



PLANT IMMIGRANTS

No. 198

OCTOBER, 1922

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Foreign Seed and Plant Introduction

EXPLANATORY NOTE

This circular is made up principally of notes received from agricultural explorers, foreign collaborators, and correspondents, concerning the more important plants which have been received recently by the Office of Foreign Seed and Plant Introduction. It also contains reports on the behavior of plants which have been introduced in previous years.

Descriptions appearing here are revised and later published in the Inventory of Seeds and Plants Imported,—the permanent record of plant introductions made by this Office.

Plant Immigrants should be considered merely an ANNOUNCEMENT OF THE ARRIVAL OF PLANT MATERIAL. As a rule all material is propagated before being distributed; this may require several years.

The Annual Catalogue of New Plant Introductions describes briefly the plants available for distribution. Application for seeds or plants listed in Plant Immigrants may be sent at any time, however, and will be filed in the order of their receipt. When material is ready for distribution, these requests will be given first attention; if their number is sufficient to exhaust the available supply of a given species, it will not be included in the Annual Catalogue.

Plant breeders and experimenters who desire plants not available in this country are invited to correspond with this office which will endeavor to secure the required material through its agricultural explorers, foreign collaborators, or correspondents.

DAVID FAIRCHILD
*Agricultural Explorer in Charge,
Office of Foreign Seed and Plant Introduction.*

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Annona diversifolia (Annonaceae), 55709. ILAMA. From Tapachula, Chiapas, Mexico. Seeds purchased through R. O. Stevenson, British Vice-Consulate. "The ilama may be termed the cherimoya of the lowlands. The cherimoya does not succeed in the Tropics unless grown at elevations of 4,000 to 6,000 feet, where the climate is cool. The ilama, on the other hand, belongs to the lowlands, but is strikingly similar in character to a good cherimoya. It is a valuable recruit and one which can not be too strongly recommended for cultivation throughout the Tropics." (Wilson Popenoe.)

Buddleia colvilei (Loganiaceae), 55675. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. A shrub or small tree 15 to 20 feet high from the vicinity of Sikkim, India, where it is found at altitudes of 9,000 to 12,000 feet. The oblong toothed leaves are about 6 inches long and the crimson flowers, an inch in length, are borne in large loose terminal clusters. (Adapted from Hooker, Flora of British India, vol. 4, p. 81.)

Cephalostachyum capitatum (Poaceae), 55676. BAMBOO. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. A bamboo from the hills of Sikkim, India, which develops strong, slender, yellow stems up to 30 feet in height. These stems are used by the natives for bows and arrows, and the leaves are considered good fodder. (Adapted from Gamble, Manual of Indian Timbers, p. 429.)

Citrus sp. (Rutaceae), 55624. From Johannesburg, Transvaal. Seeds presented by Col. A. J. Bester. "When I visited the great Sym-babian ruins in central Africa in 1911 I discovered a new citrus fruit; I collected seeds and brought them back, and now the variety is distributed all over the Transvaal. The smooth-skinned fruits are much like a big lime in shape, and the abundant fine-flavored juice is very sweet." (Bester.)

Clematis grewiaeflora (Ranunculaceae), 55677. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. A large woody climber with densely hairy, deeply 5-lobed leaflets and many-flowered panicles of hairy, tawny yellow flowers, with oblong sepals $1\frac{1}{2}$ inches long. The plant is native to the lower temperate and subtropical Himalayas at altitudes of 3,000 to 5,000 feet. (Adapted from Johnson's Gardener's Dictionary, p. 230, and from Hooker, Flora of British India, vol. 1, p. 6.)

Hydrangea robusta (Hydrangeaceae), 55681. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. A very stout, nearly erect hydrangea from Sikkim, India. The short-stemmed, oval leaves are coarsely toothed and the flowers, with white sepals, blue petals and stamens, are borne in rather loose, spreading corymbs with red pedicels. (Adapted from Curtis's Botanical Magazine, pl. 5038.)

Ilex insignis (Aquifoliaceae), 55682. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. An attractive holly from the Sikkim Himalayas, where it grows at an altitude of 7,000 feet. It forms a small tree or shrub with thick grooved branches which are purplish when young. The dark-green, leathery leaves are pinnately lobed, with the lobes spine tipped and alternately raised and depressed, so that there appears to be a double row of spiny lobes on each side. This holly has proved hardy in Ireland. (Adapted from Gardeners' Chronicle, 2d ser., vol. 14, p. 296.)

Jasminum dispersum (Oleaceae), 55684. JASMINE. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. A climbing shrub common in temperate regions of the Himalayas at altitudes of 2,000 to 8,000 feet. It bears very numerous white flowers in axillary cymes and terminal panicles sometimes containing a hundred flowers. (Adapted from Hooker, Flora of British India, vol. 3, p. 602.)

Leycesteria belliana (Caprifoliaceae), 55686. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. A small graceful shrub with opposite, membranous, lance-shaped leaves and sessile, 2 to 4-flowered spikes of rosy white flowers. It is native to the Sikkim Himalayas near the Nepal border at an altitude of 10,000 feet; it should prove hardy in England. (Adapted from Transactions and Proceedings of the Botanical Society of Edinburgh, vol. 24, p. 173.)

Ligustrum confusum (Oleaceae), 55687. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. This relative of our common privet is a small tree, sometimes 40 feet in height, and it is native to the mountains of northeastern India at altitudes of 3,000 to 5,000 feet. The narrow, leathery leaves are sometimes as much as 3½ inches long, and the small white flowers are borne in dense panicles. (Adapted from Hooker, Flora British India, vol. 3, p. 616.)

Lilium spp. (Liliaceae), 55609, 55610, 55730. LILY. From Likiang, Yunnan, China. Bulbs collected by J. F. Rock, Agricultural Explorer of the Bureau of Plant Industry. Quoted notes by Mr. Rock.

55609. *Lilium sutchuenense*, "(No. 4402. Likiang. June 13, 1922.) A lily 3 to 4 feet in height, growing among limestone rocks and along brooks in scrub vegetation at an altitude of 10,000 to 11,000 feet on the Likiang snow range, near the Moso village of Nguluke. The flowers are borne at the apex of the stem in twos or threes, and are very variable in color, ranging from orange-yellow to red and reddish brown, the inner part of the corolla being spotted purple."

55610. *Lilium* sp., "(No. 4532. Likiang. June 17, 1922.) A plant 2 to 2½ feet high, growing among limestone crags in pine and fir forests at altitudes of 12,000 feet and higher. These bulbs were collected on the slopes of the Likiang snow range. The flowers, which are smaller than those of *Lilium sutchuenense*, are green and marked on the outside and inside with deep purplish spots. The lobes are much reflexed, making the perianth pitcher shaped. This species is not common, while *L. sutchuenense* is found more frequently."

Lilium sp., 55730. (No. 4756. Nguluke, near Likiang. June 27, 1922.) This may be a variety of *Lilium sutchuenense*. The plant, which grows on the Likiang range at an altitude of 11,000 feet, is about 4 feet tall, with linear-lanceolate leaves and large, brightly colored reddish yellow flowers spotted with a rich purple.

Lotus uliginosus (Fabaceae), 55710. From Paris, France. Seed purchased from Vilmorin-Andrieux & Co. A pasture plant of considerable importance, rather extensively used in New Zealand, from 10 to 15 tons of seed being sown annually. This plant prefers a wet or swampy habitat. Seed sold in December, 1918, at about a dollar per pound. It is saved for seed mainly in the Auckland Province, but prior to the war the greater portion was imported, mainly from Germany. This seed was exported from the latter country under the name of *Lotus villosus* or *L. uliginosus*, which names are the European trade names for the *L. major* of the New Zealand seed trade. This species is very variable with regard to certain characters such as hairiness, and in consequence several botanical names have been given to the plant. There are apparently a good many different strains, but whether these breed true from seed and are good agricultural species or whether they are due either to the habitat in which they are growing or to fertilization has not yet been ascertained. (Adapted from The New Zealand Journal of Agriculture, vol. 17, p. 347.)

Magnolia campbellii (Magnoliaceae), 55688. MAGNOLIA. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. A beautiful, deciduous magnolia from the Himalayas, where it ascends to 8,000 feet above sea level. It reaches a height of 80 feet, has very dark bark, large elliptical dark-green leaves, and white to purple flowers 10 inches in diameter. This magnolia has flowered freely in southern France and Italy. (Adapted from Curtis's Botanical Magazine, pl. 6793.)

Michelia cathcartii (Magnoliaceae), 55689. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. A lofty tree with magnolia-like foliage and terminal white flowers about an inch in diameter. It is native to the temperate forests of the Sikkim Himalayas, where the moderately hard, dark-brown heartwood is used for planking and for making tea boxes. (Adapted from Gamble, Manual of Indian Timbers, p. 6, and from Hooker, Flora of British India, vol. 1, p. 42.)

Morus laevigata (Moraceae), 55692. MULBERRY. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. An Indian mulberry which occurs wild and cultivated, though not common, in the lower Himalayas, where it forms a medium-sized tree with oval leaves up to 7 inches in length. In early spring appear the long-cylindrical, yellowish white or pale-purple fruits; these are edible, although of a rather insipid-sweet flavor. (Adapted from Atkinson, Notes on the Economic Products of the North-Western Provinces, pt. 5, p. 83.)

Myrica rubra (Myricaceae), 55735. From Yokohama, Japan. Seeds purchased from the Yokohama Nursery Co. "The beautiful, dark-purple fruits are the size of crab apples and can be eaten out of hand or made into compotes and pies. There is great variation in the habit and productivity of the trees and also in the color, size, and taste of the fruits. The trees are evergreen and thrive best on well-drained rocky terraces. The localities that will best suit them in the United States will probably be the southern sections of the Gulf Coast States and the milder parts of California. Chinese name 'Yang mae.'" (Frank N. Meyer.)

Oryza sativa (Poaceae), 55731. RICE. From Szemao, Yunnan, China. Seed collected by J. F. Rock, Agricultural Explorer of the Bureau of Plant Industry. "(Szemao, March 11, 1922.) A bright-red rice of fine grade, called 'Tzu no mi' by the Chinese and sold in Szemao." (Rock.)

Persea americana (Lauraceae), 55625. AVOCADO. From Honolulu, Hawaii. Budwood presented by Gerrit P. Wilder. "Wilder." Grown by Mr. Wilder at his residence in Honolulu; a seedling from the Guatemalan variety "McDonald" growing at 1402 Punahou St., Honolulu. An account of the introduction of the "McDonald" from Guatemala is given in Bulletin 25, p. 43, Hawaii Agricultural Experiment Station as follows:

"About 20 years ago Admiral Beardsley, leaving Guatemala for Hawaii, carried with him a number of avocados for consumption on the way. He saved two seeds, wrapping them in cotton-wool and packing them in ice. Arriving in Honolulu, he gave one seed to Judge Wiedeman and the other to Mrs. E. K. Wilder. The former was planted at 1402 Punahou St., now occupied by the McDonald house, and although both seeds grew, the 'McDonald' is far superior in quality and blooms earlier."

A description of the fruit of the "Wilder" variety follows:

Form nearly round; size large, average weight about one pound; stem thick, tough; apex broadly rounded; surface light olive-green; flesh yellow, shading into light green near the skin, and easily separated from the latter, oily, rich and nutty in flavor; season October to January in Honolulu.

The tree is vigorous, inclined to grow upward rather than to branch out, but can stand pruning. The variety is valuable as a late avocado.

An analysis of the fruit (analysis 1747, University of California, 1915) is as follows:

	Ounces.
Weight of fruit.....	25.79
Weight of seed.....	6.42
Weight of skin.....	2.54
Weight of edible portion.....	16.88

Analysis of edible portion.

	Per cent.
Protein.....	1.31
Ash.....	0.86
Fat.....	15.87
Carbohydrates.....	5.15



A YOUNG CITRUS ORCHARD IN CENTRAL CHILE.

(*Citrus* spp.)

In climatic conditions, as well as in topographical features, the Republic of Chile much resembles California. In recent years Chilean horticulturists have given serious attention to the development of commercial fruit growing, and the best varieties of deciduous fruits, as well as of oranges, lemons, and several other subtropical fruits, have been introduced for trial. In this respect Chile has given an example of intelligent effort along the line of plant introduction which should serve as an inspiration to many other countries. The orchard here shown is situated a few miles from Santiago de Chile and is owned by Salvador Izquierdo, with whom the Office of Foreign Seed and Plant Introduction has conducted an exchange of plants for many years. The trees are mainly oranges and grapefruit, of standard California varieties. (Photographed by Wilson Popenoe at Cascada del Salto, near Santiago, Chile, October 6, 1921; P18885FS.)



THE CHILEAN WINE PALM AT HOME.

(*Jubaea chilensis* (molina) Baill.)

The coquito or wine palm of central Chile has been cultivated for some years in southern California, where it is considered an excellent ornamental plant. It is frost resistant to a high degree, but of very slow growth. The fruits contain small, round kernels having the flavor of coconuts, whence the name coquito (little coconut); these are eaten in several South American countries. From the sap a thick sirup, known as *miel de palma*, is prepared in Chile. It is used in the same manner as maple sirup. Commercial plantations have been established in various parts of that country for the production of this sirup. The wild palms here shown are in a small ravine near Valparaiso, Chile. (Photographed by Wilson Popenoe, October 10, 1921; P18897FS.)

Picea smithiana (Pinaceae), 55694. SPRUCE. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden. The Himalayan spruce is a lofty tree found in the mountains of northwestern India at altitudes of 7,000 to 11,000 feet; the terminal, drooping pale-green cones are 4 to 6 inches long. The stiff, sharp, spirally arranged green leaves are crowded into hanging, taillike twigs when young. The wood is extensively used for rough furniture and planking. (Adapted from Watt, Dictionary of the Economic Products of India, vol. 1, p. 4.)

Prinsepia sinensis (Amygdalaceae), 55711. From Jamaica Plain, Mass. Seeds presented by Prof. C. S. Sargent, Arnold Arboretum. "*Prinsepia sinensis* is a species which has been comparatively unknown to horticulturists until recent times. It is quite distinct from the well-known *P. utilis* which yields a cooking oil common in India, but is closely similar to *P. uniflora* which has been introduced by this Office several times. Like *P. uniflora* it is a Chinese ornamental shrub with gray or whitish bark and small gray spines. But while *P. uniflora* has white flowers, dark purple fruits, and thick, linear-lanceolate leaves, *P. sinensis* is distinguished by yellow flowers, deep red fruits and thin, ovatelanceolate leaves. The shrub is said to be somewhat hardier than *P. uniflora*. The plant is of striking habit and the clusters of large bright-yellow flowers must make it a brilliant sight on its native Mongolian hills from Mukden to the Yalu. It is early blooming, but at the Arnold Arboretum it bears only a few fruits." (D. C. Peattie.)

Prunus armeniaca (Amygdalaceae), 55729. APRICOT. From Likiang, Yunnan, China. Seeds collected by J. F. Rock, Agricultural Explorer of the Bureau of Plant Industry. "(Nguluke, Likiang Valley. June 25, 1922.) The trees, 45 feet or more high, found in this region at altitudes of 8,000 to 9,200 feet, are apparently free from disease and should make good stock plants. The small, sour, rich red fruits, which are deliciously fragrant, are excellent for jam or for stewing." (Rock.)

Prunus majestica (Amygdalaceae), 55732. CHERRY. From Talifu, Yunnan, China. Seeds collected by J. F. Rock, Agricultural Explorer of the Bureau of Plant Industry. "(No. 3174. Talifu. April 25, 1922.) A fine large tree, 60 to 70 feet in height, of *Prunus pseudocerasus* type, found in the foothills of Talifu at altitudes of 6,700 to 7,000 feet. The tree from which these seeds were collected had three trunks clothed with smooth, shining bronzed-colored bark with horizontal bands speckled with white. Each trunk was over a foot in diameter, the branches were stout and erect, the foliage dark green, and the fruits small, oblong, reddish, and cherry like in appearance." (Rock.)

Prunus mume (Amygdalaceae), 55633-55645. JAPANESE APRICOT. From Lokong, Kwangtung, China. Seeds presented by G. Weidman Groff, general director, Canton Christian College. Collected by F. A. McClure, of the Canton Christian College.

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|--------|---------------------|--------|----------------------|
| 55633. | "Cha Ip Mui." | 55640. | "Sun Ngan Au Mui." |
| 55634. | "Cha Ip Mui." | 55641. | "Tai Nui." |
| 55635. | "Hak Lok Tsai Mui." | 55642. | "Tai Wang Wat Mui." |
| 55636. | "Hang Mui." | 55643. | "Tai Wat Tsing Mui." |
| 55637. | "Hang Mui Chi." | 55644. | "Tai Wat Tsing Mui." |
| 55638. | "Hung Mui." | 55645. | "Wang Wat Mui." |
| 55639. | "Ngo Shu Mui." | | |

Prunus tomentosa endotricha (Amygdalaceae), 55608. BUSH CHERRY. From Jamaica Plain, Mass. Budwood presented by Dr. C. S. Sargent, of the Arnold Arboretum. A large spreading shrub or small tree with densely hairy branches, dark-green, toothed, sharp-pointed leaves about 3 inches long, solitary white flowers three-fourths of an inch across, and dark-red fruits about half an inch in diameter. The plant is found native in western Hupeh and northern Shensi, China. (Adapted from Sargent, *Plantae Wilsonianae*, vol. 1, p. 225.)

Rhododendron spp. (Ericaceae), 55697, 55699-55701. From Darjiling, India. Seeds presented by G. H. Cave, curator, Lloyd Botanic Garden.

Rhododendron arboreum, 55697. This Himalayan rhododendron is variable both in its foliage and in the color of its flowers. In one form the leaves are silvery on the lower surface, while in another they are covered with a brownish red down. The bell-shaped flowers, borne in dense trusses, vary from deep crimson to pure white. The tree sometimes reaches a height of 35 feet, with a trunk 4 feet in circumference. (Adapted from *Flora and Sylva*, vol. 3, p. 34.)

Rhododendron dalhousiae, 55699. This is said to be the finest rhododendron from northeastern India, chiefly because of the great size and beauty of the fragrant flowers, which resemble those of a large lily. It is a straggling shrub, 6 to 8 feet high, with smooth, dark-green leaves. The flowers, which occur in terminal clusters of 3 to 5, are nearly 5 inches across. (Adapted from Curtis's *Botanical Magazine*, pl. 4718.)

Rhododendron falconeri, 55700. This shrub or tree, which sometimes attains a height of 30 feet, is a native of northeastern India. The large, deep-green leaves, sometimes a foot long, and the whitish, densely clustered flowers make it a very fine ornamental. (Adapted from Curtis's *Botanical Magazine*, pl. 4924.)

Rhododendron maddenii, 55701. An ornamental Himalayan shrub 6 to 8 feet high. The dark-green leaves are from 4 to 7 inches long, with deep-red petioles. The large, delicate, fragrant flowers, white tinged with rose, are borne in threes at the ends of the branches. (Adapted from Curtis's *Botanical Magazine*, pl. 4805.)

Rhopalostylis sapida (Phoenicaceae), 55619. NIKAU. From Auckland, New Zealand. Seeds presented by Stanley G. Chambers, secretary, Auckland Acclimatisation Society. An elegant palm from New Zealand, which is of peculiar interest because of its distribution, as it occurs further south than any species of palm in either Australia or South Amer-

ica, being found at 38° 22' S. Lat. The pinnate leaves, 4 to 6 feet in length, are borne on a trunk 6 to 12 feet high, and the very numerous flowers, occurring on a densely flowered, much-branched spadix, are pale pink. The young inflorescences are eaten by the natives of New Zealand. (Adapted from Curtis's Botanical Magazine, pl. 5139.)

Rubus spp. (Rosaceae), 55630 and 55631. From the Island of Hainan, China. Seeds presented by F. A. McClure, Canton Christian College. Quoted notes by Mr. McClure.

Rubus sp., 55630. "(No. 848.) An edible wild berry found in sandy soil at an altitude of 100 to 165 feet."

Rubus sp., 55631. "(No 849.) An edible wild berry found in clay loam on hillsides at an altitude of about 3,300 feet."

Rumex spp. (Polygonaceae), 55605 and 55606. From Okitsu, Japan. Seeds presented by T. Onda, director, Government Horticultural Experiment Station. These sorrels, which are used as salad vegetables in Japan, are introduced for trial as food for diabetics.

Rumex acetosa, 55605. SORREL. "Suiba."

Rumex crispus, 55606. CURLY DOCK. Variety japonicus. "Gishi-gishi."

Trifolium subterraneum (Fabaceae), 55707. SUBTERRANEAN CLOVER. From Melbourne, Victoria. Seeds purchased from F. H. Brunning & Co., Ltd. "Experiments carried on by the U. S. Department of Agriculture and by state experiment stations in cooperation with this department, during the years 1921 and 1922, have established the fact that this clover will survive the winter as far north as Knoxville, Tenn. At this station, as well as at several others, the plants from fall seeding made some growth in the fall, held their own during the winter and made a rapid and heavy growth early in the spring of 1922. This clover made a strong growth on sandy land at McNeill, Miss.; in this case finely ground bone meal had been used as fertilizer. Preliminary trials have been encouraging and the department is making further tests." (A. J. Pieters.)

Vitex lucens (Verbenaceae), 55620. PURIRI. From Auckland, New Zealand. Seeds presented by Stanley G. Chambers, secretary, Auckland Acclimatisation Society. A fine tree, from 50 to 60 feet in height, native to New Zealand but restricted to the northern part of the North Island. It is often called the New Zealand oak, on account of the strength and durability of its wood which is not injured by dampness or exposure, and is therefore extremely valuable for shipbuilding purposes. The logs are often perforated with holes, the work of a soft-bodied grub which develops into the "puriri moth." These holes do not affect the timber except in so far as it has sometimes to be cut to disadvantage.

The handsome, bright glossy green leaves are 3 to 5-foliolate with leaflets 3 to 4 inches long. The pink or red 2-lipped flowers, produced more or less all the year round, are in axillary clusters of 4 to 8. The roots of the "puriri" never penetrate deeply into the ground, but lie near the surface, so the tree is easily blown over in a gale. (Adapted from Laing and Blackwell, Plants of New Zealand, p. 350.)

Zinziber sp. (Zinziberaceae), 55632. From the Island of Hainan, China. Rhizomes presented by F. A. McClure, Canton Christian College. "(No. 857.) Rhizomes of 'Hak Sam Keung' (black-hearted ginger); the flowers are rich pink, and a dark purple color in the center of the leaves as well as in the rhizome gives the plant its name. It is found most abundantly in sandy soil in thickets and along streams, and is a very promising ornamental for semitropical regions." (McClure.)

NOTES ON THE BEHAVIOR OF PREVIOUS INTRODUCTIONS.

Amygdalus persica (Amygdalaceae), 43134. PEACH. "Osprey Improved." From Avondale, Auckland, New Zealand. "In the spring of 1920 I set this tree out, and this year it bore nearly a peck of fruit. The fruits are of good size, greenish with a bright red cheek, freestone, and have soft flesh of delicious flavor." (Sam Burchfield, Huron Valley Iris Gardens, Ann Arbor, Mich., September 27, 1922.)

Brassica pekinensis (Brassicaceae), 45969. PAI TS'AI. A selection of a northern Chinese strain made by Dr. Yamei Kin. "When no other variety of Chinese cabbage made a marketable head, this strain developed a splendid head on every plant." (A. F. Yeager, Agricultural Experiment Station, Agricultural College, N. Dak., September 8, 1922.)

Capsicum annuum (Solanaceae), 47010. RED PEPPER. Originally from Costa Rica, but sent from Zamboanga, Philippine Islands. "The seeds were sown early and produced strong-branched plants $3\frac{1}{2}$ feet high, which bore an abundant crop of peppers of very good quality. The date of maturing was later than that of other pepper varieties usually grown here." (William G. Shepard, Guinea Mills, Va., October 20, 1922.)

Clematis tangutica obtusiuscula (Ranunculaceae), 52337. CLEMATIS. From central Asia. "Although planted in March, 1922, by August 30 this had grown to a height of 5 feet and during the first week in September bore handsome yellow solitary flowers. This species is likely to prove an extremely popular addition to the list of large-flowered clematis, being the most beautiful, I believe, that I have ever seen." (W. G. Shepard, Guinea Mills, Va., September 6, 1922.)

Cotoneaster zabeli (Malaceae), 49032. From western Hupeh, China. "This was planted on March 15, 1922. It grew splendidly through the summer, and now measures 4 feet in diameter." (W. G. Shepard, Guinea Mills, Va., September 6, 1922.)

Pyrus communis (Malaceae), 32735. PEAR. "Herzogen Elsa." From Germany. "I have a small tree of this variety about $4\frac{1}{2}$ feet high, which was sent to me four years ago. This year it bore its first crop; on August 25 there were 12 large pears about $3\frac{1}{2}$ inches in length. These were sweet, juicy, and of very good quality. The tree shows some evidence of leaf blight but so far no twig blight, although there are many badly blighted trees in the neighborhood." (Dr. John E. Cannaday, Charleston, W. Va., August 31, 1922.)

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