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U. S. DEPARTMENT OF AGRICULTURE.

DIVISION OF BOTANY.

*U.S. Department of Agriculture, International
Crop Research Service, Plant
Material International,
Inventory (NO. 1.)*

FOREIGN SEEDS AND PLANTS

IMPORTED BY THE

SECTION OF SEED AND PLANT INTRODUCTION.

NUMBERS 1-1000.



INVENTORY OF FOREIGN SEEDS AND PLANTS.

INTRODUCTORY STATEMENT.

In the importation and distribution of a large number of samples of foreign seeds, the use of a series of numbers has been found necessary as the simplest means of designation in the frequent absence of English names. The publication of this list appears desirable in order to render the available data accessible for reference and to enable our correspondents to select to best advantage the seeds or plants with which they may desire to experiment.

When the work of this section was formally organized the Department was already in possession of a considerable quantity of seeds secured by Prof. Niels E. Hansen of the Agricultural College of South Dakota during a visit to Russia, central Asia, and Siberia. This long and arduous journey was undertaken under circumstances rendering extremely difficult the accumulation of detailed information. A large amount of territory was, however, covered and much valuable material secured. A portion of this was distributed last year, but many of the importations did not arrive until after the planting season had passed, so that they are as yet entirely untried in America. In many other cases correspondents have stated that their experiments were unsatisfactory on account of late planting, and another trial is therefore necessary. Although the numbers of varieties in some groups is formidable, it is hoped that through cooperation of experiment stations and private investigators the more valuable novelties may be experimentally separated from those not serviceable in the United States.

The repetition of identical names and data under successive numbers may appear to have been unnecessary unless it is explained that the typographical arrangement is expected to serve a second purpose in the form of printed labels to accompany the seeds. Efforts are being made to increase the amount and definiteness of the information to be furnished with later importations.

In addition to the importations of Professor Hansen, there have been numerous contributions from a variety of sources, as noted in each case. More recently there has arrived from France a large series of seeds and cuttings personally selected by Mr. Walter T. Swingle, agricultural explorer of this section. At an early date are expected invoices of cereals from Russia and Japan, specialists in such crops having visited

those countries during the season just past. Lists of the material secured by them may be expected soon.

The organization, methods, and purposes of this section have been recently explained in a bulletin and a circular, which are available on application. It should be repeated here that our efforts are on a line quite distinct from that of the Congressional seed distribution, whose object is the general and popular distribution of vegetable, field, and flower seeds.

Although the foreign seeds and plants imported by this section are the best to be found in the various foreign countries visited by our explorers, it is to be expected that relatively few of them will show conspicuous excellence under the new conditions of growth in the United States. Importations are accordingly made, in the great majority of cases, in experimental quantities only, for the use of the experiment stations and private parties having special knowledge and experience in the cultivation of particular crops. This office is interested in knowing that an actual experiment will be undertaken, that the results from the imported seeds will be brought into comparison with those of other varieties grown under similar conditions, and that an honest and intelligible report will be made. Only second in importance to a report of the superiority of a new variety is the establishment of the fact of its inferiority, especially if the reasons for this can be definitely stated. It is only by thorough, conclusive, and systematically recorded experiments that the necessity of reimportation can be avoided.

It is scarcely necessary to state that the seed of any novelty or promise should be carefully saved. Indeed, it is desirable, even in cases of apparent failure, that the seed be gathered and a second attempt made, since many crops are known not to show their true character during the first season under new conditions. Moreover, imported seed may not infrequently be weakened by age, by unfavorable conditions in transit, or by the treatment necessary in disinfection against insect pests and fungous parasites. As soon as the success of any imported species or variety is assured, it will be the policy of this Department to secure for wider distribution a larger quantity of vigorous, clean, and reliably selected seed.

Before being sent out all seeds are carefully inspected for impurities, but it is nevertheless important that new importations be distributed only to agriculturists of sufficient knowledge and experience to recognize any new weeds, insects, or fungous diseases, specimens of which should be sent to this office, and the remainder carefully destroyed by fire.

Experiment-station workers and others who may receive these inventories will accordingly confer favors by sending to this office the names and addresses of those who may be qualified by intelligence and experience, and have the interest and material facilities for testing in a satisfactory manner such plants as they may apply for, but our corre-

spondents will also understand that there is no wish to encourage requests from those who may be actuated merely by the desire to "plant something new."

In the absence of any detailed statement regarding items of the following list, it is to be understood that nothing is known as to their value or desirability for the United States. The reports of last year's experiments have been incorporated where they seemed suggestive or conclusive, but when they were few in number and of contradictory import, it seemed best, if the stock of seed was not exhausted, to await the results of a more extensive distribution.

In attempting to bring back a representative collection of the useful plants of the arid southern parts of Asiatic Russia, Professor Hansen included several species the distribution of which even for experimental purposes can scarcely be advised, such as the series of barberries, which, notwithstanding any possible desirability in other regards for the Northwest, can not wisely be planted in any wheat-growing region for the reason that the wheat rust in one of its stages is parasitic on the barberry, and spreads from it with especial virulence. Other numbers have a botanical or an anthropological rather than an agricultural interest and many remain undetermined, but it has seemed best for purposes of reference to publish the entire list.

O. F. COOK,

Special Agent in Charge of Seed and Plant Introduction.

INVENTORY.

1. BRASSICA OLERACEA.

Cabbage.

From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (29 packages.) "Bronka," early variety.

According to Mr. H. C. Warner, of the State Board of Agriculture of South Dakota, this variety produced heads a little earlier than the Jersey Wakefield, but they were too small for market.

2. BRASSICA OLERACEA.

Cabbage.

From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (62 packages.) "Genuine white Bulgarian."

3. BRASSICA OLERACEA.

Cabbage.

From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (7 packages.) A white variety from Ladoga Lake region.

Mr. Warner also experimented with this number and found it of medium quality, but with the type not well fixed and the heads mostly loose. He states that it is not to be compared for value with Succession, Vandergaw, or Flat Dutch.

4. BRASSICA OLERACEA.

Cabbage.

From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (5 packages.) "White Reval."

5. BRASSICA OLERACEA.

Cabbage.

From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (61 packages.) "Genuine white Saburovka, fine for sauerkraut."

6. **BRASSICA OLERACEA.** **Cabbage.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (40 packages.) "Earliest white."
7. **CUCUMIS SATIVUS.** **Cucumber.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. "Prof. Rytow;" said to be a peculiar dwarf variety for culture in dwellings. From Kiakhta, Siberia, on border of Mongolia. (30 packages.)
8. **CUCUMIS SATIVUS.** **Cucumber.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (260 packages.) "Aksel Dwarf."
Very early; originated in the Province of Perm.
9. **CUCUMIS SATIVUS.** **Cucumber.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (53 packages.) "Galachov Dwarf."
10. **BRASSICA CAMPESTRIS.** **Turnip.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (823 packages.) "Krasnoselki cabbage turnip."
Mr. H. Benton, of the Experiment Station at Uniontown, Ala., reports: "Quantity equal to any other variety; quality best of fourteen varieties grown on the station farm this season." A Kansas correspondent, on the other hand, says that the quality is poor, tough, and woody.
11. **BRASSICA CAMPESTRIS?** **Turnip.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. "Genuine Petrovski table."*
12. **PISUM SATIVUM.** **Pea.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (64 packages.) "Rostov Sugar."
Best Russian variety for drying.
13. **ZEA MAYS.** **Corn.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (6 packages.) Earliest sweet corn from Malachows.
Reported from Alabama as "worthless in this locality." Report from Kansas: "Yield good, quality fine, variety very early."
14. **CUCURBITA MAXIMA.** **Pumpkin.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (16 1-ounce packages.) "Honey;" introduced from Bulgaria.
Mr. H. C. Warner, of the State Board of Agriculture of South Dakota, says: "This pumpkin was tested in comparison with Connecticut, Field, Potiron, Etampes, Tours, Large Cheese, Japanese, Cushow, Black Sugar, Gray Bologne, and Pie, and while some of them were more productive, it leads them all in quality. It should be extensively distributed for culinary use and for feeding milch cows." According to Mr. Warner's report this noteworthy success was attained in rich, sandy loam; the vines bore drought and the fruit was ripe by the beginning of September. In California this excellence seems not to have been apparent.

*Unless the number of plants or packages of seed is stated it is to be inferred that our stock is exhausted. Unless otherwise credited all notes in quotations are from the persons furnishing the seeds.

15. CUCUMIS MELO.**Muskmelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. "Kochanka;" a Russian variety. (27 packages.)

Oval, flesh green; very productive, medium early; sweet and juicy. Extensively used for confectionery, cooked in sugar, the process peculiar.

16. CITRULLUS VULGARIS.**Watermelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. Russian variety from Belbek, Crimea. (38 packages.)

Oblong, dark green; flesh bright red; early.

17. CUCUMIS MELO.**Muskmelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. "Empress of Melons;" a Russian variety. (57 packages.)

Oval, surface variegated, flesh green, delicate, melting, and very sweet; extremely early and productive.

18. CITRULLUS VULGARIS.**Watermelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. Originally from Yokohama, Japan. (42 packages.)

Dark green, with red flesh; moderately late.

19. CUCUMIS MELO.**Muskmelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. "Lenkoran No. 2;" originally from Lenkoran, Province of Baku, in Transcaucasia. (227 packages.)

Shape, oval; outside bright yellow with small dark spots; flesh green; ripens late and keeps well.

20. CITRULLUS VULGARIS.**Watermelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. "Favorite of the Pjatigorsk farm;" a Russian variety. (26 packages.)

Round, skin green with dark stripes, flesh orange; very early. Variety obtained direct from its native locality.

21. CUCUMIS MELO.**Muskmelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. "General Skobelev II;" an Asiatic variety introduced into Russia from Khiva, Turkestan. (31 packages.)

Round, rind white, flesh orange; medium early.

22. CITRULLUS VULGARIS.**Watermelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. "The Czar of Bakteha;" a Russian variety. (22 packages.)

Very large, bright green with dark stripes, flesh red; rather late.

23. CITRULLUS VULGARIS.**Watermelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. "Favorite of the Pjatigorsk farm;" a Russian variety. (20 packages.)

Round, skin green with dark stripes, flesh dark red; very early; further described as "magnificent."

Evidently the same as No. 20.

24. CITRULLUS VULGARIS.**Watermelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. "Jea Teveam;" originally from China. (34 packages.)

Blackish green, flesh rose-colored; moderately late.

25. **CITRULLUS VULGARIS.** **Watermelon.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898. "Cream of Japan;" an Asiatic variety. (52 packages.)
 Oval, dark green, striped, flesh pure white; rather late.
26. **CITRULLUS VULGARIS.** **Watermelon.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898. Originally from Afghanistan. (52 packages.)
 Grayish green, flesh red; moderately early.
27. **CUCUMIS MELO.** **Muskmelon.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898. "Mlle. Maroussia Lessevitzky;" a Russian variety. (195 packages.)
 Oval, skin dark yellowish green, flesh bright green, very juicy; a superb variety, ripening rather late.
28. **CUCUMIS MELO.** **Muskmelon.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898. "Kochanka;" a Russian variety. (305 packages.)
 Oval, flesh reddish yellow, very productive; early.
29. **CITRULLUS VULGARIS.** **Watermelon.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898. An Asiatic variety originally from Chimkent, Turkestan. (34 packages.)
 Round, quite large, light green with dark stripes, flesh red; late and of good keeping quality.
30. **CUCUMIS MELO.** **Muskmelon.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898. "Mme Lydia Lessevitzky;" a Russian variety. (242 packages.)
 Flat, round, skin bright yellow, flesh deep orange, delicate, medium early.
31. **CUCUMIS MELO.** **Muskmelon.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898. "Kookkala-poosh;" originally from Bokhara, Turkestan. (232 packages.)
 Oval, very dark green, flesh greenish, delicate and juicy; rather late.
32. **BLANK.**
33. **CITRULLUS VULGARIS.** **Watermelon.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898. "Koula;" originally from Turkestan. (58 packages.)
 Perfectly round in form, green with small dark spots, flesh red; late and of good keeping quality.
34. **CUCUMIS MELO.** **Muskmelon.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898. "Okh-Took;" a variety from Bokhara, Turkestan. (65 packages.)
 Long, skin of a pure white, flesh green, thick and juicy; an exquisite late and long-keeping variety.
35. **CITRULLUS VULGARIS.** **Watermelon.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898. Originally from Khiva, Turkestan. (34 packages.)
 Skin adorned with pretty designs, very dark; flesh red; late. May be kept very late.

36. CUCUMIS MELO.**Muskmelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. From Amu Daria, Turkestan. (41 packages.)

Oblong and very large; flesh pure white, thick and juicy; a very good late variety.

37. CUCUMIS MELO.**Muskmelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. "Obenavode;" from Bokhara, Turkestan. (40 packages.)

Oval, skin yellow, adorned with dark green spots; flesh whitish; late; of good keeping quality.

38. CUCUMIS MELO.**Muskmelon.**

From Russia. Received through Prof. N. E. Hansen, January, 1898. "The Queen;" a Russian variety. (193 packages.)

Very large, oval; skin clear and adorned with pretty, deep-colored designs; flesh pure white, exceedingly thick and juicy; late.

39. CITRULLUS VULGARIS.**Watermelon.**

From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. "Striped kamishine." (45 packages.)

Flesh red.

40. CITRULLUS VULGARIS.**Watermelon.**

From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. "Kaikalar winter." (17 packages.)

Flesh red.

41. CITRULLUS VULGARIS.**Watermelon.**

From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. From Afghanistan.

Flesh red.

42. CUCUMIS MELO.**Muskmelon.**

From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. "Apricot." (26 packages.)

A cantaloupe; small, very early, productive, flesh an intense red color.

43. CITRULLUS VULGARIS.**Watermelon.**

From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. Favorite of the Pjatigorsk farm. (128 packages.)

Flesh orange. Favorably reported upon from Maryland. In Nebraska said to be of no value.

44. CITRULLUS VULGARIS.**Watermelon.**

From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. "Caucasian." (1 package.)

Flesh red. Favorably reported upon from Maryland.

45. CITRULLUS VULGARIS.**Watermelon.**

From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898. (21 packages.) "Theodosian."

Flesh red.

46. **CITRULLUS VULGARIS.** **Watermelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(27 packages.) "White Crimean."
Flesh red.
47. **CITRULLUS VULGARIS.** **Watermelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(50 packages.) "Kula."
Flesh red.
48. **CITRULLUS VULGARIS.** **Watermelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(48 packages.) "Pineapple."
Flesh orange.
49. **CITRULLUS VULGARIS.** **Watermelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(123 packages.) "Incomparable."
Flesh red.
50. **CITRULLUS VULGARIS.** **Watermelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
Korean. (370 packages.)
Flesh red.
51. **CITRULLUS VULGARIS.** **Watermelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(4 packages.) "Kook-kala-poosh"—the Usbek name. Originally from Bokhara, Usbekistan in Turkestan.
Flesh green.
52. **CUCUMIS MELO.** **Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(24 packages.) "Queen of muskmelons."
Flesh orange.
53. **CUCUMIS MELO.** **Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(57 packages.) "Peach."
Flesh green.
54. **CUCUMIS MELO.** **Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(23 packages.)
Marbled sugar melon; flesh green; very large, early, used for preserves same as No. 15, but considered not as good for that purpose.
55. **CITRULLUS VULGARIS.** **Watermelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(3 packages.) Originally from Shemakhiński.
Flesh red.

56. **CUCUMIS MELO.** **Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (17 packages.) "Ukraine pineapple."
 A cantaloupe; flesh orange; a late variety grown in the Crimea and southern Russia.
57. **CUCUMIS MELO.** **Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (33 packages.) "Ankelin."
 Originally from Vernoe, Turkestan. Very productive; flesh white. Grown in Siberia from Lake Baikal to Vladivostock.
58. **CUCUMIS MELO.** **Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (119 packages.) "Osma."
 Flesh green; used for preserving same as No. 15; large and a very late keeper.
59. **CUCUMIS MELO.** **Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (1 package.) "Lenkoran II."
 Originally from Lenkoran, Province of Baku, Transcaucasia; flesh green. Reported from Maryland as "productive, but of no value."
60. **CUCUMIS MELO.** **Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (103 packages.) "Lenkoran I."
 Originally from Lenkoran, Province of Baku, South Russia. Fruit round, dark green; flesh green. Reported from Maryland as "productive, but of no value."
61. **CITRULLUS VULGARIS.** **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (62 packages.) "Raspberry cream."
 Flesh red.
62. **CUCUMIS MELO.** **Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (4 packages.) "Getman's."
 Flesh greenish white.
63. **CUCUMIS MELO.** **Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (14 packages.) "Reticulated muskmelon."
 Flesh orange.
64. **CITRULLUS VULGARIS.** **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (45 packages.) "Pearl of Kishinev." (Southwest Russia.)
 Flesh yellow.
65. **CUCUMIS MELO.** **Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (32 packages.) "Queen of muskmelons."
 Flesh green.

66. **CUCUMIS MELO.** **Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (126 packages.) "Lida."
 A cantaloupe; round, oval, strongly ribbed; flesh orange. An early variety grown
 in the Crimea and southern Russia.
67. **CUCUMIS MELO.** **Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 "Petro Alexandrovski."
 Originally from Turkestan; yellow with very thick red aromatic flesh.
68. **CITRULLUS VULGARIS.** **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (95 packages.) "Ferghanian watermelon." (Named after Ferghana, a province
 in Turkestan.)
 Flesh red.
69. **CITRULLUS VULGARIS.** **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 Crimean.
 Flesh white; a very early productive variety of the choicest quality from the
 Crimea.
70. **CITRULLUS VULGARIS.** **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (6 packages.) Originally from Belbek, in the Crimea.
 Flesh orange.
71. **CITRULLUS VULGARIS.** **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (4 packages.) From Kashgar, Chinese Turkestan.
 Flesh red.
72. **CITRULLUS VULGARIS.** **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (1 package.) "Incomparable."
 Flesh yellow.
73. **CITRULLUS VULGARIS.** **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (3 packages.) "Khan." Originally from Khiva, Turkestan.
 Flesh red.
74. **CITRULLUS VULGARIS.** **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (3 packages.) Originally from Ferghana, in Turkestan.
 Flesh red.
75. **CITRULLUS VULGARIS.** **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 "Monastery."
 Flesh red.

- 76. CITRULLUS VULGARIS. Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (5 packages.) "Aksa."
 Flesh cream-colored.
- 77. CITRULLUS VULGARIS. Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (4 packages.) Crimean white.
 Flesh red.
- 78. CITRULLUS VULGARIS. Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (176 packages.) "Kochanka" (a little cabbage head).
 Flesh red; used for preserves. See No. 15.
- 79. CITRULLUS VULGARIS. Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (134 packages.)
 Flesh red; suitable for dessert.
- 80. CITRULLUS VULGARIS. Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (11 packages.) "Improved black."
 Flesh red.
- 81. CUCUMIS MELO. Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (93 packages.) "Dubooka" (Oak).
 Keeps very late; flesh green; used for preserves. See No. 15.
- 82. CITRULLUS VULGARIS. Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (14 packages.) "Christmas gift."
- 83. CUCUMIS MELO. Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 Originally from Sarepta, South Russia.
 Round, smooth; flesh light green.
- 84. CITRULLUS VULGARIS. Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (28 packages.) "Kopanski."
 Flesh yellow.
- 85. CITRULLUS VULGARIS. Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (44 packages.) "Cavenis" of Khiva, Turkestan.
 Flesh red.
- 86. CITRULLUS VULGARIS. Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (14 packages.) "Afghanistan Pearl."
 Flesh rose-colored.

87. CITRULLUS VULGARIS. **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 "Cream of Japan."
 Flesh white.
88. CITRULLUS VULGARIS. **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (5 packages.)
 Flesh red. Did not germinate in Delaware.
89. CITRULLUS VULGARIS. **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (25 packages.) "Baikal."
 Flesh red.
90. CITRULLUS VULGARIS. **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (60 packages.) Originally from Belbek, in the Crimea.
 Flesh red.
91. CITRULLUS VULGARIS. **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 Originally from South Ussurie, eastern Siberia.
 Flesh yellow.
92. CITRULLUS VULGARIS. **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (62 packages.) Originally from Turkestan.
 Flesh red.
93. CITRULLUS VULGARIS. **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (30 packages.) "Roubanski Rjabko."
 Flesh red.
94. CITRULLUS VULGARIS. **Watermelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 "Czar of Baktsha."
 Flesh red.
95. CUCUMIS MELO. **Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 "Dutjma." Originally from Khiva, Turkestan.
 "The Dutma or Dutjma varieties of Transcancasia and Turkestan are said to be covered with earth during a certain period of their growth to increase the delicacy of their flavor."
96. CUCUMIS MELO. **Muskmelon.**
 From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
 (14 packages.) "Petschatka" (a little stamp or seal), or "Stamboulka"
 (the bowl of a Turkish pipe).
 Flesh white.

- 97. CUCUMIS MELO. Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(25 packages.) "Marusja."
Dark green, finely netted, medium early; flesh pale green. Grown in south Russia.
- 98. CUCUMIS MELO. Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(53 packages.) "President Akhsharoumov."
Flesh green. A long, early sort from Turkestan, said to have been used for crossing to impart its earliness.
- 99. CUCUMIS MELO. Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(14 packages.) "Petro-Alexandrovs kian."
Flesh red.
- 100. CUCUMIS MELO. Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(229 packages.) "General Scobelev II." Originally from Khiva, Turkestan.
Flesh green.
- 101. CUCUMIS MELO. Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(5 packages.) "Okh-oo-took."
Flesh green.
- 102. CITRULLUS VULGARIS. Watermelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(35 packages.) Originally from Chimkent.
Flesh red.
- 103. CUCUMIS MELO. Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(92 packages.) "Kochanka" (a little cabbage head).
Flesh green.
- 104. CITRULLUS VULGARIS. Watermelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(131 packages.) "Pearl of Kishinev."
Flesh red.
- 105. CITRULLUS VULGARIS. Watermelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(120 packages.) "Favorite of the Pjatigorsk farm."
Flesh scarlet.
- 106. CITRULLUS VULGARIS. Watermelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(139 packages.) Originally from Afghanistan.
Flesh red.
- 107. CUCUMIS MELO. Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(5 packages.) "Bosi-boldo;" originally from Bokhara, Turkestan.
Flesh greenish.

- 108. CUCUMIS MELO. Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(25 packages.) "Crystal Queen."
Flesh white.
- 109. CUCUMIS MELO. Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(16 packages.) "Woshtchanka" (a waxed cloth).
Flesh white.
- 110. CUCUMIS MELO. Muskmelon.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(57 packages.) "Professor Batalin." Originally from Khiva, Turkestan.
Flesh white.
- 111. PRUNUS CERASUS. Cherry.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
From Vladimir.
"Professor Schroeder of the Agricultural College at Moscow said that this cherry comes true to seed, and must not be grafted on mahaleb or mazzard stocks." Nearly all failed to germinate.
- 112. PRUNUS CERASUS. Cherry.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
Nearly all failed to germinate. From Vladimir.
- 113. PISUM SATIVUM. Peas.**
From Moscow, Russia. Received through Prof. N. E. Hansen, February, 1898.
(2 packages.) Russian wax field peas.
- 114. CUCUMIS MELO. Muskmelon.**
From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898.
"Taken from fruits imported from Khiva, Turkestan. This includes the Khiva No. 1, extra select seed of three largest melons, weighing up to 30 pounds, which are marked Extra select. Russian Government officials said the melons from Khiva were the largest in Turkestan, some weighing fully 1 pood (36 pounds) each. Flesh white, very thick, quality delicious."
- 115. CUCUMIS MELO. Muskmelon.**
From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (15 packages.) "Gulabi."
- 116. CUCUMIS MELO. Muskmelon.**
From New Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (60 packages.)
- 117. CUCUMIS MELO. Muskmelon.**
From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (117 packages.)
Not of largest size, but one of the best winter melons; endures rough treatment in overland transportation.
- 118. CUCUMIS MELO. Muskmelon.**
From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (178 packages.)
Seed saved from fruit bought in the bazaar; oval, skin a clear yellow, smooth, somewhat netted at stem end; flesh, white; quality, excellent; size up to 36 by 39 inches in circumference, a medium-sized specimen 27 by 24½ inches.

119. CUCUMIS MELO.**Muskmelon.**

From New Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (207 packages.)

"Seed of four melons bought in a native (Sart) fruit bazaar. Fruit $31\frac{1}{2}$ by 20 inches in circumference, oval, uniform dark green, no stripes, smooth, flesh white, very sweet, but not ripe at time of purchase, November 5, 1897. Said to be a late keeper."

120. CUCUMIS MELO.**Muskmelon.**

From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (153 packages.)

"I purchased 25 melons of this variety, but saved one of them separate (No. 125) because it was netted. Skin a beautiful bright lemon-yellow, smooth; melon oval, flesh white. A few are orange yellow but probably because better ripened. This variety is not of especially large size, but its bright color will attract purchasers. Measurements of the two circumferences of five specimens were: 30 by $23\frac{3}{4}$; $28\frac{1}{2}$ by $23\frac{1}{2}$; 27 by $23\frac{1}{2}$; 28 by $23\frac{3}{4}$; 30 by $22\frac{1}{2}$ inches. Possibly Nos. 118, 143, 144, 120, and 125 may prove identical but there was enough variation to warrant keeping them separate. All were bought at various times and places in the bazaar. All are of excellent quality."

121. CUCUMIS MELO.**Muskmelon.**

From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (201 packages.)

Seed saved from "Gulabi" melons. Probably identical with No. 128. Fruit oval, 30 inches the longer circumference; skin yellow, smooth, somewhat marbled with green; flesh white, not fully ripe. "A good keeper and endures rough overland shipping," said the interpreter.

122. CUCUMIS MELO.**Muskmelon.**

From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (354 packages.) "Hodja Murat."

This number was fruited in Oklahoma, but the quality was not determined. From Texarkana, Ark., the flesh is described as very thick, of a beautiful green color, and of delicious quality.

"A large sack of seed dried in the flesh in native fashion by the gardener at the Emir of Bokhara's old summer palace at Old Amu Daria. "Hodja" is a term of distinction meaning a descendant of Mohammed. "Sown at the same time as Zamutcha (No. —) but is later. It likes water and should be watered every three days. Flesh of melting, virgin-like tenderness," said the old Mohammedan gardener."

123. CUCUMIS MELO.**Muskmelon.**

From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (330 packages.)

A yellow fall variety. Seed dried in the flesh by the natives.

124. CUCUMIS MELO.**Muskmelon.**

From New Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (82 packages.)

125. CUCUMIS MELO.**Muskmelon.**

From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (46 packages.)

Fruit same as that of No. 120, but netted.

126. CUCUMIS MELO.**Muskmelon.**

From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (227 packages.)

An early variety.

- 127. CUCUMIS MELO. Muskmelon.**
 From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (102 packages.)
 Seed bought in native bazaar; it may be mixed. Variety said to be early.
- 128. CUCUMIS MELO. Muskmelon.**
 From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (135 packages.) "Gulabi."
 "Common in the bazaars; stands rough shipping. This variety, like many others, is gathered unripe late in the fall and is hung up in slings, made of a kind of reed grass close to the ceiling in the native houses, where it ripens during the winter and into the spring."
- 129. CUCUMIS MELO. Muskmelon.**
 From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (172 packages.)
 A late fall variety.
- 130. CUCUMIS MELO. Muskmelon.**
 From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (95 packages.) "Emir" or "Ameer."
 Keeps till spring.
- 131. CUCUMIS MELO. Muskmelon.**
 From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (71 packages.) "Hodjamurat."
- 132. CUCUMIS MELO. Muskmelon.**
 From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (90 packages.)
- 133. CUCUMIS MELO. Muskmelon.**
 From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (33 packages.) "Shirazi."
 Keeps till spring.
- 134. CUCUMIS MELO. Muskmelon.**
 From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (32 packages.) "Durbei."
 "Ripens in June."
- 135. CUCUMIS MELO. Muskmelon.**
 From Turkestan. Received through Prof. N. E. Hansen, February, 1898. (35 packages.) "Coctcha."
 "Seed obtained at Old Amu Daria, but said to have come direct from Cherabad by way of Kerki. The interpreter said that when seed from Cherabad is planted at Kerki (a town on the Amu Daria River), the fruit is modified in form and color, and that this variety is very rare and difficult to obtain pure."
- 136. CUCUMIS MELO. Muskmelon.**
 From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (35 packages.) "Zagara."
- 137. CUCUMIS MELO. Muskmelon.**
 From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (47 packages.) "Bek-zati," said to mean "descendant of a prince."

- 138. CUCUMIS MELO. Muskmelon.**
From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (25 packages.) "Saa-mutchu."
Keeps very late in the spring. See No. 137.
- 139. CUCUMIS MELO. Muskmelon.**
From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (48 packages.) "Bek-zaati," said to mean "prince's mouth."
- 140. CUCUMIS MELO. Muskmelon.**
From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (68 packages.) "Durbei."
Probably same as No. 134.
- 141. CUCUMIS MELO. Muskmelon.**
From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (39 packages.) "Gulabi."
- 142. CUCUMIS MELO. Muskmelon.**
From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (43 packages.)
- 143. CUCUMIS MELO. Muskmelon.**
From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (28 packages.)
Oval, somewhat netted, yellow. See No. 120.
- 144. CUCUMIS MELO. Muskmelon.**
From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (28 packages.)
"A round, yellow, netted melon, 26 inches in circumference, with white flesh, found mixed with Nos. 118 and 120."
- 145. CUCUMIS MELO. Muskmelon.**
From Old Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (51 packages.) "Gulabi."
A common sort; stands rough shipping.
- 146. CUCUMIS MELO. Muskmelon.**
From Turkestan. Received through Prof. N. E. Hansen, February, 1898. (90 packages.)
Mixture of choice native sorts. Seeds saved in the flesh in native fashion.
- 147. CUCUMIS MELO. Muskmelon.**
From Turkestan. Received through Prof. N. E. Hansen, February, 1898. (65 packages.) "Durbei."
"Ripens in June." Perhaps the same as No. 134.
- 148. CUCUMIS MELO. Muskmelon.**
From Odessa, Russia. Received through Prof. N. E. Hansen, February, 1898. (34 packages.)
- 149. CUCUMIS MELO. Muskmelon.**
From New Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (44 packages.)
"Twenty-six by 3½ inches in circumference, oval approaching ovate, surface uneven, light yellow with mingled yellow and green marbled raised spots; flesh white, melting, delicious. Fruit bought in a native Sart fruit bazaar November 5, 1897."

- 150. CUCUMIS MELO. Muskmelon.**
 From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (17 packages.) "Saraksi."
 Keeps till spring.
- 151. CUCUMIS MELO. Muskmelon.**
 From Turkestan. Received through Prof. N. E. Hansen, February, 1898. (36 packages.)
- 152. CUCUMIS MELO. Muskmelon.**
 From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (110 packages.)
- 153. CUCUMIS MELO. Muskmelon.**
 From Turkestan. Received through Prof. N. E. Hansen, February, 1898. (87 packages.)
- 154. CUCUMIS MELO. Muskmelon.**
 From Turkestan. Received through Prof. N. E. Hansen, February, 1898. (15 packages.) "Tikinsche" (Turcoman).
 A long, oval, sweet, juicy, summer variety from Turcomania.
- 155. CUCUMIS MELO. Muskmelon.**
 From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (14 packages.) "Gulaoo."
 A winter variety. Sown twice a year, the second crop for late keeping.
- 156. CUCUMIS MELO. Muskmelon.**
 From Turkestan. Received through Prof. N. E. Hansen, February, 1898. (10 packages.) "Ak-morosak" (white melon).
 Round, netted, flesh green. From Turcomania.
- 157. CUCUMIS MELO. Muskmelon.**
 From Turkestan. Received through Prof. N. E. Hansen, February, 1898. (5 packages.)
 Oval, greenish yellow, netted, flesh green, very sweet and juicy.
- 158. CUCUMIS MELO. Muskmelon.**
 From Turkestan. Received through Prof. N. E. Hansen, February, 1898. (10 packages.)
 "The only flat sort; very early, green with light rose, aromatic, very good."
- 159. CUCUMIS MELO. Muskmelon.**
 From Turkestan. Received through Prof. N. E. Hansen, February, 1898. (6 packages.) "Kara morosak" (black melon).
 A summer variety from Turcomania.
- 160. CUCUMIS MELO. Muskmelon.**
 From Turkestan. Received through Prof. N. E. Hansen, February, 1898. (87 packages.)
- 161. CUCUMIS MELO. Muskmelon.**
 From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (37 packages.)

- 162. CUCUMIS MELO. Muskmelon.**
From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (33 packages.)
- 163. CUCUMIS MELO. Muskmelon**
From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (24 packages.)
- 164. CUCUMIS MELO. Muskmelon.**
From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (39 packages.)
- 165. CUCUMIS MELO. Muskmelon.**
From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (42 packages.)
- 166. CUCUMIS MELO. Muskmelon.**
From Uralsk, Russia. Received through Prof. N. E. Hansen, February, 1898. (28 packages.)
Originally from Turkestan.
- 167. CUCUMIS MELO. Muskmelon.**
From Uralsk, Russia. Received through Prof. N. E. Hansen, February, 1898. (25 packages.)
Originally from Turkestan.
- 168. CUCUMIS MELO. Muskmelon.**
From Uralsk, Russia. Received through Prof. N. E. Hansen, February, 1898. (15 packages.)
Originally from Turkestan.
- 169. CUCUMIS MELO. Muskmelon.**
From Uralsk, Russia. Received through Prof. N. E. Hansen, February, 1898. (10 packages.)
Originally from Turkestan.
- 170. CUCUMIS MELO. Muskmelon.**
From Uralsk, Russia. Received through Prof. N. E. Hansen, February, 1898. (10 packages.)
Originally from Turkestan.
- 171. CUCUMIS MELO. Muskmelon.**
From Uralsk, Russia. Received through Prof. N. E. Hansen, February, 1898. (20 packages.)
Originally from Turkestan.
- 172. CUCUMIS MELO. Muskmelon.**
From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (32 packages.) "Kara-kootur."
- 173. DAUCUS CAROTA. Carrot.**
From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, February, 1898. (17 packages.)

- 174. ALLIUM CEPA.** **Onion.**
From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
- 175. CITRULLUS VULGARIS.** **Watermelon.**
From New Bokhara, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (4 packages.)
- 176. CUCURBITA PEPO.** **Squash.**
From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (2 packages.)
- 177. PISTACIA VERA.** **Pistachio.**
From Tiflis, Transcaucasia. Received through Prof. N. E. Hansen, March, 1898.
- 178. CUCURBITA PEPO.** **Squash.**
From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
Yellow, oval, 15 by 7 inches in diameter.
- 179. PUNICA GRANATUM.** **Pomegranate.**
From Turkestan. Received through Prof. N. E. Hansen, March, 1898.
"Seeds saved from large, fine fruits picked in the garden of the Emir of Bokhara's summer palace in Old Amu Daria."
- 180. LAGENARIA VULGARIS.** **Bottle gourd.**
From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (14 packages.)
"Large. The native Sarts engrave the surface in odd designs."
- 181. LAGENARIA VULGARIS.** **Bottle gourd.**
From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (6 packages.)
Small, much used to hold snuff, oil, etc.
- 182. PRUNUS AMYGDALUS.** **Almond.**
From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
- 183. PRUNUS ARMENIACA.** **Apricot.**
From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
- 184. CUCURBITA.** **Squash.**
From Old Bokhara, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (3 packages.)
- 185. SORGHUM VULGARE.** **Sorghum.**
From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
Native fodder plant. The natives use the seed for porridge and bread.
- 186. GLYCYRRHIZA GLABRA.** **Licorice.**
From Uralsk, Russia. Received through Prof. N. E. Hansen, March, 1898.
"Native on the driest steppes at Uralsk. The root affords licorice and the tops are a favorite fodder for cattle, and are cut for hay. There is some *Glycyrrhiza echinata* seed mixed with the other, but both are good."

- 187. GLYCYRRHIZA GLABRA.** **Licorice.**
From Uralsk, Russia. Received through Prof. N. E. Hansen, March, 1898. (4 packages.)
Same as No. 186.
- 188. GLYCYRRHIZA GLABRA.** **Licorice.**
From Uralsk, Russia. Received through Prof. N. E. Hansen, March, 1898. (3 packages.)
Same as No. 186.
- 189. PRUNUS ARMENIACA.** **Apricot.**
From New Bokhara. Received through Prof. N. E. Hansen, March, 1898.
- 190. PRUNUS.** **Plum.**
From Old Bokhara. Received through Prof. N. E. Hansen, March, 1898.
- 191. PRUNUS ARMENIACA.** **Apricot.**
From Old Bokhara. Received through Prof. N. E. Hansen, March, 1898.
- 192. PRUNUS.** **Cherry.**
From Old Bokhara. Received through Prof. N. E. Hansen, March, 1898.
- 193. PRUNUS ARMENIACA.** **Apricot.**
From Old Bokhara. Received through Prof. N. E. Hansen, March, 1898.
- 194.**
From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
Shrub with inflated pods growing in alkali desert soil.
- 195. AMMODENDRON.** **Sand acacia.**
From Turkestan. Received through Prof. N. E. Hansen, March, 1898. (16 packages.) Desert shrub.
"Seeds of *Ammodendron sieversii* and *A. karelinii*. Used along the Transcaspian Railway to bind the moving sands. In practice no distinction is made between these two species. See No. 198."
- 196. ARISTIDA PUNGENS PINNATA.** **Sand oats.**
From Turkestan. Received through Prof. N. E. Hansen, March, 1898. (1 package.)
"A desert plant found best for binding the sand dunes the first year or two along the Transcaspian Railway. Not found native at Amu Daria but in the Kirghiz Tartar steppes north."
- 197. CALLIGONUM.**
From Repetchek, near Amu Daria, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (2 packages.) Desert shrub. See No. 202.
- 198. AMMODENDRON.** **Sand acacia.**
From Repetchek, near Amu Daria, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (4 packages.)
"Seeds of *Ammodendron sieversii* and *A. karelinii*. The former has leaves with long petioles; the leaves of the latter are nearly sessile. Native desert thorn shrubs or bushy trees, attaining a height of 7 meters; the wood very strong and used for building purposes. Seeds must be sown in the fall (November in Bokhara); if sown in spring they remain dormant till the following year. Both species are used for binding moving sand dunes along the Transcaspian Railway."

199. PTEROCOCCUS.

From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (2 packages.)

Desert plant, used for binding moving sands along the Transcaspian Railway.

200. CALLIGONUM.

From Turkestan. Received through Prof. N. E. Hansen, March, 1898. (2 packages.) Desert plant. See No. 202.

201.

From Repetchek, near Amu Daria, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (1 package.)

Desert plant, used for binding moving sands along the Transcaspian Railway.

202. CALLIGONUM.

From Repetchek, near Amu Daria, Turkestan. Received through Prof. N. E. Hansen, March, 1898. "Ak-candym." (native Sart name, "ak" meaning *white*.)

Planted along the Transcaspian Railway to bind the moving sands. All these bushes make excellent fuel.

203. CUCUMIS SATIVUS.**Cucumber.**

From Turkestan. Received through Prof. N. E. Hansen, March, 1898. (6 packages.)

204. CALLIGONUM.

From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, March, 1898.

Desert plant, not valuable for binding moving sands, but good on clay.

205. SALSOLA ARBUSCULA.

From Turkestan. Received through Prof. N. E. Hansen, March, 1898. (4 packages.)

"A native desert bush with linear leaves 3 inches long; attains a height of 15 feet; much planted to hold the moving sands along the Transcaspian Railway, and esteemed the best because the growth is quickest. Mr. Palettsky, the Government forestry expert in charge of this work, showed me one-year plants in nursery 5 feet high and well branched. This bush does well on sand and alkali deserts; the more it is covered with moving sand the better it grows, as the branches root quickly. Wood heavier than water, good for fuel, but too brittle and hard to use in the arts."

206. ARISTIDA PUNGENS.

From Repetchek, near Amu Daria, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (2 packages.) A variety.

Desert plant, used in the same way as No. 196.

207. HALOXYLON AMMODENDRON.

From Turkestan. Received through Prof. N. E. Hansen, March, 1898. (2 packages.) "Saxaool."

"Used to bind the moving sand dunes along the Transcaspian Railway. A native, large, bushy, fleshy, leafless tree, which grows slowly at first but attains a height of 8 to 10 meters (24 to 30 feet). Grows well in the sand deserts and on alkali soils. Wood makes excellent fuel, better than birch, heavier than water, but too brittle and hard to use in the arts."

208.

From Repetchek, near Amu Daria, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (4 packages.) Desert plant.

209. EPHEDRA STROBILACEA.

From Repetchek, near Amu Daria, Turkestan. Received through Prof. N. E. Hansen, March, 1898. Desert plant.

Used to bind the moving sands along the Transcaspian Railway.

210. PYRUS GERMANICA.**Medlar.**

From Caucasus. Received through Prof. N. E. Hansen, March, 1898. (1 package.)

211. PYRUS SORBUS.**Service tree.**

From Yalta, Crimea. Received through Prof. N. E. Hansen, March, 1898. (4 packages.)

"Fruit somewhat pyriform, 1 by 1½ inch in diameter, yellow, with red cheek. Tree much like mountain ash. Fruit much eaten when softened by partial decay, but to my taste this tree is of value only for ornament." *Professor Hansen.*

212. CUCUMIS SATIVUS.**Cucumber.**

From Tiflis, Transcaucasia. Received through Prof. N. E. Hansen, March, 1898.

213.

From Turkestan. Received through Prof. N. E. Hansen, March, 1898. (1 package.) Desert plant for binding moving sands. Label missing.

214. TRITICUM DURUM.**Wheat.**

From Daghestan Province, North Caucasus. Received through Prof. N. E. Hansen, March, 1898. Spring variety.

215. TRITICUM VULGARE.**Wheat.**

From Poland. Received through Prof. N. E. Hansen, March, 1898. (1 package.) "Kostromka."

"One of the best wheats in Poland. Professor Williams said that this sample was probably spring, but there is also a fall Kostromka."

216. TRITICUM DURUM (?).**Wheat.**

From Daghestan Province, North Caucasus. Received through Prof. N. E. Hansen, March, 1898. "A very hard wheat."

217. TRITICUM VULGARE.**Wheat.**

From Poland. Received through Prof. N. E. Hansen, March, 1898. "Pulavka."

Very white in cross section; contains much starch. A fall variety.

218. TRITICUM VULGARE (?).**Wheat.**

From Poland. Received through Prof. N. E. Hansen, March, 1898.

A fall variety.

219. ORYZA SATIVA.**Rice.**

From Caucasus. Received through Prof. N. E. Hansen, March, 1898. "Chaltick."

The finest and highest-priced Caucasus rice. It has a curved grain.

220. PISUM SATIVUM.**Pea.**

From North China. Received through Prof. N. E. Hansen, March, 1898. (1 package.)

221. SESAMUM INDICUM.**Sesame.**

From Erivan Province, Transcaucasia. Received through Prof. N. E. Hansen, March, 1898. (1 package.) The form called *Sesamum orientale*.

"Yields an oil much used for the table, also good for paints. Native in the Erivan Province and largely cultivated. Said to be better for table use than olive oil."

222. PERILLA.

From North China. Received through Prof. N. E. Hansen, March, 1898. (1 package.) "Soosa." Grown for human food.

223. CHÆTOCHLOA ITALICA.**Italian millet.**

From North China. Received through Prof. N. E. Hansen. "Cooza."

224. PHASEOLUS.**Bean.**

From North China. Received through Prof. N. E. Hansen, March, 1898. (1 package.) "Landow."

225. SORGHUM VULGARE (?).**Sorghum.**

From North China. Received through Prof. N. E. Hansen, March, 1898. (1 package.) "Ga-oo-lan."

Used for human food.

226. PHASEOLUS.**Bean.**

From North China. Received through Prof. N. E. Hansen, March, 1898. (1 package.) "Vay-do."

227. PANICUM MILIACEUM.**Millet.**

From North China. Received through Prof. N. E. Hansen, March, 1898. (1 package.) "Me-sa."

Chinese black; does not shell when ripe.

228. PANICUM CRUS-GALLI.**Barnyard grass.**

From North China. Received through Prof. N. E. Hansen, March, 1898. (1 package.) Cultivated for human food.

229. CHÆTOCHLOA ITALICA.**Italian millet.**

From North China. Received through Prof. N. E. Hansen, March, 1898. (1 package.) "Nian-goo."

230. BLANK.**231. [LABEL MISSING.]**

Belongs to Prof. N. E. Hansen's importations.

232. [LABEL MISSING.]

Belongs to Prof. N. E. Hansen's importations.

233. ACANTHOPANAX RICINIFOLIA.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

From the Minnesota Station this is reported as "a very weak grower."

234. ACTINIDIA CALLOSA.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

235. ACTINIDIA POLYGAMA.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Refused to grow at the Minnesota Station.

236. PRUNUS NANA.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Native of the Siberian steppes. Did not survive at the Oregon Station; is doing well at the South Dakota Station.

237. ATRAGENE ALPINA SIBIRICA (?)

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Is flourishing at the Minnesota Station.

238. ATRAPHAXIS LANCEOLATA.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Flowered at the Minnesota Station.

239. BERBERIS VULGARIS.**Barberry.**

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Form called *B. heteropoda*.

240. BERBERIS VULGARIS.**Barberry.**

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Form called *B. thunbergii*.

241. BERBERIS VULGARIS.**Barberry.**

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Form called *B. thunbergii*.

242. BERBERIS VULGARIS AMURENSIS.**Barberry.**

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Nine plants alive at the Minnesota Station.

243. CARAGANA FRUTESCENS.**Pea tree.**

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Died at the Oregon Station; is doing well at the South Dakota Station.

244. CARAGANA JUBATA.**Pea tree.**

From Russia. Received through Prof. N. E. Hansen, December, 1897.

245. CARAGANA PYGMEA.**Pea tree.**

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Alive, but apparently not flourishing at the Oregon station.

246. CRATÆGUS PENTAGYNA.**Thorn.**

From Russia. Received through Prof. N. E. Hansen, December, 1897.

247. CRATÆGUS SANGUINEA.**Thorn.**

From Russia. Received through Prof. N. E. Hansen, December, 1897.

248. DEUTZIA PARVIFLORA.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Died at the Oregon station.

249. DIERVILLA MIDDENDORFIANA.**Bush honeysuckle.**

From Russia. Received through Prof. N. E. Hansen, December, 1897.

250. *ELÆAGNUS MULTIFLORA.*

From Russia. Received through Prof. N. E. Hansen, December, 1897.

251. *ELEUTHEROCOCCUS SENTICOSUS.*

From Russia. Received through Prof. N. E. Hansen, December, 1897.

252. *EUONYMUS THUNBERGIANUS.*

From Russia. Received through Prof. N. E. Hansen, December, 1897.

253. *EUONYMUS MAACKI.*

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Two plants have made strong growth at the Minnesota station.

254. *FRAXINUS MANDSCHURICA.*

Ash.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

255. *HIPPOPHÆE RHAMNOIDES.*

From Irkutsk, Siberia. Received through Prof. N. E. Hansen, December, 1897.

Plants are growing at several points. "This species as found in France winterkills at St. Petersburg, but the Irkutsk form is hardy. Much esteemed in Siberia for its abundant yellow fruit, which is used for sauce, preserves, and cordials. It is also planted for hedges."

256. *HYDRANGEA ASPERA.*

From Russia. Received through Prof. N. E. Hansen, December, 1897.

257. *JUGLANS MANDSHURICA.*

Walnut.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

258. *LARIX DAHURICA.*

Larch.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

259. *LESPEDEZA BICOLOR.*

From Russia. Received through Prof. N. E. Hansen, December, 1897.

260. *LONICERA ALBERTI.*

Honeysuckle.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

Flourishing at the Minnesota and South Dakota stations; died in Oregon. "Plants propagated from the original stock found by Albert Regel in the high mountains of Turkestan."

261. *LONICERA CHRYSANTHA.*

Honeysuckle.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

262. *LONICERA CÆRULEA DEPENDENS.*

Honeysuckle.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

The fruit is edible and sold in the market at Nertchinsk, east of Lake Baikal, Siberia.

263. *LONICERA HISPIDA.*

Honeysuckle.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

264. *LONICERA MAACKI.*

Honeysuckle.

From Russia. Received through Prof. N. E. Hansen, December, 1897.

265. *LONICERA MAXIMOWICZII*. **Honeysuckle.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
266. *MENISPERMUM DAURICUM*. **Moonseed.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
267. *METAPLEXIS STAUNTONI*.
From Russia. Received through Prof. N. E. Hansen, December, 1897.
268. *QUERCUS MONGOLICA* **Oak.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
270. *POTENTILLA FRUTICOSA*. **Cinquefoil.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
272. *PRUNUS MAACKI*.
From Russia. Received through Prof. N. E. Hansen, December, 1897.
273. *PYRUS BACCATA*. **Crab apple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
"Imported to test the Russian method for preventing root-killing of apple trees, viz, to use *P. baccata* as a stock. The nursery method is much like that for *Prunus mahaleb* with cherries. Professor Schroeder, of the Agricultural College at Moscow, said the effect was slightly to dwarf the cultivated apples in tree, but to make them bear at least two years earlier. *Pyrus baccata* is native at Irkutsk and east of Lake Baikal, and the typical form bears fruit about the size of peas. Dr. Regel selected and named a number of varieties differing in size and color of fruit."
274. *RHAMNUS CATHARTICA*. **Buckthorn.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
Dead at the Minnesota station.
275. *RHODODENDRON CHRYSANTHUM*.
From Russia. Received through Prof. N. E. Hansen, December, 1897.
276. *RHODODENDRON KAMTSCHATICUM*.
From Russia. Received through Prof. N. E. Hansen, December, 1897.
277. *RHODODENDRON PUNCTATUM*.
From Russia. Received through Prof. N. E. Hansen, December, 1897.
Died at the Minnesota Station.
278. *ROSA RUGOSA*. **Rose.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
Has proved a very vigorous grower at Washington, D. C., and in Iowa.
279. *ROSA RUGOSA ALBA*. **Rose.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
280. *ROSA RUGOSA*. **Rose.**
From Russia. Received through Prof. N. E. Hansen, December, 1897. Var. flore pleno.

- 280a. RUBUS ARCTICUS.** **Raspberry.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
 Died in transit. Native of the far north.
- 281. RUBUS CÆSIUS TURKESTANICUS.** **Raspberry.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
 Native of Turkestan, and deemed promising for hot semiarid or arid regions.
 Reported growing at Coconut Grove, Fla., and at Wichita, Kans.; at the latter
 point said to be flourishing.
- 282. RUBUS CHAMÆMORUS.** **Cloudberry.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 285. SPIRÆA LÆVIGATA.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 286. SPIRÆA LONGIGEMMIS.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 287. SPIRÆA TRILOBATA.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 288. SYRINGA EMODI.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 289. TILIA MANDSHURICA.** **Linden.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 290. VACCINIUM ULIGINOSUM.** **Bog bilberry.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 291. VACCINIUM VITIS-IDÆA.** **Mountain cranberry.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 292. PYRUS BACCATA.** **Crab apple.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898.
 See No. 273.
- 293. PYRUS PRUNIFOLIA.** **Apple.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 294. PYRUS BACCATA.** **Crab apple.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898.
 See No. 273.
- 295. PYRUS PRUNIFOLIA.** **Apple.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898.
 Imported for the same purpose as No. 273, but deemed less promising.
- 296. DIERVILLA MIDDENDORFIANA.** **Bush honeysuckle.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 297. SPIRÆA LÆVIGATA.**
 From Russia. Received through Prof. N. E. Hansen, January, 1898.

- 298. CORNUS TARTARICA.** **Cornel.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 299. CRATÆGUS SANGUINEA.** **Thorn.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 300. CARAGANA FRUTESCENS.** **Pea tree.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
Variety "*grandiflora*."
- 301. RUBUS.** **Raspberry.**
From Russia. Received through Prof. N. E. Hansen, January, 1898. Plants.
Mochaikin, variety "Usanka."
A standard Russian red variety.
- 302. RUBUS LACINIATUS.** **Raspberry.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 303. RUBUS FRUTICOSUS.** **Raspberry.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 304. ROSA RUGOSA.** **Rose.**
From Russia. Received through Prof. N. E. Hansen, January, 1898. "Souvenir de Jeddo."
- 305. LARIX SIBIRICA.** **Larch.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
Variety "*archangelica*."
- 306. LARIX DAHURICA.** **Larch.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 307. ACER TATARICUM.** **Maple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 308. RIBES.** **Gooseberry.**
From Moscow, Russia. Received through Prof. N. E. Hansen, December, 1897.
"Avenarius."
Dr. Schroeder esteems this highly. A native variety.
- 309. PRUNUS.** **Plum.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
From Otshakov.
- 310. PRUNUS.** **Cherry.**
From Russia. Received through Prof. N. E. Hansen, December, 1897. "Vladimir."
- 311. RUBUS.** **Raspberry.**
From Russia. Received through Prof. N. E. Hansen, December, 1897. "Usanka."
See No. 301.
- 312. LONICERA CÆRULEA.** **Honeysuckle.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.

- 313. BERBERIS VULGARIS.** **Barberry.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
Form called *B. heteropoda*.
- 314. HIPPOPHÆE RHAMNOIDES.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
See No. 255.
- 315. RIBES NIGRUM.** **Black currant.**
From Russia. Received through Prof. N. E. Hansen, December, 1897. Long-fruited Russian.
- 316. RIBES RUBRUM.** **Red currant.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
"Brusskovaja" (square).
- 317. PYRUS BACCATA.** **Crab apple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
See No. 273. Seedlings 7 to 14 inches long. Seed originally from Irkutsk, Siberia.
- 318. PYRUS PRUNIFOLIA.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
See No. 295.
- 319. PYRUS PRUNIFOLIA.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897. "Ducin."
- 320. PRUNUS CHAMÆCERASUS.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
"Native to dry steppes in East Russia and Siberia. Professor Schroeder regarded this species as having a future when improved by cultivation."
- 321. RIBES SAXATILE.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 322. SALIX CINEREA GLABRA.** **Willow.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 323. SALIX TRIANDRA.** **Willow.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
Variety "*trevirani*."
- 324. BLANK.**
- 325. SALIX PURPUREA.** **Willow.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
Variety "*uralensis*."
- 326. PYRUS INTERMEDIA.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.

- 327. PYRUS AUCUPARIA DULCE.** **Mountain ash.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
Fruit edible; used for preserves and cordials.
- 328. PYRUS ARIA.** **Beam tree.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 329. BLANK.**
- 330. PYRUS PRUNIFOLIA.**
From Russia. Received through Prof. N. E. Hansen, December, 1897. "Petrowskoje."
- 331. PYRUS BACCATA.** **Crab apple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 332. PYRUS AMYGDALIFORMIS.** **Pear.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 333. PYRUS AMYGDALIFORMIS.** **Pear.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
Variety "*ussuriensis*."
- 334. PYRUS BACCATA CHINENSIS.** **Crab apple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 335. CARAGANA SPINOSA.** **Pea tree.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 336. CARAGANA SPINOSA.** **Pea tree.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 337. CARAGANA ARENARIA.** **Pea tree.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 338. SALIX VIMINALIS REGALIS.** **Willow.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 339. POPULUS.** **Poplar.**
From Russia. Received through Prof. N. E. Hansen, December, 1897. "*Populus wobsti*."
- 340. POPULUS BALSAMIFERA.** **Balsam poplar.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 341. POPULUS BALSAMIFERA.** **Balsam poplar.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 342. POPULUS MOSKOVIENSIS.** **Poplar.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 343. POPULUS.** **Poplar.**
From Russia. Received through Prof. N. E. Hansen, December, 1897. "*Populus catherinea*."

- 344. ARTEMISIA ABROTANUM. Southernwood.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
 Tall-growing Russian variety used for low hedges in Assinaboia. Only a few cuttings to determine nomenclature.
- 345. ARTEMISIA PROCERA.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
 Tall-growing Russian variety used for low hedges in Assinaboia. Only a few cuttings to determine nomenclature.
- 346. RIBES NIGRUM. Black currant.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897. Large-fruited Russian.
- 347. RIBES RUBRUM. Red currant.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897. "Bruschkovaja (square)."
- 347a. PYRUS MALUS. Apple.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897. "Swinzowka."
- 348. PYRUS MALUS. Apple.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897. "Arabian."
- 349. PYRUS MALUS. Apple.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897. "Largerfelder."
- 350. PYRUS MALUS. Apple**
 From Russia. Received through Prof. N. E. Hansen, December, 1897. "Sala terevskoje."
- 351. PYRUS MALUS. Apple**
 From Russia. Received through Prof. N. E. Hansen, December, 1897. "Charlamovskoje" (not Borowinka).
- 352. PYRUS MALUS. Apple.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 353. PYRUS MALUS. Apple.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 354. PYRUS MALUS. Apple.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 355. PYRUS MALUS. Apple.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 356. PYRUS MALUS. Apple.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 357. PYRUS PRUNIFOLIA. Apple.**
 From Russia. Received through Prof. N. E. Hansen, December, 1897.

- 358. PYRUS MALUS.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 359. PYRUS MALUS.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 360. PYRUS PRUNIFOLIA.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
- 361. PYRUS PRUNIFOLIA.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
Hybrid variety *edulis*.
- 362. PYRUS PRUNIFOLIA.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
"Hybrid variety *nobilis*. One of the hybrids originated by Prof. Schroeder, of Moscow, between *Pyrus baccata* and the hardiest Russian apples. Several others are included in the foregoing and following numbers."
- 363. PYRUS PRUNIFOLIA.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, December, 1897.
Hybrid variety *purpurea*.
- 364. PYRUS MALUS.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 365. PYRUS MALUS.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 366. PYRUS MALUS.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 367. PYRUS MALUS.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 368. PYRUS PRUNIFOLIA.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 369. PYRUS MALUS.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 370. PYRUS PRUNIFOLIA.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 371. PYRUS MALUS.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 372. PYRUS MALUS.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
- 373. PYRUS MALUS.** **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.

374. *PYRUS MALUS*. Apple.
From Russia. Received through Prof. N. E. Hansen, January, 1898.
375. *PYRUS COMMUNIS*. Pear.
From Russia. Received through Prof. N. E. Hansen, January, 1898. "Compot."
376. *PYRUS COMMUNIS*. Pear.
From Russia. Received through Prof. N. E. Hansen, January, 1898.
378. *PYRUS MALUS*. Apple.
From Russia. Received through Prof. N. E. Hansen, January, 1898.
379. *SALIX TRIANDRA*. Willow.
From Russia. Received through Prof. N. E. Hansen, January, 1898.
380. *PYRUS PRUNIFOLIA*. Apple.
From Russia. Received through Prof. N. E. Hansen, January, 1898.
See No. 295.
381. *PRUNUS CERASUS*. Cherry.
From Russia. Received through Prof. N. E. Hansen, January, 1898.
382. *PRUNUS*.
From Russia. Received through Prof. N. E. Hansen, January, 1898.
383. *PYRUS MALUS*. Apple.
From Russia. Received through Prof. N. E. Hansen, January, 1898.
384. *PYRUS COMMUNIS*. Pear.
From Russia. Received through Prof. N. E. Hansen, January, 1898. "Sapiganka."
385. *PYRUS PRUNIFOLIA*. Apple.
From Russia. Received through Prof. N. E. Hansen, January, 1898.
386. *PRUNUS CERASUS*. Cherry.
From Russia. Received through Prof. N. E. Hansen, January, 1898.
387. *LONICERA ALBERTI*. Honeysuckle.
From Russia. Received through Prof. N. E. Hansen, January, 1898. See No. 260.
388. *LONICERA CHRYSANTHA*. Honeysuckle.
From Russia. Received through Prof. N. E. Hansen, January, 1898.
389. *LONICERA CERULEA DEPENDENS*. Honeysuckle.
From Russia. Received through Prof. N. E. Hansen, January, 1898. See No. 262.
390. *LONICERA HISPIDA*. Honeysuckle.
From Russia. Received through Prof. N. E. Hansen, January, 1898.
391. *LONICERA MAACKI*. Honeysuckle.
From Russia. Received through Prof. N. E. Hansen, January, 1898.

392. *LONICERA MAXIMOWICZII*. **Honeysuckle.**
From Russia. Received through Prof. N. E. Hansen, January, 1898.
393. *PYRUS MALUS*. **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898. Scions.
394. *PYRUS MALUS*. **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898. Scions.
395. *PYRUS MALUS*. **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898. Scions.
396. *PYRUS MALUS*. **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898. Scions.
397. *PYRUS MALUS*. **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898. Scions.
398. *PYRUS MALUS*. **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898. Scions.
400. *PYRUS MALUS*. **Apple.**
From Russia. Received through Prof. N. E. Hansen, January, 1898. Scions.
401. *QUERCUS MONGOLICA*. **Oak.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
402. *NEGUNDO MANDSHURICUM*. **Negundo.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
403. *POPULUS BALSAMIFERA*. **Balsam poplar.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
404. *PYRUS AUCUPARIA*. **Mountain ash.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
405.
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
406.
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
407. *ELEUTHEROCOCCUS SENTICOSUS*.
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
408. *ULMUS CAMPESTRIS*. **Elm.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

409. *LARIX JAPONICA*. **Larch.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
410. *SAMBUCUS RACEMOSA*. **Elder.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
411. *PRUNUS CERASUS*. **Cherry.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. (18 packages.)
412. *RHAMNUS DAHURICA*. **Buckthorn.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. (Not found.)
413. *PHELLODENDRON AMURENSIS*.
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. (Not found.)
414. *SCHIZANDRA CHINENSIS*.
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
415. *SYRINGA AMURENSIS*. **Lilac.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
416. *ALNUS ALNOBETULA*. **Alder.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
417. *OSTRYA MANDSHURICA*. **Hornbeam.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
418. *PRUNUS MAACKI*.
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
419. *FRAXINUS XANTHOXYLOIDES*. **Ash.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
420. *ACER TATARICUM*. **Maple.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
421. *VITIS VINIFERA*. **Grape.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. Form known as "*Vitis amurensis*."
422. *FRAXINUS MANDSHURICA*. **Ash.**
From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

423. *PINUS SYLVESTRIS*. **Scotch Pine.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
424. *ACER TEGMENTOSUS*. **Maple.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
425. *PHILADELPHUS CORONARIUS*. **Syringa.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
426. *EUONYMUS MACROPTERUS*. **Willow.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
427. *SALIX VIMINALIS*. **Willow.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
428. *ULMUS MONTANA*. **Elm.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
429. *TILIA MANDSHURICA*. **Linden.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
430. *PYRUS BACCATA*. **Crab apple.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
431. *TILIA CORDATA*. **Linden.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
432. *BETULA ERMANI*. **Birch.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
433. *LONICERA MAXIMOWICZII*. **Honeysuckle.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
434. *BETULA ALBA*. **White birch.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
435. *PICEA AJANENSIS*. **Spruce.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.
436. *CORNUS TARTARICA*. **Cornel.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Han-
 sen, March, 1898.

437. CLADRASTIS AMURENSIS.

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

438. PRUNUS GLANDULIFOLIA.

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

439. VITIS VINIFERA.**Grape.**

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

Known as "*Vitis amurensis*."

440. BETULA DAVURICA.**Birch.**

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

441. EUONYMUS THUNBERGIANUS.

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

442. ARALIA MANDSHURICA.

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

443. ULMUS CAMPESTRIS.**Elm.**

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

444. ARALIA MANDSHURICA.

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

445. PRUNUS PADUS.**Bird cherry.**

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

446. ACER.**Maple.**

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

"Dreifächerig" (three-parted).

447. ACER PICTUM.**Maple.**

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

448. SYRINGA AMURENSIS.**Lilac.**

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

449. CRATAEGUS PENTAGYNA.

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. (Not found.)

450. ACANTHOPANAX SESSILIFLORUM.

From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.

- 451. ACER.** **Maple.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
 "Strauchartig" (bushy).
- 452. PRUNUS ARMENIACA.** **Apricot.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
- 453. VIBURNUM OPULUS.** **Snowball.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
- 454. JUGLANS MANDSHURICA.** **Walnut.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
- 455. POLYGONUM SACHALINENSIS.** **Sachaline.**
 From Saghalin Island. Received through Prof. N. E. Hansen, March, 1898.
- 456. POLYGONUM WEYCHERI.**
 From Sakhalin Island. Received through Prof. N. E. Hansen, March, 1898.
 "New fodder plant. Value doubtful."
- 457. VITIS.** **Grape**
 From Sakhalin or Amur. Received through Prof. N. E. Hansen, March, 1898.
- 458. PRUNUS ARMENIACA.** **Apricot.**
 From Sakhalin or Amur. Received through Prof. N. E. Hansen, March, 1898.
- 459. PRUNUS PADUS.** **Bird cherry.**
 From Sakhalin or Amur. Received through Prof. N. E. Hansen, March, 1898.
- 460. ROSA.** **Rose.**
 From Sakhalin or Amur. Received through Prof. N. E. Hansen, March, 1898.
- 461. PRUNUS.**
 From Sakhalin or Amur. Received through Prof. N. E. Hansen, March, 1898.
 (3 packages.)
- 462. ACTINIDIA ACUMINATA.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. (85 packages.)
- 463. OXYCOCCUS.** **Cranberry.**
 From Sakhalin or Amur. Received through Prof. N. E. Hansen, March, 1898.
- 464. PYRUS.** **Pear.**
 From Sea Province, South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
- 465. PRUNUS PADUS.** **Bird cherry.**
 From Sakhalin or Amur. Received through Prof. N. E. Hansen, March, 1898. (3 packages.)

- 466. RUBUS CHAMÆMORUS** (?).
From Sakhalin. Received through Prof. N. E. Hansen, March, 1898. (1 package.) "Moroshka" (cloudberry).
- 467. HORDEUM VULGARE.** **Barley.**
From Olonezk Province, European Russia. Received through Prof. N. E. Hansen, March, 1898. (3 cleaned packages.)
From the farthest north the Moscow School could get it.
- 468. PHLEUM BOEHMERI MACRANTHA.** **Boehmer's timothy.**
From Russia. Received through Prof. N. E. Hansen, March, 1898.
- 469. MEDICAGO SATIVA.** **Alfalfa.**
From Turkestan Agricultural Society, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
Native alfalfa. Endures drought much better than European alfalfa. See No. 999.
- 470.**
From South Ussurie. Received through Prof. N. E. Hansen, March, 1898. (3 packages.) "Zuzia" (toper).
- 471. PISUM SATIVUM.** **Pea.**
From Siberia. Received through Prof. N. E. Hansen, March, 1898. "Chanda."
Imported into Amur Province, Siberia, from China.
- 472.**
From Siberia. Received through Prof. N. E. Hansen, March, 1898. (3 packages.) "Gaolan."
Imported into Amur Province, Siberia, from China.
- 473. HORDEUM VULGARE.** **Barley.**
From Siberia. Received through Prof. N. E. Hansen, March, 1898. (3 packages.)
Imported into Amur Province, Siberia, from China.
- 474. TRITICUM DURUM** (?). **Wheat.**
From Siberia. Received through Prof. N. E. Hansen, March, 1898.
Imported into Amur Province, Siberian, from China.
- 475. ZEA MAYS.** **Maize.**
From South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
- 476.**
From South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. (4 packages.) "Gaolan."
- 477.**
From South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. (2 weedy packages.) "Nidngu."
- 478. CHAETOCHELOA ITALICA.** **Millet.**
From South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. (1 package.) "Cusa."

- 479. TRITICUM VULGARE?** **Wheat.**
From South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898.
- 480. GLYCINE HISPIDA.** **Soja bean.**
From South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. (1 package.)
- 481. PANICUM MILIACEUM.** **Millet.**
From South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. (2 packages.)
- 482.**
From South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. (1 package.) "Pajsa."
- 483.**
From South Ussurie. Received through Prof. N. E. Hansen, March, 1898.
- 484. FAGOPYRUM FAGOPYRUM.** **Buckwheat.**
From Siberia. Received through Prof. N. E. Hansen, March, 1898. (3 packages.)
Imported into Amur Province from China.
- 485. VIGNA CATJANG.** **Cowpea.**
From Siberia. Received through Prof. N. E. Hansen, March, 1898. (2 packages.)
Imported into Amur Province from China.
- 486. PISUM SATIVUM.** **Pea.**
From Siberia. Received through Prof. N. E. Hansen, March, 1898. (1 package.) "Lando."
Imported into Amur Province from China.
- 487. TRITICUM DURUM (?).** **Wheat.**
From Siberia. Received through Prof. N. E. Hansen, March, 1898.
Imported into Amur Province from China.
- 488.** **Millet.**
From Siberia. Received through Prof. N. E. Hansen, March, 1898. (4 packages.) "Misa."
Imported into Amur Province from China.
- 489.** **Millet.**
From Siberia. Received through Prof. N. E. Hansen, March, 1898. (5 packages.) "Cusa."
Imported into Amur Province from China.
- 490.**
From Siberia. Received through Prof. N. E. Hansen, March, 1898. (4 packages.) "Susa."
Imported into Amur Province from China.
- 491. AVENA SATIVA.** **Oat.**
From Siberia. Received through Prof. N. E. Hansen, March, 1898. (1 package.)
Imported into Amur Province from China.

- 492. PISUM SATIVUM.** **Pea.**
 From Siberia. Received through Prof. N. E. Hansen, March, 1898. (3 packages.) "Vay-do."
 Imported into Amur Province from China.
- 493.**
 From Siberia. Received through Prof. N. E. Hansen, March, 1898. (4 packages.) "Pajsa."
 Imported into Amur Province from China.
- 494. PISUM SATIVUM.** **Pea.**
 From Siberia. Received through Prof. N. E. Hansen, March, 1898. (3 packages.) "Vay-do."
 Imported into Amur Province from China.
- 495. CORYLUS HETEROPHYLLA.** **Hazel.**
 From Amur Province, Siberia. Received through Prof. N. E. Hansen, March, 1898.
- 496. CORYLUS HETEROPHYLLA.** **Hazel.**
 From Amur Province, Siberia. Received through Prof. N. E. Hansen, March, 1898. Small nuts.
- 497.**
 From Siberia. Received through Prof. N. E. Hansen, March, 1898. "Che-tu."
 Nuts; imported into Amur Province from China.
- 498. AVENA SATIVA.** **Oat.**
 From South Ussurie, Siberia. Received through Prof. N. E. Hansen, March, 1898. (3 packages.)
- 499. ZEA MAYS.** **Maize.**
 From Siberia. Received through Prof. N. E. Hansen, March, 1898. (4 packages.)
 Imported into Amur Province from China.
- 500. TRITICUM DURUM.** **Wheat.**
 From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898. "Kubanka."
- 501. TRITICUM DURUM.** **Wheat.**
 From Orenburg (1895). Received through Prof. N. E. Hansen, March, 1898. "Kubanka."
- 502. TRITICUM VULGARE.** **Wheat.**
 From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898. A spring variety.
- 503. AVENA SATIVA.** **Oat.**
 From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898. (1 package.)
- 504. TRITICUM VULGARE.** **Wheat.**
 From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898. "Kubanka."

505. TRITICUM VULGARE. Wheat.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
506. PANICUM MILIACEUM. Millet.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
507. AVENA SATIVA. Oat.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
508. AVENA SATIVA. Oat.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
509. TRITICUM VULGARE. Wheat.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
510. TRITICUM VULGARE. Wheat.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
511. TRITICUM VULGARE. Wheat.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
Spring variety.
512. AVENA SATIVA. Oat.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
Large-grained.
513. AVENA SATIVA. Oat.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
514. PANICUM MILIACEUM. Millet.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
515. TRITICUM VULGARE. Wheat.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
"Besoska" (beardless).
516. AVENA SATIVA. Oat.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
Large-grained.
517. AVENA SATIVA. Oat.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
(2 packages.) "Rundkorn" (round-grained).
518. TRITICUM DURUM. Wheat.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
"Kubanka."
519. LINUM USITATISSIMUM. Flax.
From Orenburg Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)

- 520. HORDEUM VULGARE. Barley.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(3 packages.)
- 521. SECALE CEREALE. Rye.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(2 packages.)
- 522. SECALE CEREALE. Rye.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(2 packages.)
- 523. HORDEUM VULGARE. Barley.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(2 packages.)
- 524. SECALE CEREALE. Rye.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(2 packages.)
- 525. TRITICUM VULGARE. Wheat.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(1 package.) Spring variety.
- 526. TRITICUM VULGARE. Wheat.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
Spring variety.
- 527. AVENA SATIVA. Oat.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(2 packages.)
- 528. TRITICUM VULGARE. Wheat.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
- 529. TRITICUM VULGARE. Wheat.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
- 530. SECALE CEREALE. Rye.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
- 531. TRITICUM VULGARE. Wheat.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
Spring variety.
- 532. TRITICUM VULGARE. Wheat.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
Spring variety.
- 533. AVENA SATIVA. Oat.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(3 packages.)
- 534. AVENA SATIVA. Oat.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(2 packages.)

- 535. HORDEUM VULGARE.** **Barley.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(3 packages.)
- 536. AVENA SATIVA.** **Oat.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(2 packages.)
- 537. PISUM SATIVUM.** **Pea.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(3 weedy packages.)
- 538. AVENA SATIVA.** **Oat.**
From Province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(3 packages.)
- 539. PISUM SATIVUM.** **Pea.**
From province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(3 packages.)
- 540. SECALE CEREALE.** **Rye.**
From province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(4 packages.)
- 541. AVENA SATIVA.** **Oat.**
From province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(3 packages.)
- 542. FAGOPYRUM FAGOPYRUM.** **Buckwheat.**
From province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(5 packages.)
- 543. HORDEUM VULGARE.** **Barley.**
From province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(3 packages.)
- 544. SECALE CEREALE.** **Rye.**
From province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
- 545. AVENA SATIVA.** **Oat.**
From province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(3 packages.)
- 546. AVENA SATIVA.** **Oat.**
From province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(3 packages.)
- 547. SECALE CEREALE.** **Rye.**
From province of Perm. Received through Prof. N. E. Hansen, March, 1898.
(2 packages.) Winter variety.
- 548. LENS ESCULENTA.** **Lentil.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)

549. *AVENA SATIVA*. **Oat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
550. *HORDEUM VULGARE*. **Barley.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.) Spring variety.
551. *TRITICUM VULGARE*. **Wheat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
Spring variety.
552. *PISUM SATIVUM*. **Pea.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
Wedge-shaped.
553. *LENS ESCULENTA*. **Lentil.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
554. *AVENA SATIVA*. **Oat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
555. *AVENA SATIVA*. **Oat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
556. *HORDEUM VULGARE*. **Barley.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
557. *TRITICUM VULGARE*. **Wheat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
Spring variety.
- 557*a*. *SECALE CEREALE*. **Rye.**
From Russia (?). Received through Prof. N. E. Hansen, March, 1898.
558. *LENS ESCULENTA*. **Lentil.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.) Summer variety.
559. *SECALE CEREALE*. **Rye.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.) Winter variety.
560. *PISUM SATIVUM*. **Pea.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
561. *PANICUM MILIACEUM*. **Millet.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)

562. **PANICUM MILIACEUM.** **Millet.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.) Summer variety.
563. **AVENA SATIVA.** **Oat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
564. **TRITICUM DURUM.** **Wheat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
"Kubanka." Spring variety.
565. **PISUM SATIVUM.** **Pea.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
Wedge-shaped.
566. **TRITICUM VULGARE.** **Wheat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
"Chivinka." Spring variety.
567. **TRITICUM VULGARE.** **Wheat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
568. **PANICUM MILIACEUM.** **Millet.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
569. **TRITICUM DURUM.** **Wheat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
"Kubanka." Spring variety.
570. **TRITICUM VULGARE.** **Wheat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
"Chivinka." Spring variety.
571. **PISUM SATIVUM.** **Pea.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
Round.
572. **TRITICUM VULGARE.** **Wheat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
"Girka." Spring variety.
573. **TRITICUM VULGARE.** **Wheat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.) Summer variety.
574. **HORDEUM VULGARE.** **Barley.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.)
575. **TRITICUM VULGARE.** **Wheat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
Egyptian.

- 576. TRITICUM VULGARE. Wheat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
- 577. TRITICUM VULGARE. Wheat.**
From Astrakhan Province. Received through Prof. N. E. Hansen, March, 1898.
Spring variety.
- 578. TRITICUM VULGARE. Wheat.**
From Kharkov Province. Received through Prof. N. E. Hansen, March, 1898.
"Girka."
Winter variety. Professor Williams, of Moscow, said: "Very good for flour; very thin-shelled." He especially recommended it.
- 579. TRITICUM DURUM. Wheat.**
From Kharkov Province. Received through Prof. N. E. Hansen, March, 1898.
(1 package.) "Arnautka."
"Spring variety; one of the best Russian hard wheats. Largely exported to Italy for macaroni. Also much used in Russia for mixing with soft wheats for making the highest-priced flour. It does not make good bread alone. This variety, which is said to be about the same as Beloturka of the Volga region, is not sent to England, because it sells at a lower price than the softer American and European wheats; but in Italy it commands the highest price, as it is found especially adapted for the manufacture of macaroni. It does best on new land in dry regions, and degenerates quickly on unfavorable soils."
- 580. TRITICUM VULGARE. Wheat.**
From Daghestan, in the Caucasus. Received through Prof. N. E. Hansen, March, 1898.
Spring variety; very resistant to heat and drought.
- 581. TRITICUM VULGARE. Wheat.**
From Poltava Province. Received through Prof. N. E. Hansen, March, 1898.
Peasant wheat, winter, mostly red.
- 582. TRITICUM VULGARE. Wheat.**
From Poltava Province. Received through Prof. N. E. Hansen, March, 1898.
Winter variety, white.
- 583. TRITICUM VULGARE. Wheat.**
From the Voronesh Province. Received through Prof. N. E. Hansen, March, 1898.
Winter variety, red.
- 584. TRITICUM VULGARE. Wheat.**
From Minsk Province. Received through Prof. N. E. Hansen, March, 1898.
White; a very fine winter variety.
- 585. TRITICUM VULGARE. Wheat.**
From Russia. Received through Prof. N. E. Hansen, March, 1898.
- 586. FAGOPYRUM FAGOPYRUM. Buckwheat.**
From Russia. Received through Prof. N. E. Hansen, March, 1898. (3 packages.)
- 587. AVENA SATIVA. Oat.**
From Russia. Received through Prof. N. E. Hansen, March, 1898. (3 packages.)

- 588. TRITICUM SPELTA.** **Spelt.**
From Russia. Received through Prof. N. E. Hansen, March, 1898. (3 packages.)
- 589. HORDEUM VULGARE.** **Barley.**
From Russia. Received through Prof. N. E. Hansen, March, 1898. (3 packages.)
- 590. SECALE CEREALE.** **Rye.**
From Russia. Received through Prof. N. E. Hansen, March, 1898. (3 packages.)
- 620. DIOSCOREA DIVARICATA.** **Yam.**
From Kuldja, China. Received through Prof. N. E. Hansen, 1898. One dozen roots.
Said by Professor Hansen to be much used for food there.
- 621. ACACIA MACRANTHA.**
From Venezuela. Received through Sig. Miquel Romero, Agricultural Correspondent of Agricultural Club of Caracas. "Cuji Pods."
Used extensively in Venezuela for horse and cattle food.
- 623. LAGENARIA VULGARIS.** **Bottle gourd.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (3 packages.) "Pechak."
Small, scented, ornamental variety.
- 624. LAGENARIA VULGARIS.** **Bottle gourd.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (2 packages.)
Large bottle.
- 625. LAGENARIA VULGARIS.** **Bottle gourd.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, 1898. (3 packages.)
Small bottle.
- 626. BETA VULGARIS.** **Beet.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, 1898. (3 packages.)
Red.
- 627. ORYZA SATIVA.** **Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, U S. Minister to Japan, March 4, 1898. (1 package.) "Homura;" early variety.
- 628. ORYZA SATIVA.** **Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (2 packages.) "Shinshu;" early variety.
- 629. ORYZA SATIVA.** **Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (1 package.) "Kyowase;" early variety.
- 630. ORYZA SATIVA.** **Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (2 packages.) "Shinmori;" early.

- 631. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (2 packages.) "Sekitori;" medium early.
- 632. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (2 packages.) "Araki;" medium early.
- 633. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (1 package.) "Shiratana;" medium early.
- 634. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (2 packages.) "Kinchaku;" medium early.
- 635. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (1 package.) "Gotambo;" late.
- 636. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (2 packages.) "Hosoye;" late.
- 637. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (1 package.) "Sugaippon;" late.
- 638. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (2 packages.) "Genroku;" late.
- 639. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (1 package.) "Fusakichi;" late.
- 640. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (2 packages.) "Gimmochi;" glutinous.
- 641. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (1 package.) "Tokiwamochi;" glutinous.
- 642. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (2 packages.) "Oiran;" upland variety.
- 643. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (1 package.) "Kyuzo;" upland variety.
- 644. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (2 packages.) "Kumamoto;" upland variety.

- 645. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck March 4, 1898. (2 packages.) "Terishirazu;" upland variety.
- 646. ORYZA SATIVA. Rice.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. (1 package.) "Shinobumochi;" upland variety, glutinous.
- 647. GLYCINE HISPIDA. Soy bean.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. "Akasaya."
- 648. GLYCINE HISPIDA. Soy bean.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. "Nakade."
- 649. GLYCINE HISPIDA. Soy bean.**
From Tokyo, Japan. Received through Hon. A. E. Buck March 4, 1898. "Deko;" medium early.
- 650. GLYCINE HISPIDA. Soy bean.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. "Sen-nari;" medium early.
- 651. GLYCINE HISPIDA. Soy bean.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. "Fuk-nishiro;" medium early.
- 652. GLYCINE HISPIDA. Soy bean.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. "Kiyomasa;" late.
- 653. GLYCINE HISPIDA. Soy bean.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. "Mejiro;" late.
- 654. GLYCINE HISPIDA. Soy bean.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. "Aoteppo;" late.
- 655. GLYCINE HISPIDA. Soy bean.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. "Kinoshita;" late.
- 656. GLYCINE HISPIDA. Soy bean.**
From Tokyo, Japan. Received through Hon. A. E. Buck, March 4, 1898. "Asahi;" late.
- 657. PITHECOLOBIUM DULCE.**
From Guaymas, Sonora, Mexico. Received through Dr. Edward Palmer. Collected May, 1897. (68 packages.)
"Fruit edible. Bark used for tanning. Wood useful for many purposes. Fine shade tree. It is one of the widely disseminated trees along both sides of the Gulf of California and along the west coast of Mexico. It is to be found about the settlements. It is a very conspicuous tree and especially adapted to all sorts of soils and climatic conditions, even drought and moisture. It is a large tree with wide-spreading branches and grows to a height of from 10 to 50 feet and to a diameter of from 1 to 4 feet. It can be topped without injury so that the branches can be used for posts and poles. The wood is sawed, makes good planks for many uses, and is good fuel."

The bark is much used, alone or in combination, by all the tanners of Mexico. With ordinary care the guaymochle bark makes a beautiful, strong, white, elastic tan, not as strong as that of the oak, but one of the safest and best tanning materials. A yellow dye is prepared from the bark. The fruit of the tree is much sought after as food. It is very prolific and the white manna-like substance which adheres to the black seed is a favorite food with all classes, especially with those who have consumption, who eat it with the strong conviction of obtaining relief. In Colima it is so abundant that it is sold for 1 cent a kilo. In Acapulco there is an ample supply of this fruit, and in spite of all the tropical fruits on the market it is a great favorite. It is surprising the quantity of fruit a tree, growing in a desert region with not more than 2 inches of rain a year, will produce, and it grows from the Tropics to the region where there is an inch of ice. It has as wide a distribution as any tree known, because of its adaptability to the wants of man."—*Dr. E. Palmer.*

This useful and ornamental tree should receive a thorough trial in the warmer parts of the country from Florida to California.

658. BYRSONIMA CRASSIFOLIA.

From Colima, Mexico. Received through Dr. Edward Palmer. Collected July, 1897. "Nancee."

"A large shrub or small tree 15 feet or so high and 3 to 8 inches in diameter. The flowers are yellow, but become bronze or an amber color when older. This shrub is found growing in the mountains. The fruit, yellow in color, is eaten with salt raw. It has an overacid pulque taste or that of overripe cheese. It is used in soups and in stuffing meats. It is found for sale in the market at Acapulco and Colima for about three months."

659. CERATONIA SILIQUA.

St. John's bread.

From Mexico. Collected by Dr. Edward Palmer, October, 1897. (8 packages.)

"Cultivated at San Jose de Guaymas by Mr. A. Parode, who obtained the seed from Africa. The tree thrives well. It has a large top suitable for shade and produces an abundance of fruit, which is fed to all kinds of domestic animals, all relishing it. There is quite a demand for it among the settlements along the Jacqua River as well as in the uplands of Sonora."

660. TABEBUIA DONNELL-SMITHII.

White mahogany.

From Colima, Mexico. Collected by Dr. Edward Palmer, July, 1897. (49 packages.)

"The trees about Colima are from 40 to 50 feet high and about 12 to 15 inches in diameter. It is common in the mountains about Colima and is much cultivated as an ornamental tree, it being very beautiful when in full bloom with its copious supply of golden-yellow flowers. From the large trees excellent lumber is obtained. It can only be used when thoroughly dry. Drawers made of it will not open in rainy weather, and the wood decays quickly with dampness. It is used much for the interior of houses and railroad carriages.

"It endures a long rainless season, and is easily propagated by seed. It should be tried in the practically frostless parts of the arid Southwest."—*Dr. E. Palmer.*

661.

From Mexico. Collected by Dr. Edward Palmer, August, 1897. "Candelilla."

This is ornamental and grows from a large bush to a small tree 8 to 10 feet high. The profusion of yellow fruit gives the tree a very showy appearance. The fruit is eaten by the birds.

662.

From Mexico. Collected by Dr. Edward Palmer (No. 34).

663. CRESCENTIA ALATA.

Calabash tree.

From Mexico. Collected by Dr. Edward Palmer.

664.

From Colima, Mexico. Collected by Dr. Edward Palmer (No. 156), August, 1897.
"Cobano."

"The form of this tree is the same as that of the ash, but it is evergreen, and about 50 feet high and 5 feet in diameter. The wood of this tree is very useful in carpenter's work for doors, windows, railroad sleepers, etc. The seeds are sold in the markets for medicinal purposes."

665. MIMUSOPS GLOBOSA.

Balata tree.

From British Guiana. Received through G. S. Jenman, director botanic gardens, Georgetown, Demerara.

679. MEDICAGO SATIVA.

Alfalfa.

From Bokhara, Turkestan. Received through Prof. N. E. Hansen. (80 packages.)

680. RUSCUS ACULEATUS.

Butcher's broom.

From Naples, Italy. Received through W. T. Swingle, March 17, 1898.

681. PRUNUS ARMENIACA.

Apricot.

From Turkestan. Received through Prof. N. E. Hansen, March, 1898. (2 packages.)

Dried in flesh.

682. PRUNUS CERASUS (?).

Cherry.

From Turkestan. Received through Prof. N. E. Hansen, March, 1898. (2 packages.)

Dried with flesh. Said to be choice fruit.

683. PRUNUS.

Plum.

From Turkestan. Received through Prof. N. E. Hansen, March, 1898. (7 packages.)

Dried with flesh.

684. SESAMUM INDICUM.

Sesame.

From Monrovia, Liberia, West Africa. Received through Henry O. Stewart. (7 packages.)

Seed parched and used for flavoring.

685.

From Monrovia, Liberia. Received through Henry O. Stewart. (25 packages.)
"Kiffie."

Seed parched, ground, and used for flavoring soups.

686. ZEA MAYS.

Maize.

From Florence, Italy. Received through United States consulate, April, 1898. (10 packages.)

Tuscan.

687. ZEA MAYS.

Maize.

From Florence, Italy. Received through United States consulate, April, 1898. (12 packages.)

Tuscan.

688.

From Naples, Italy. Received through W. T. Swingle, April 26, 1898. "Gramigna."

Used everywhere as horse food in Italy. Grows by water in April, later all over the fields, according to Signor Michaeli, Professor Dohru's gardener at Naples.

689. MIMUSOPS GLOBOSA.

Balata tree.

From Demerara, British Guiana. Received through G. S. Jenman, director botanic gardens, April 26, 1898.

690. FICUS CARICA.

Fig.

From Italy. Received through W. T. Swingle, April, 1898.

Probably the "Profico ricciato" or "Caprifico rugoso" of Gasparini, producing more insects and for longer time than any other variety. Three cuttings from the trees on Vesuvius, Italy. Received at the Department April 26, 1898.

691. ORYZA SATIVA.

Rice.

From Cairo, Egypt. Received through Consul-General Thomas S. Harrison, April 29, 1898. "Fahle."

Reaped in October.

692. ORYZA SATIVA.

Rice.

From Cairo, Egypt. Received through Consul-General Thomas S. Harrison, April 29, 1898. "Fino."

Sown in Egypt the 1st of March and reaped the end of October.

693. ORYZA SATIVA.

Rice.

From Cairo, Egypt. Received through Consul-General Thomas S. Harrison, April 29, 1898. "Sabiny."

Sown in Egypt May 1 and reaped July 15, or sown July 1 and reaped September 15.

694. ORYZA SATIVA.

Rice.

From Cairo, Egypt. Received through Consul-General Thomas S. Harrison, April 29, 1898. "Ain el Bint."

Sown in Egypt May 1 and reaped in October.

695. CITRUS MEDICA LIMONUM.

Lemon.

From Florida. Sent by Frank Dean, esq., Coconut Grove, April 30, 1898.

696. FICUS CARICA.

Fig.

From Resina, near Naples, Italy. Received through Mr. W. T. Swingle, May 2, 1898. Profico twigs.

Collected April 9, 1898; received May 2, 1898. These twigs bear "mamme" fruits.

697. FICUS CARICA.

Fig.

From Portici, near Naples, Italy. Received through W. T. Swingle, May 2, 1898. Profico twigs.

Collected April 10, 1898, at Portici, near Naples; received May 2, 1898. These twigs bear "mamme" fruits.

698. FICUS CARICA.

Fig.

From Posilipo, near Naples. Received through W. T. Swingle, May 2, 1898.

Profico fruits of the so-called "mamme," from Strickland's place at Posilipo, near Naples. Sent to J. C. Shinn, Niles, California.

- 699. FICUS CARICA.** **Fig.**
 From Posilipo, near Naples. Received through W. T. Swingle, May 2, 1898.
 Caprifig twigs.
 All from one tree on Mr. Strickland's place.
- 700. FICUS CARICA.** **Fig.**
 From Chiaja, near Naples, Italy. Received through W. T. Swingle, April 14, 1898.
 Caprifig twigs with mamme fruits.
- 701. CITRUS.**
 From Posilipo, near Naples. Received through W. T. Swingle, April 14, 1898.
 Fruits.
- 702. CITRUS AURANTIUM BERGAMIA.** **Bergamot orange.**
 From Naples, Italy. Received through W. T. Swingle, April 14, 1898. (One
 fruit.)
 The buds sent with fruit in transit.
- 703. CITRUS MEDICA.** **Lemon.**
 From Naples, Italy. Received through W. T. Swingle, April 14, 1898. "Lima;"
 a small sweet lemon.
- 704. CITRUS MEDICA.** **Lemon.**
 From Naples, Italy. Received through W. T. Swingle, April 14, 1898. "Limone
 dulce;" sweet variety.
- 705. PYRUS SORBUS.** **Service tree.**
 From Naples, Italy. Received through W. T. Swingle, May 2, 1898.
 Sample of seeds.
- 706. CITRUS MEDICA.**
 From Naples, Italy. Received through W. T. Swingle. April 14, 1898. "Cedra-
 tella;" a small variety of lemon or citron.
- 707. SORGHUM VULGARE.**
 From Dumraon farm. Received through R. F. Patterson, consul-general at Cal-
 cutta, May 2, 1898. "Jowear."
- 708. PASPALUM SCROBICULATUM.**
 From Calcutta. Received through R. F. Patterson, consul-general, Calcutta,
 May 2, 1898. "Kodo."
- 709. PANICUM FRUMENTACEUM.**
 From Calcutta, India. Received through R. F. Patterson, consul-general at Cal-
 cutta, May 2, 1898. "Sawan."
- 710. CHÆTOCHLOA ITALICA.** **Italian millet.**
 From Calcutta, India. Received through R. F. Patterson, consul-general at Cal-
 cutta, May 2, 1898. "Tanguni;" from Dumraon farm.
- 711. PANICUM MILIACEUM.** **Millet.**
 From Calcutta, India. Received through R. F. Patterson, May 2, 1898.
 "Cheena;" from Dumraon farm.

712. PENNISETUM TYPHOIDEUM.

From Calcutta, India. Received through R. F. Patterson, May 2, 1898.
"Bapa;" from Dumraon farm.

713. ELEUSINE CORACANA.

From Calcutta, India. Received through R. F. Patterson, consul-general at Calcutta, May 2, 1898. "Marua;" from Dumraon farm.

714. LENS ESCULENTA.**Lentil.**

From Calcutta, India. Received through R. F. Patterson, consul-general at Calcutta, May 2, 1898. "Masur;" from Dumraon farm.

715. ORYZA SATIVA.**Rice.**

From Calcutta, India. Received through R. F. Patterson, consul-general at Calcutta, May 2, 1898.

716. ORYZA SATIVA.**Rice.**

From Calcutta, India. Received through R. F. Patterson, May 2, 1898.

717. SORGHUM VULGARE.**Sorghum.**

From Amu Daria, Turkestan. Received through Prof. N. E. Hansen, 1897. (2 pounds.)

718. PRUNUS ARMENIACA.**Apricot**

From Kokand. Received through Prof. N. E. Hansen, 1897. ($\frac{3}{4}$ pound.)

Dried in the flesh.

719.

From Damgan, Amu Daria, Turkestan. Received through Prof. N. E. Hansen, 1897. (1 pound.) "Desert plant."

720.

From Samarkand, Amu Daria. Received through Prof. N. E. Hansen, 1897. (10 packages.)

721.

From Amu Daria. Received through Prof. N. E. Hansen, 1897. "Aubuchara."
(30 packages.)

722.

From Amu Daria. Received through Prof. N. E. Hansen, in the importation of 1897. (10 packages.)

723.

From Turkestan. Received through Prof. N. E. Hansen, in the importation of 1897. (2 packages.)

"Igda" said to be the most common name. Used as a remedy for dysentery and diarrhœa.

724. PISUM SATIVUM.**Pea.**

From Persia (Baharden). Received through C. Ahuger, Askhabad, Transcaspia, in Prof. N. E. Hansen's importation of 1897.

725. PISUM SATIVUM.**Pea.**

From Mr. C. Ahuger, Askhabad, Transcaspia. Received through Prof. N. E. Hansen, 1897.

Possibly same as No. 724, being identical in appearance, or slightly larger.

726. No label.

Apparently identical with No. 723. Received through Prof. N. E. Hansen, 1897. (36 packages.)

727. CITRULLUS VULGARIS.**Watermelon.**

From Udjarri, between Tiflis and Baku, Transcaucasia. Received through Prof. N. E. Hansen, importation 1897. (26 packages.)

Melon round, 3 feet in circumference. Flesh red and very good. Green with dark-green stripes.

728. CUCUMIS MELO.**Muskmelon.**

From Chazudar, 200 versts west of Samarkand, Turkestan. Received through Prof. N. E. Hansen. (20 packages.)

Yellow with green spots, flesh white, flavor delicious; 29 by 30½ inches in circumference.

729. CUCUMIS MELO.**Muskmelon.**

From Russia. Received through Prof. N. E. Hansen in the importation of 1897. (40 packages.)

Bright yellow, oval, smooth, flesh white; 24¾ by 29¾ inches in circumference.

730. CUCUMIS MELO.**Muskmelon.**

From Amu Daria (Chardjui), 200 versts west of Samarkand, Turkestan. Received through Prof. N. E. Hansen in the importation of 1897. (23 packages.)

Oval, very large, 29 by 35 inches in circumference; yellow with green spots, flavor delicious, and flesh white; smooth.

731. PUNICA GRANATUM.**Pomegranate.**

From Tiflis, Transcaucasia, Russia. Received through Prof. N. E. Hansen in the importation of 1897.

A large red variety.

732. PYRUS SORBUS.**Service tree.**

From Yalta, Crimea. Received through Prof. N. E. Hansen in the importation of 1897. (3 packages.)

Fruit edible; see No. 211.

733. CUCURBITA.**Squash.**

From Baku, Transcaucasia. Received through Prof. N. E. Hansen in the importation of 1897. (3 packages.)

Used for cooking.

734. ZIZYPHUS SATIVA.**Jujube.**

From Tiflis, Transcaucasia. Received through Prof. N. E. Hansen in the importation of 1897. (3 packages.)

735. ZIZYPHUS SATIVA.**Jujube.**

From Batoum, Transcaucasia, on the Black Sea. Received through Prof. N. E. Hansen in the importation of 1897. (2 packages.)

736. CUCUMIS MELO.**Muskmelon.**

From Russia. Received through Prof. N. E. Hansen in the importation of 1897. (56 packages.) (Tiflis, No. 3.)

Oval, smooth, yellow, with broad mottled stripes and splashes of dark green; flesh white; 25½ by 19 inches in circumference.

737. CUCUMIS MELO.**Muskmelon.**

From Russia. Received from A. K. Klumm, through Prof. N. E. Hansen, in the importation of 1897. (25 packages.)

Oval, yellow, smooth, flesh greenish-yellow.
Odessa, southern Russia.

738. CUCUMIS MELO.**Muskmelon.**

From Tiflis, Transcaucasia, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (61 packages.)

Tiflis-Erivan, No. 2. A winter variety, oval, smooth, yellow mottled with dark green, with white flesh; size, $31\frac{1}{2}$ by 19 inches in circumference. See No. 739.

739. CUCUMIS MELO.**Muskmelon.**

From Tiflis, Transcaucasia, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (14 packages.)

"Tiflis-Erivan, No. 2. Oval, 21 by 26 inches. 'The Persian dealer of whom I bought Tiflis-Erivan, Nos. 1 and 2, called both doutjma, and said they were all one variety. Of No. 1 I bought three, and of No. 2 only one. The latter was later, larger, and still green. The color was dark green, netted with white; flesh greenish, unripe; skin turning yellow on one side.' The doutjma melons are said to be covered with earth during a certain period of their growth to increase the delicacy of their flavor."

740. CUCUMIS MELO.**Muskmelon.**

From Odessa, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (12 packages.)

White Persian, medium size, green, oval, smooth, the flesh white. Very fine.

741. CUCUMIS MELO.**Muskmelon.**

From Tiflis, Transcaucasia, Russia. Received through Prof. N. E. Hansen in the importation of 1898. (46 packages.) "Doutjma."

"Tiflis-Erivan, No. 1. Bright yellow, white-netted, oval, $24\frac{1}{2}$ by 18 inches in circumference, with white flesh, very fine quality, good keeper, not fully ripened when obtained. Bought October 14; often sold at Easter. Brought from Erivan in carts once a week. See No. 739."

742. CUCUMIS MELO.**Muskmelon.**

From Odessa, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (10 packages.)

Very small, yellow, skin wrinkled, oval, pointed, a late keeper.

743. CUCUMIS MELO.**Muskmelon.**

From Odessa, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (13 packages.) "Large oak."

Late keeper, large, yellow and green, rounded-oval, flesh white.

744. CUCUMIS MELO.**Muskmelon.**

From Odessa, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (8 packages.)

Large, roundish, yellow with some green splashes and faint sparse netting, flesh white; not ripe when obtained.

745. CUCUMIS MELO.**Muskmelon.**

From Tiflis, Transcaucasia, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (68 packages.)

"Large, skin smooth, white with a few short green splashes; the largest one $29\frac{1}{2}$ by $21\frac{1}{2}$ inches in circumference, oval, the flesh white. A winter keeper, fit for preserving; not ripe when obtained. Brought from Charchan (No. 1), near Batoum."

- 746. CUCUMIS MELO. Muskmelon.**
From Odessa, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (4 packages.)
Winter melon, round, yellow marbled with green. Originally from Crimea.
- 747. CUCUMIS MELO. Muskmelon.**
From Odessa, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (11 packages.)
Oval, green and yellow marbled, smooth and very good; Persian.
- 748. CUCUMIS MELO. Muskmelon.**
From Odessa, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (8 packages.)
Winter melon, center solid, flesh white (good); small, black, green-wrinkled. Crimean.
- 749. CUCUMIS MELO. Muskmelon.**
From Tiflis, Transcaucasia, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (14 packages.)
"Tiflis-Erivan, No. 2. Oval, smooth, yellow, somewhat mottled with small dark-green spots, flesh white; very large, 30 by 23 inches in circumference. Not quite ripe when obtained, but sweet. A 'Doutjma' melon. See No. 739."
- 750. CUCUMIS MELO. Muskmelon.**
From Odessa, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (18 packages.) "Eichen" (oak).
Large, roundish, dark green, marbled with faint yellowish, flesh white. Green when obtained, late keeper.
- 751. CUCUMIS MELO. Muskmelon.**
From Odessa, Russia. Received through Prof. N. E. Hansen in the importation of 1897. (7 packages.) "Crimean pineapple."
Oval, yellow with some green, marbly, white-fleshed, very good.
- 752. CUCUMIS MELO. Muskmelon.**
From Russia. Received through Prof. N. E. Hansen in the importation of 1897. (15 packages.)
Winter, small, white, skin wrinkled, flesh white, center solid, very good. Crimean (?).
- 753. CUCUMIS MELO. Muskmelon.**
From Tiflis, Transcaucasia, Russia. Received through Prof. N. E. Hansen, in the importation of 1897. (6 packages.)
Tiflis, No. 4. Oval, 28½ by 20 inches in circumference, bright yellow and smooth.
- 754. CUCUMIS MELO. Muskmelon.**
From Tiflis, Transcaucasia, Russia. Received through Prof. N. E. Hansen, in the importation of 1897. (33 packages.)
Tiflis, No. 1. Oval, 20½ by 27 inches in circumference, skin longitudinally furrowed, white covered with short green splashes and spots, white-fleshed, not ripe when obtained; long-keeping.
- 755. LEUCÆNA GLAUCA.**
From St. Denis, Réunion Island. Sent to Dr. A. C. True by Aug. de Villele. (20 packages.)
Said to be a valuable forage plant on the island.

- 756. AGROPYRON TENERUM. Wheat grass.**
 Imported at request of Prof. F. Lamson-Scribner from Canada through the kindness of Mr. K. McIver. (54 packages.)
- 757. GOSSYPIUM HERBACEUM. Cotton.**
 From St. Denis, Réunion Island. Received through Office of Experiment Stations (Dr. A. C. True) from Aug. de Villele. (4 packages.)
 De Villele remarks that the cotton is not cultivated in Réunion any more, but that he believes the plant if given care would develop excellent qualities.
- 758. ZEA MAYS. Maize.**
 From La Paz, Bolivia. Through Mr. Frank G. Carpenter, April 9, 1898. (20 packages.) "Cuzco maize."
 Kernels red-yellow or variegated.
- 759. ZEA MAYS. Maize.**
 From La Paz, Bolivia. Imported through Mr. Frank G. Carpenter, April 9, 1898. (20 packages.) "Cuzco maize."
 Sample differs from No. 758 in being an olive or steel-gray color. Some specimens are variegated.
- 760. ZEA MAYS. Maize.**
 From La Paz, Bolivia. Imported through Mr. Frank G. Carpenter, April, 1898. (20 packages.) "Cuzco maize."
 This sample is of a light yellow color, with flattened grains, quite evidently a variety different from No. 759.
- 761. GOSSYPIUM HERBACEUM. Cotton.**
 From La Paz, Bolivia. Imported through Mr. Frank G. Carpenter, April, 1898. (4 packages.)
 No details as to productiveness yet received.
- 762. EUGENIA BUXIFOLIA.**
 From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Station, May 10, 1898. (2 packages.)
 "The fruits are eaten by the aborigines, small boys, and birds. They are formed in profusion, and are acidulous and wholesome. They are white with a purplish tint, and up to 1 inch in diameter."
- 763. MYRSINE VARIABILIS.**
 From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898. (2 packages.)
 "The wood is yellowish, hard, and tough. It is durable, and in grain is something like the British oak. Valuable timber."
- 764. MACADAMIA TERNIFOLIA. Queensland nut.**
 From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 765. TRISTANIA CONFERTA. Brisbane box.**
 From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 766. EUCALYPTUS SIDEROPHLOIA. White ironbark.**
 From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

767. EUCALYPTUS CITRIODORA.

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

768. EUCALYPTUS GLOBULUS.**Blue gum.**

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

"Blue gum tree" of Victoria and New Zealand.

769. EUCALYPTUS CREBRA.**Narrow-leaved ironbark.**

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

770. EUCALYPTUS OBLIQUA.**Stringybark.**

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

771. EUCALYPTUS DIVERSICOLOR.**Karri.**

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

772. EUCALYPTUS LEUCOXYLON.**Red ironbark.**

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

773. EUCALYPTUS AMYGDALINA.**Almond-leaved stringybark.**

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

774. EUCALYPTUS PIPERITA.**White stringybark.**

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

775. EUCALYPTUS MICROCORYS.**Tallowood.**

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

776. EUCALYPTUS SIDEROPHLOIA.

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

777. EUCALYPTUS CORYNOCALYX.**Sugar gum tree.**

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

778. EUCALYPTUS MARGINATA.**Jarrah.**

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

779. EUCALYPTUS SALIGNA.

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

780. EUCALYPTUS ROSTRATA.**Red gum.**

From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

- 781. EUCALYPTUS REDUNCA.** **White gum.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 782. EUCALYPTUS PANICULATA.** **Gray ironbark.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 783. EUCALYPTUS MELANOPHLOIA.** **Silver-leaved ironbark.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 784. EUCALYPTUS HEMIPHLOIA.** **Yellow box.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 785. EUCALYPTUS GONIOCALYX.** **Bastard box**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 786. EUCALYPTUS RESINIFERA.** **Red mahogany.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 787. EUCALYPTUS TERETICORNIS.** **Gray gum.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 788. EUCALYPTUS ACMENIOIDES.** **White mahogany.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 789. EUCALYPTUS CAPITELLATA.** **Stringybark.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
Stringybark of southeast Australia.
- 790. EUCALYPTUS HÆMASTOMA.** **White gum.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 791. EUCALYPTUS PLANCHONIANA.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 792. EUCALYPTUS MACULATA.** **Spotted gum.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 793. EUCALYPTUS CORYMBOSA.** **Bloodwood.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
- 794. EUCALYPTUS TRACHYPHLOIA.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.

795. *EUCALYPTUS CALOPHYLLA*. **Red gum.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
796. *EUCALYPTUS BOTRYOIDES*. **Bastard mahogany.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
797. *EUCALYPTUS ACMENIOIDES*. **White mahogany.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
798. *EUCALYPTUS VIRGATA*. **Mountain ash.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
799. *EUCALYPTUS ROBUSTA*. **Swamp mahogany.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
800. *EUCALYPTUS MELLIODORA*. **Yellow boxwood**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
801. *EUCALYPTUS EUGENIOIDES*. **Stringybark.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
Stringybark of Victoria and New South Wales.
802. *EUCALYPTUS PILULARIS*. **Black butt.**
From Brisbane Botanic Garden, Queensland, Australia. Received through Office of Experiment Stations, May 10, 1898.
803.
From Colomas, Mexico. Received through Dr. J. N. Rose, 1897. "Azafran."
Used for coloring soups in Mexico. Gives a rich orange color.
804. *CICER ARIETINUM*. **Chick pea.**
From Guadalajara, Mexico. Imported by Dr. J. N. Rose, 1897.
805. *SPONDIAS*. **Hog plum.**
From Acaponeta, Mexico. Received through Dr. J. N. Rose, 1898.
Edible, red-fruited species; fruit finely flavored; called by the Mexicans "Ciruelo."
806. *ANONA CHERIMOYA*. **Cherimoyer.**
From Guadalajara, Mexico. Received through Dr. J. N. Rose, 1897.
Small-fruited species.
807. *FIGUS CARICA*. **Fig.**
From Naples, Italy. Received through W. T. Swingle, May, 14, 1898. "Profico riccio."
In fruit, insects nearly all escaped. Collected April 27, 1898.

- 808. POINCIANA REGIA. Royal peacock flower.**
 From Mexico. Received through Dr. J. N. Rose, May 17, 1898
 "Tabochin" of Mexico. Collected in western Mexico and declared by Dr. Rose to be the most beautiful tree seen by him in Mexico.
- 809. IPOMŒA FISTULOSA. Morning-glory.**
 From Mexico. Received through Dr. J. N. Rose, 1897.
 A shrubby Ipomœa, commonly cultivated in Mexico, where it grows to a height of 5 to 8 feet and is a very prolific bloomer.
- 810. ORYZA SATIVA. Rice.**
 From Calcutta, India. Received through R. F. Patterson, consul-general at Calcutta, May 17, 1898.
- 811. ORYZA SATIVA. Rice.**
 From Calcutta, India. Received through R. F. Patterson, consul-general at Calcutta, May 17, 1898.
- 812. ORYZA SATIVA. Rice.**
 From Calcutta, India. Received through R. F. Patterson, consul-general at Calcutta, May 17, 1898.
- 813. ORYZA SATIVA. Rice.**
 From Calcutta, India. Received through R. F. Patterson, consul-general at Calcutta, May 17, 1898.
- 814. ORYZA SATIVA. Rice.**
 From Calcutta, India. Received through R. F. Patterson, consul-general at Calcutta, May 17, 1898.
- 815. ARBUTUS CANARIENSIS. Strawberry tree.**
 From Botanic Gardens, Naples, Italy. Received May 20, 1898.
- 816. ARBUTUS UNEDO. Strawberry tree.**
 From Botanic Gardens, Naples, Italy. Received May 20, 1898.
- 817. ARBUTUS ANDRACHNE. Strawberry tree.**
 From Botanic Gardens, Naples, Italy. Received May 20, 1898.
- 818. CUCUMIS MELO. Muskmelon.**
 From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (100 packages.) "Organdie;" early sort.
- 819. CUCUMIS MELO. Muskmelon.**
 From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (295 packages.) "She-vin-da."
 Late.
- 820. CUCUMIS MELO. Muskmelon.**
 From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (155 packages.) "Kov-cha."
 Late.

- 821. CUCUMIS MELO. Muskmelon.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
(191 packages.) "Bon-si-ol-di."
Late.
- 822. CUCUMIS MELO. Muskmelon.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
(175 packages.) "Gulabi."
Late.
- 823. CUCUMIS MELO. Muskmelon.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
(63 packages.)
Mixture of the named sorts.
- 824. CUCUMIS MELO. Muskmelon.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
(403 packages.) "Don-ne-jo-ree."
Late.
- 825. CUCUMIS MELO. Muskmelon.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
(56 packages.) "Han-da-lac."
Very early.
- 826. CUCUMIS MELO. Muskmelon.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
(111 packages.) "Hang-ga-lac."
Summer.
- 827. CUCUMIS MELO. Muskmelon.**
From Khiva. Received through Prof. N. E. Hansen, March, 1898. (7 packages)
"Khitaische" (meaning *Chinese*), the Uzbek name.
Khiva, 200 to 300 miles W. by N. of Samarkand, Turkestan.
- 828. CUCUMIS MELO. Muskmelon.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
(61 packages.) "Ok-ka-la-pus."
- 829. CUCUMIS MELO. Muskmelon.**
From Russia. Received through Prof. N. E. Hansen, March, 1898. (177
packages.) "Sa-rek-ka-ool."
Early yellow.
From Samarkand, Turkestan.
- 830. CUCUMIS MELO. Muskmelon.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March,
1898. (364 packages.) "Taa-kee."
Late.
- 831. CUCUMIS MELO. Muskmelon.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March,
1898. (183 packages.) "Ur-gan."
Very early.

- 832. CUCUMIS MELO. Muskmelon.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (8 packages.) "Hochja."
- 833. CUCUMIS MELO. Muskmelon.**
From Samarkand, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (5 packages.) "Leherim pishack" (the sweetest of them all).
- 834. CUCUMIS MELO. Muskmelon.**
From Khiva, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (5 packages.) "Kara-karee" (old and black).
Early sort.
- 835. AGROPYRON CRISTATUM.**
From Walujka Experiment Station (in the dry steppes about 50 miles east of Rovnaya, south of Saratof on Volga River), Russia. Received through Prof. N. E. Hansen, May 25, 1898. (3 packages.)
"Native dry steppe grass. Seed from plants cultivated one year. Director Bogdan regards this species promising for cultivation."
- 836. CUCUMIS MELO. Muskmelon.**
From Bokhara. Received through Prof. N. E. Hansen, May, 1898. (176 packages.)
- 837. AGROPYRON CRISTATUM.**
From Walujka Experiment Station (east of Volga River; see No. 835), Russia. Received through Prof. N. E. Hansen, May 25, 1898. (3 packages.)
Native grass; seed gathered wild from dry sandy steppe.
- 838. AGROPYRON CRISTATUM.**
From Russia. Received through Prof. N. E. Hansen, May, 1898. (3 packages.)
Native grass; seed gathered wild on dry sandy steppe. Same as No. 837.
- 839. GLYCYRRHIZA GLABRA. Licorice.**
From Uralsk. Received through Prof. N. E. Hansen, May, 1898. (4 packages.)
See No. 186.
- 840.**
From Russia. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)
- 841. TRITICUM RAMOSUM.**
From Walujka, Russia (see No. 835). Received through Prof. N. E. Hansen, May, 1898. (3 packages.)
"Native dry steppe grass. Director Bogdan, of the Walujka Experiment Station, said: "A weed, but makes very good hay."
- 842. MEDICAGO FALCATA. Medick.**
From Walujka, Russia (see No. 835). Received through Prof. N. E. Hansen, May, 1898. (2 packages.)
Seed gathered from wild plants. Regarded by Director Bogdan, of the Walujka Experiment Station, as promising fodder plant for dry steppes, where it is found native at Walujka.
- 843. TRITICUM VULGARE. Wheat.**
No label. Received through Prof. N. E. Hansen.
Very likely the lot of arnautka or beloturka hard wheat secured at Semipalatinsk, Siberia.

- 844. TRITICUM VULGARE.** **Wheat.**
Label missing. Very likely from Semipalatinsk, Siberia.
- 845. APOCYNUM CANNABINUM.** **Indian hemp.**
From Russian Turkestan. Received through Prof. N. E. Hansen, May, 1898. (2 packages.) Fiber plant.
"Much used for ropes, mats, etc. Shiny, silky cloth can be made from it, and the Russian Government several years ago contemplated using it as fiber threads in their paper money, as we use silk, but it was not used, as I understand, on account of expense of preparation, it not being a commercial product. The Kirghiz Tartars are expert in making ropes from it; the fiber is used direct from the dry stems without previous preparation."
- 846. Blank.**
- 847. TRITICUM VULGARE.** **Wheat.**
From Kuldja region, western China. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)
"Seven-branched spring wheat from China, which is to be sown thinly," says the interpreter.
- 848. PANICUM MILIACEUM.** **Millet.**
From Russia. Received through Prof. N. E. Hansen, May, 1898. (3 packages.)
- 849. PYRUS PRUNIFOLIA.** **Apple.**
From Vernoe (capital of Semiretchinsk province, Russian Turkestan). Received through Prof. N. E. Hansen, May, 1898. (92 packages.)
"Mixed wild apples. 'Over thirty sorts mixed' said Niedzwetsky, who gathered the seed, and perhaps the red-wooded Chinese apple, with both the skin and the flesh of the fruit red, is among the lot. He called the mixed seed '*Pyrus malus prunifolia*.'"
- 850. TRITICUM VULGARE.** **Wheat.**
From China. Received through Prof. N. E. Hansen, May, 1898.
- 851. CHÆTOCHLOA ITALICA.** **Italian millet.**
From the Kirghiz steppes near Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)
Cattle fodder. Variety *germanica*.
- 852. ROSA.** **Rose.**
From mountains near Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (15 packages.)
- 853. TRITICUM VULGARE.** **Wheat.**
From Vernoe. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)
- 854. ACER SEMENOVII.** **Maple.**
From mountains near Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)
- 855. PYRUS MALUS.** **Apple.**
From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (8 packages.)
Seed from best winter apples of the Apport or Alexander type.

856. ROSA.

From mountains near Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (28 packages.)

857. ROSA.**Rose.**

From the mountains near Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (16 packages.)

Wild species.

858. TRITICUM DURUM.**Wheat.**

From South Russia. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)

Kubanka for dry lands; the best sort at Vernoe, Turkestan.

859. PANICUM MILIACEUM.**Millet.**

From Russia. Received through Prof. N. E. Hansen, May, 1898. (1 package.)

Milled sample; inferior method.

860. ELÆAGNUS ANGUSTIFOLIA (?)

From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)

861. APOCYNUM CANNABINUM.**Indian hemp.**

From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)

Grows best on sandy steppes near Vernoe.

862. PANICUM MILIACEUM.**Millet.**

From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (1 package.)

Wild, black.

863. PYRUS MALUS.**Apple.**

From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (10 packages.)

Red-fleshed, from Kuldja, China.

864.

From Russia. Received through Prof. N. E. Hansen, May, 1898. (1 package.)
"Kirghiz."

The black sort.

865.

From the mountains at Vernoe. Received through Prof. N. E. Hansen, May, 1898. (1 package.)

Bush; not determined by anyone yet in Vernoe.

866. CITRULLUS VULGARIS.**Watermelon.**

From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (16 packages.)

Originally Russian; modified by cultivation.

867. ROSA FEROX.**Rose.**

From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (4 packages.)

- 868. ALLIUM CEPA.** **Onion.**
 From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898.
 (2 packages.)
 Grows well on dry soils and defies drought and cold.
- 869. PYRUS MALUS.** **Apple.**
 From Horticultural School at Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (6 packages.)
 A small red-fleshed variety, similar to No. 863
- 870. DAUCUS CAROTA.** **Carrot.**
 From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898.
 (2 packages.)
 Very large; native sort from Dungan.
- 871. BERBERIS VULGARIS.** **Barberry.**
 From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898.
 (2 packages.)
 Six-foot bush in sand dunes (moving sands).
- 872. ELÆAGNUS ANGUSTIFOLIA.**
 From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898.
 (4 packages.)
 Grows in sand; roots go straight down and deep.
- 873. BETA VULGARIS.** **Beet.**
 From Russia. Received through Prof. N. E. Hansen, May, 1898. (1 package.)
 Very sweet. Originally derived from Russian sorts.
- 874.** **Millet.**
 From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898.
 Millet eaten with milk or alone; a soup cooked of it.
- 875. TRITICUM VULGARE.** **Wheat.**
 From Siberia. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)
 "Girka with some hard wheat in it. A soft wheat sells well in England."
- 876. PYRUS BACCATA.** **Crab apple.**
 From Horticultural School at Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (2 packages.) Seed from trees grown from seed obtained at Irkutsk, Siberia. See No. 273.
- 877. CUCUMIS MELO.** **Muskmelon.**
 From mountains at Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (10 packages.)
- 878.**
 From mountains at Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)
 Bush; species not yet determined by anyone in Vernoe.
- 879. HIPPOPHÄE.**
 From mountains at Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)
 Grows when irrigated.

- 880. ROSA CANINA.** **Rose.**
 From Tashkend, Turkestan. Received through Prof. N. E. Hansen, May, 1898.
 (4 packages.)
 Very fine stock for growing tree roses.
- 881.**
 From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (2
 packages.) "Kalyndendron."
 A plant of the pea family.
- 882. TRITICUM DURUM.** **Wheat.**
 From Siberia. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)
 "Beloturka."
 "Hard wheat, spring. This has some "pererodka" or degenerated kernels in it.
 The idea appeared to be that this variety ran out quickly on soils not perfectly
 adapted to it. This is the hard wheat of the Volga region, which is shipped to Italy
 for maccaroni and is used for mixing with softer wheats in Russia."
- 883.**
 From Russia. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)
- 884. PETROSELINUM SATIVUM.** **Parsley.**
 From Russia. Received through Prof. N. E. Hansen, May, 1898. (2 packages.)
 Native parsley from Vernoe, Turkestan. The varieties of parsley from Europe are
 of no value at Vernoe.
- 885. TRITICUM VULGARE (?)**. **Wheat.**
 From Semipalatinsk, Siberia. Received through Prof. N. E. Hansen, May, 1898.
 (1 package.)
 First class; spring variety.
- 886. BRASSICA OLERACEA.**
 From Russia. Received through Prof. N. E. Hansen, March, 1898. (4 packages.)
 Derived from Russian sorts.
- 887. DAUCUS CAROTA.** **Carrot.**
 From China. Received through Prof. N. E. Hansen, March, 1898. (2 packages.)
 Native sort from Dungan district, Chinese Turkestan.
- 888. CUCUMIS SATIVUS.** **Cucumber.**
 From Kuldja, Chinese Turkestan. Received through Prof. N. E. Hansen, March,
 1898. (1 package.)
- 889. TRITICUM DURUM.** **Wheat.**
 From Semipalatinsk, Siberia. Received through Prof. N. E. Hansen, March, 1898.
 (2 packages.) "Tartar."
 Hard spring wheat. This sample has some degenerated grains in it.
- 890. CUCURBITA ?** **Gourd.**
 From Kuldja, Chinese Turkestan. Received through Prof. N. E. Hansen, March,
 1898. (1 package.)
 Large red.

- 891. PYRUS MALUS.** **Apple.**
 From Vernoe, Turkestan. Received through Prof. N. E. Hansen, March, 1898.
 (1 package.)
 "Seed of small red-skinned sweet apple from Kuldja, Chinese Turkestan; saved from apples obtained at Vernoe in orchard near the Horticultural School."
- 892. PRUNUS.** **Cherry.**
 From the Horticultural School at Vernoe, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (1 package.)
- 893. PHYSALIS.**
 From Semipalatinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.) "Klukva."
 Interpreter said it was brought up from Tashkend, Russian Turkestan. Further notes wanting, but Professor Hansen thinks it some kind of a table food.
- 894. PINUS CEMBRA.** **Siberian pine.**
 From Semipalatinsk, Siberia. Received through Prof. N. E. Hansen, March, 1898. (4 packages.)
 For eating, the seeds are gathered unripe. Much used for table as we use nuts.
- 895. PANICUM MILIACEUM.** **Millet.**
 From Vernoe, Turkestan. Received through Prof. N. E. Hansen, March, 1898. (1 package.)
 Used for a gruel. Milled sample. Much used by the peasants.
- 896. BRASSICA RAPA.** **Turnip.**
 From Vernoe, Turkestan. Received through Prof. N. E. Hansen, May, 1898. (1 package.)
 "Native sort found in the sand. Over 20 sorts from Europe did not succeed there, but this native variety is very good and does not fear the heat."
- 897. PRUNUS ARMENIACA.** **Apricot.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky.
 Fruit of seventh year.
- 898. MEDICAGO.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (3 packages.)
- 899. VICIA FABA.** **Horse bean.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (1 package.)
- 900. DAUCUS CAROTA.** **Carrot.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (1 package.)
- 901.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (3 packages.)
 Women use it for dyeing the eyebrows.

902.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

903.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

Powder; very poisonous.

904.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

Substitute for soap in washing linen.

905. DIANTHUS CARYOPHYLLUS.

Carnation.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

906.

Mint.

From Siberia. Received through Prof. N. E. Hansen, May 24, 1898. From J.
Niemetz, Nertchinsk; collected by Mr. Roborovsky. (1 package.)

907.

Stock rose.

From Siberia. Received through Prof. N. E. Hansen, May 24, 1898. From J.
Niemetz, Nertchinsk; collected by Mr. Roborovsky. (1 package.)

Of a dark violet, almost black color; used for dyeing.

908. CELOSIA CRISTATA.

Yellow cockscomb.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24,
1898. (1 package.)

909.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (3 packages.)

The oil extracted is used for light and for healing the wounds of animals caused
by worms.

910. ISATIS.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (3 packages.)

911.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (3 packages.) "Yandok."

Used for brush making and grows wild on plowed land.

912. IMPATIENS BALSAMINA.

Balsam.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

913. MORUS.

Mulberry.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

Silk-thread mulberry.

- 914. RAPHANUS SATIVUS. Radish.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
 Sweet radish.
- 915.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
 Garden plant, used as a condiment.
- 916.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
 The oil is used.
- 917. CUCUMIS MELO. Muskmelon.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
 A cantaloupe.
- 918. CITRULLUS VULGARIS. Watermelon.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
- 919. PANICUM MILIACEUM. Millet.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
- 920. BROMUS. Brome grass.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
- 921. MEDICAGO SATIVA. Alfalfa.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
- 922. ROSA. Rose.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky.
 White.
- 923. CARUM. Caraway.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
- 924. PAPAVER SOMNIFERUM. Poppy.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (1 package.)
- 925. CUCUMIS MELO. Muskmelon.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
 A cantaloupe.
- 926. SOLANUM.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky.

- 927. TRITICUM VULGARE.** **Wheat.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky.
- 928.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
 Cultivated in orchards for its fruits.
- 929. MEDICAGO SATIVA.** **Alfalfa.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (1 package.)
- 930.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
 Used for headache.
- 931. HORDEUM.** **Barley.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (1 package.)
- 932. CELOSIA CRISTATA.** **High cockscomb.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky.
- 933.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (3 packages.)
 Garden plant; used for a flavor in bread making.
- 934. PANICUM.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
- 935. CARUM (?)** **Caraway.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
- 936. AILANTHUS (?)**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
- 937.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (3 packages.)
 Garden plant; used on bread and considered good for the stomach. Evidently a member of the Umbelliferae.
- 938.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
 Affords blue coloring matter.

939. SORGHUM.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

940. TRITICUM VULGARE.**Wheat.**

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky.

941.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (3 packages.)

942. ALLIUM CEPA.**Onion.**

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

943.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (3 packages.) "Kynak."

944.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (3 packages.) "Zira?"

Used for a flavor in bread making.

945. PYRUS COMMUNIS.**Pear.**

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

Fruit of fifth and sixth years.

946. ERAGROSTIS.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

947. BETULA DAURICA (?).**Birch.**

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

948. CANNABIS SATIVA.**Hemp.**

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (3 packages.)

949. TAGETES.**Marigold.**

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (3 packages.)

950. TRITICUM.**Wheat.**

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

951.

From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1888.
Collected by Mr. Roborovsky. (3 packages.) "Mashock."

- 952. PHASEOLUS.** **Bean.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (3 packages.)
- 953.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)
Thread is made of it.
- 954. CAPSICUM.** **Red pepper.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)
Pods.
- 955. ZINNIA.** **Zinnia.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (3 packages.)
- 956.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)
Purgative medicine.
- 957. CANNABIS SATIVA.** **Hemp.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)
- 958.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (3 packages.)
Edible fruit.
- 959. CITRULLUS COLOCYNTHIS.** **Colocynth.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (3 packages.)
- 960. LINUM USITATISSIMUM.** **Flax.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)
- 961.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)
White silk thread.
- 962. PYRUS ARMENIACA.** **Apricot.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)
- 963. TRITICUM VULGARE.** **Wheat.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky.
- 964. CUCUMIS MELO.** **Muskmelon.**
From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
Collected by Mr. Roborovsky. (4 packages.)

965. *VITIS*. **Grape.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
 Black grapes; fourth year.
966. *HORDEUM VULGARE*. **Barley.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
967. *CELOSIA CRISTATA*. **Cockscomb.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (2 packages.)
968. *CARUM*. **Caraway.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (2 packages.)
969. *ALLIUM CEPA*. **Onion.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (4 packages.)
970.
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (3 packages.)
 Edible fruit.
971. *SOLANUM*.
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (1 package.)
972. *TRITICUM VULGARE*. **Wheat.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky.
973. *CUCUMIS SATIVUS*. **Cucumber.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky.
974. *HORDEUM*.
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky.
975. *CHÆTOCHLOA ITALICA*. **Italian millet.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (3 packages.)
976. *TRITICUM VULGARE*. **Wheat.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky.
977. *HORDEUM VULGARE*. **Barley.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky.
 Turkestan.

978. **LATHYRUS SATIVUS.** **Bitter vetch.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky. (2 packages.)
 Turkestan.
979. **HORDEUM VULGARE.** **Barley.**
 From China. Received through Prof. N. E. Hansen, May 24, 1898. Collected
 by Mr. Roborovsky.
 Cultivated by the Chinese in the vicinity of Non Shan.
980. **HORDEUM.** **Barley.**
 From Shongnau, Turkestan. Received through Prof. N. E. Hansen, May 24, 1898,
 from Professor Korjinsky, botanist at the St. Petersburg Botanic Gardens.
 "Choush."
981. **HORDEUM VULGARE.** **Barley.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky.
982. **TRITICUM VULGARE.** **Wheat.**
 From Tash-Kourgan, Turkestan. Received through Prof. N. E. Hansen, May 24,
 1898, from Professor Korjinsky.
 Short ears.
983. **SECALE CEREALE.** **Rye.**
 From Shougnar-Chorog, Turkestan. Received through Prof. N. E. Hansen,
 May 24, 1898, from Professor Korjinsky.
984. **TRITICUM VULGARE.** **Wheat.**
 From Turkestan. Received through Prof. N. E. Hansen, May 24, 1898, from
 Professor Korjinsky.
 Long ears.
985. **VICIA FABA.** **Horse bean.**
 From South Siberia. Received through Prof. N. E. Hansen, May 24, 1898, from
 Professor Korjinsky. "Baklavi inash."
986. **ASPARAGUS OFFICINALIS.** **Asparagus.**
 From Nertchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
 Collected by Mr. Roborovsky.
987. **PRUNUS PERSICA.** **Peach.**
 From Kuldja, Chinese Turkestan. Collected by Prof. N. E. Hansen in the over-
 land journey of 1897. Received May 24, 1898.
 Preserved in the flesh.
988. **PRUNUS ARMENIACA.** **Apricot.**
 From Djarkent, Turkestan. Collected by Prof. N. E. Hansen in the overland
 journey of 1897. Received May 24, 1898.
989. **HIBISCUS MANIHOT.** **Rose mallow.**
 The flowers are lemon-colored and nearly 6 inches in diameter. Although the
 specimens come from Mexico, the species is really a native of China, and
 although long ago introduced into cultivation seems to have been neglected
 until recently. Last year it attracted much attention in London and was
 exhibited at the meeting of the Royal Horticultural Society, where it received
 an award of merit.

990. ACROCOMIA SCLEROCARPA.

From Windward Islands. Received through Sir Alfred Maloney, governor of Windward Islands, June 6, 1898. (4 packages.)

Edible oil used for rheumatism.

991. MEDICAGO SATIVA.**Alfalfa.**

From Tashkend. Received through Prof. N. E. Hansen, June 4, 1898. (200 bushels.)

Variety "*turkestanica*." This subspecies of alfalfa was obtained from eight different sources varying widely in climatic conditions. It endures droughts which kill European alfalfa. Deemed very promising for trial in droughty regions. See No. 469.

992. BLANK.**993. CARTHAMUS TINCTORIUS.**

From Tashkend, Turkestan. Received through Prof. N. E. Hansen, June 4, 1898. (48 packages.)

Coming into extended cultivation for its seeds which yield a fine table oil. To be tested sparingly on account of the cheapness of cotton seed oil.

994. SORGHUM HALEPENSE.**Johnson-grass.**

From Tashkend, Russia. Received through Prof. N. E. Hansen, June 4, 1898. (96 packages.)

995. SORGHUM HALEPENSE.**Johnson-grass**

(Same as No. 994.)

996. TRITICUM DURUM (?).**Wheat.**

From Tashkend, Russia. Received through Prof. N. E. Hansen, June 4, 1898. (60 packages.) "*Chug-bul-dei*."

A native variety especially adapted for very hot dry regions. Deemed especially promising.

997. TRITICUM DURUM (?).**Wheat.**

(Same as No. 996.)

998. TRITICUM DURUM (?).**Wheat.**

(Same as No. 996.)

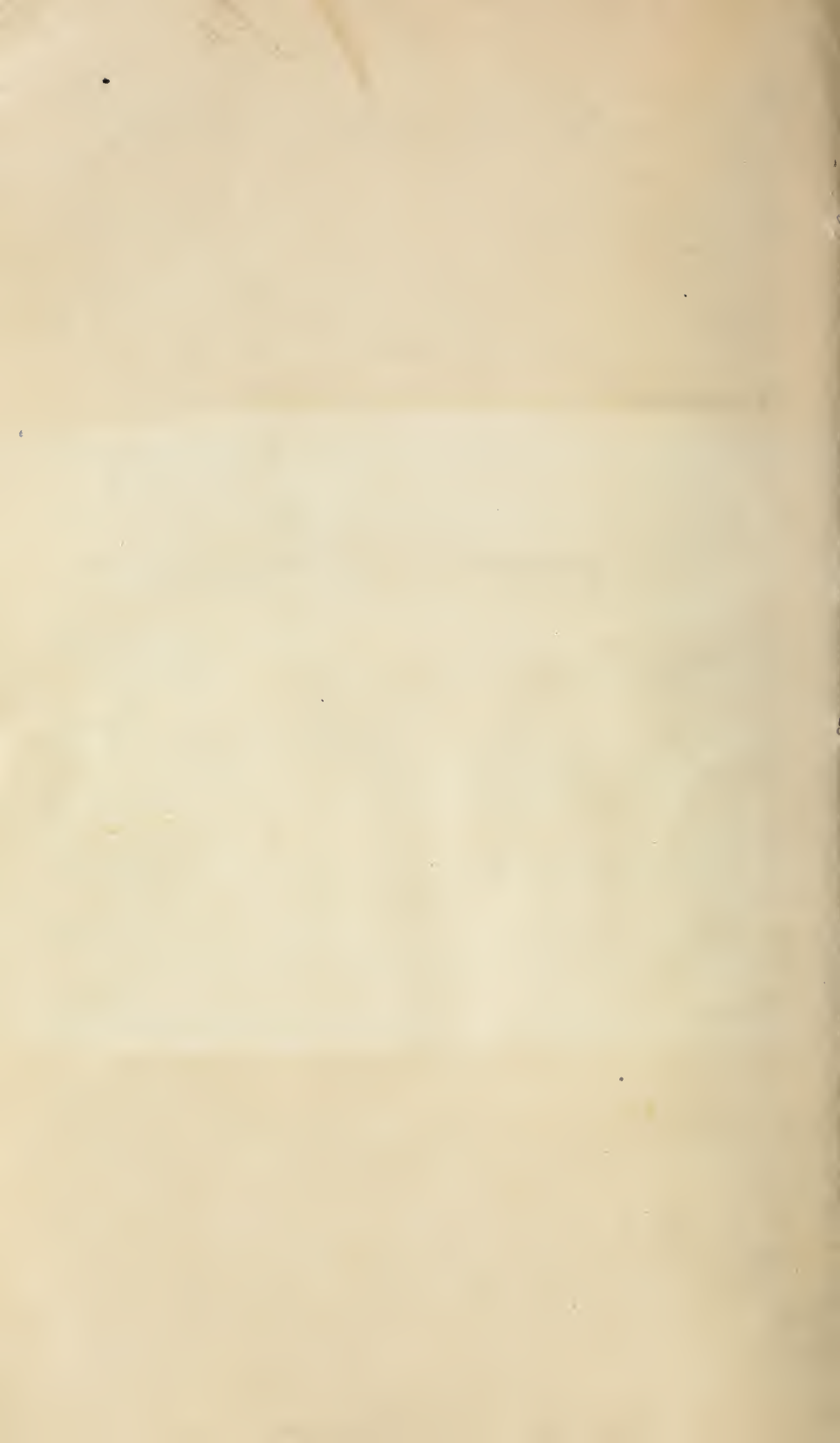
999. MEDICAGO SATIVA.**Alfalfa.**

From Uralsk Agricultural School. Received through Prof. N. E. Hansen from Samarkand, May 24, 1898. (1 package.)

1000. TRITICUM VULGARE.**Wheat.**

From Stanitzka Krasnov, near Uralsk. Received through Prof. N. E. Hansen, May 24, 1898.

14047—6



Mr. Harlan.

U. S. DEPARTMENT OF AGRICULTURE.
DIVISION OF BOTANY.

INVENTORY NO. 2

OF

FOREIGN SEEDS AND PLANTS

IMPORTED BY THE

SECTION OF SEED AND PLANT INTRODUCTION.

NUMBERS 1001-1900.

Mr. Harlan

INVENTORY OF FOREIGN SEEDS AND PLANTS.

INTRODUCTORY STATEMENT.

The present list concludes the importations secured by Prof. N. E. Hansen in Russia and central Asia. These are followed, in addition to numerous smaller invoices, by material sent by Mr. Walter T. Swingle from various parts of Europe. The results of Professor Knapp's visit to Japan, and of the South American expedition of the Hon. Barbour Lathrop and Mr. David G. Fairchild are scarcely reached in this number, but will appear among the third thousand.

As will be seen from the list of importations, Mr. Swingle has been engaged in a somewhat general survey of the agriculture and horticulture of France, Italy, Sicily, and Algeria, particularly with reference to species or varieties not known or at least not in general use in the United States. It should be remembered that while many south European and north African plants have been previously tested in the United States, the experiments have been largely carried on in parts of the country which did not offer the closest resemblance in climate or other natural conditions. There are now experiment stations and settlers in many of the more arid parts of the country, which a few years since were almost uninhabited, and where the Mediterranean flora may be expected to thrive.

While not so deficient as in the first inventory, it is realized that the data furnished with many of our importations are still far too meager, and every effort is being made to secure and send out with the seeds or plants the information necessary to their proper cultivation and utilization. It is, perhaps, desirable to emphasize some of the points stated in the first inventory. Correspondents are, for instance, requested to bear in mind that imported seeds can not be expected in all cases to excel the well-known varieties. In some lines American agriculture and horticulture are in advance of the rest of the world, and the advantages to be expected from importations apply rather to particular regions than to the country at large. It has been found, for instance, that some of the varieties of forage plants and vegetables obtained by Professor Hansen in central Asia were well adapted to the arid west but could not compete in the more humid east, where the selection of American varieties has been principally carried on. Again, seed from imported stock should be carefully harvested, even if the first crop is not a success. Many plants do not show their better qualities during the first season under new conditions. Where the experiments result favorably this Department may consider options on the purchase of seeds or plants in quantity, it being desired to extend the distribution of all successful novelties.

Some of our correspondents have sent in requests for very long lists of seeds. While there is no desire to limit the number which properly equipped experimenters may receive, persons making such requests

have in some cases been asked to state the facilities and experience which will justify their demands. In all cases, but particularly where a correspondent receives more than one lot of seed of the same kind, it is requested that our numbers be recorded for use in connection with the reports. Our blanks will bear numbers corresponding to those of the inventory list, so that identification will be easy and permanently accessible if the numbers are preserved. Otherwise the reports will have little value and our correspondents will not be able to learn the results secured in other parts of the country with the seeds with which they have experimented.

The number of plants or packages of seed available at the time this list is printed is stated in parenthesis with each item. Where no such note appears it is to be assumed that our stock is exhausted.

O. F. COOK,

Special Agent in Charge of Seed and Plant Introduction.

WASHINGTON, D. C., July 5, 1899.

INVENTORY.

- 1001. PANICUM MILIACEUM. Millet.**
From Staniza Krasnov on the Uralsk railroad. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
Red millet grown especially by the Khirgiz Tartars, but always on new land. With the chaff removed it is used as human food.
- 1002. TRITICUM VULGARE. Wheat.**
From Samarkand. Received through Prof. N. E. Hansen from Uralsk Agricultural School, May 24, 1898. (1 package.)
Russian spring wheat.
- 1003. TRITICUM DURUM. Wheat.**
From Uralsk (No. 1). Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
Form of degenerate "Kubanka."
- 1004. RUBUS XANTHOCARPUS. Chinese raspberry.**
From the Botanical Garden, St. Petersburg. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
Prof. Hansen writes: "This new species was discovered in 1885 by the celebrated Russian traveler, Grigorii Nikolajewitsch Potanin, in the Chinese province Kansu (latitude about 40°), and in 1890 Bonvalot and Prince Henry of Orleans found it in the mountain range separating the two Chinese provinces Sitschuan (or Sze-chuen) and Yun-nan (latitude about 27°). Bureau and Franchet first described it in 1891. The plants at the Imperial Botanic Gardens at St. Petersburg were grown from seeds sent by Potanin and fruited for the first time in July, 1891. The above was translated for me from a Russian bulletin of the Botanic Gardens. I saw these plants in heavy bearing August 15, 1897, on the grounds of the Botanic Gardens, and of Mr. Kesselring, a relative of the late Dr. Regel. The plant is trailing in habit, and the vines die off every fall after the ripening of the fruit, in the same manner as *Rubus arcticus* L. The fruit is ovate, bright yellow, large, fragrant, sweet; quality good. The calyx is persistent on the ripe fruit. The plant is hardy at St. Petersburg, but the heavy snowfall may help it. At the South Dakota Experiment Station the past season (1898) the plants grew readily from root-cuttings, and showed a decided sprouting tendency. The leaves endured severe frosts in the fall. If this plant proves to be of any value for general cultivation, probably Chinese raspberry will be a good common name for it."
- 1005. CITRULLUS VULGARIS. Watermelon.**
From Uralsk, Russia. Received through Prof. N. E. Hansen, May, 1898. (3 packages.)
"Chemkent." Flesh red.
- 1006. CUCURBITA. Pumpkin.**
From Odessa, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
Prolific Greek "kabackee" (small pumpkin). Edible when small. Evidently from Greece.
When the pumpkin is about 10 inches long the interior is scooped out, then it is filled with hashed meat and butter-sauce, etc., and the whole is cooked.
Also cut in pieces and cooked like asparagus. Called also "Spargel Kurbiss" (asparagus pumpkin).

- 1007. CUCUMIS MELO. Muskmelon.**
 From Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
 The "Spanish winter-melon," supposed to have been introduced into Russia from Spain by Dr. Dieck. The fruit is green and about a foot in length.
- 1008. CUCUMIS MELO. Muskmelon.**
 From Russia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
 Variety "Lida Lesevitzka." Flesh whitish green.
- 1009. SPIRAEA CRENIFOLIA. Spiraea.**
 From Russia. Received through Prof. N. E. Hansen, May 24, 1898. Growing wild at Rovna, Samara government (province), Russia. (2 packages.)
- 1010. AGROPYRON CRISTATUM. Wheat grass.**
 From Valujka, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
 Wild growth. A steppe grass native at the Valujka Experiment Station in the Samara province east of Rovna; deemed promising by Director Bogdan.
- 1011. GLYCYRRHIZA GLABRA. Wild licorice.**
 From Uralsk, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
 Native on the steppes at Uralsk on the Ural River; the roots are gathered for licorice and the tops are relished by cattle.
- 1012. AGROPYRON CRISTATUM. Wheat grass.**
 From Valujka, Russia. Received through Prof. N. E. Hansen, May 24, 1898. The same as No. 1010. (2 packages.)
- 1013. PHLEUM PRATENSE (?). Timothy.**
 From Valujka, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
- 1014. CUCUMIS MELO. Muskmelon.**
 From Kazan, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (4 packages.)
 Variety "Summer Bokhara."
- 1015. AGROPYRON REPENS. Couch grass.**
 From Valujka, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
 Director Bogdan informed Prof. N. E. Hansen that this quack or couch grass was native of the driest steppes at Valujka and was cut for hay.
- 1016. CUCUMIS MELO. Muskmelon.**
 From Saratof, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (3 packages.)
 "Bokhara" winter variety. Green-netted and white-fleshed; 12 by 8 inches in diameter, not fully ripe when secured; ripens best off the vine.
- 1017. CUCUMIS MELO. Muskmelon.**
 From Saratof, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (10 packages.)
 "Kalmuck summer." Oval, brownish-yellow, netted, flesh white; diameter, 11 by 7½ inches.

- 1018. TRIFOLIUM FRAGIFERUM. Clover.**
 From Valujka, Russia. Received through Prof. N. E. Hansen, May 24, 1898.
 (1 package.)
 Native of the steppes.
- 1019. CUCUMIS MELO. Muskmelon.**
 From Saratof, Russia. Received through Prof. N. E. Hansen, May 24, 1898.
 (4 packages.)
 A Kalmuck Tartar winter variety, with black irregular striping and white netting;
 flesh white; $11\frac{1}{2}$ by 8 inches in diameter.
- 1020. PHELEUM BOEHMERI. Boehmer's timothy.**
 From the Botanic Gardens at Kazan, Russia. Received through Prof. N. E.
 Hansen, May 24, 1898. (1 package.)
 Professor Williams, of Moscow, thinks this species promising for dry climates
 as a fodder grass. (*Professor Hansen.*)
- 1021. CUCUMIS MELO. Muskmelon.**
 From Saratof, Russia. Received through Prof. N. E. Hansen, May 24, 1898.
 (4 packages.)
 "Bokhara" yellow summer muskmelon. Flesh delicious, white. Largest speci-
 men weighing 14.4 pounds. Thirty-four and one-half by $27\frac{1}{2}$ inches in circumfer-
 ence, 9 by 13 inches in diameter. Grown at Astrakhan, Russia, and shipped by boat
 up the Volga River.
- 1022. TRIFOLIUM FRAGIFERUM. Clover.**
 From Valujka, near Rovna, Russia. Received through Prof. N. E. Hansen, May
 24, 1898. Same as No. 1018. (1 package.)
- 1023. CUCUMIS MELO. Muskmelon.**
 From Paris. Sent by James H. Kyle to the Secretary of Agriculture. (2
 packages.)
 Said by Mr. Kyle to be from fruit of superior quality.
- 1024. TRITICUM VULGARE. Wheat.**
 From the Marinskiĭ Agricultural School and Experiment Station, near Saratof,
 Russia. Received through Prof. N. E. Hansen, May 24, 1898.
 "Ghirka" (a south Russian spring variety), soft, medium, and hard.
- 1025. PISUM SATIVUM. Pea.**
 From Kief, Russia. Received through Prof. N. E. Hansen, May 24, 1898. Bought
 at the Kief Agricultural Exposition, September, 1897. (1 package.)
- 1026. CUCUMIS MELO. Muskmelon.**
 From Samara, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (3
 packages.)
 Yellow, medium size, delicious.
- 1027. PRUNUS.**
 From Kharkof, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1
 package.)
 From original tree.

1028. NITRARIA SCHOBERI.**Salt peter bush.**

From Sarepta, southern Russia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)

A desert shrub native to the salt steppes near Sarepta and the salt or alkali steppes to the east and southeast, extending into Siberia and China and to the vicinity of the Caspian Sea. "Alexander Becker informed me that the berries were sometimes eaten by the natives in China. Koehne (Deutsche Dendrologie, p. 345) and Dippel (Handbuch der Laubholzkunde, Vol. II, p. 359) do not mention China as part of its habitat. The statement is on the authority of Alexander Becker of Sarepta, who collected the present sample and who has collected for many years for the St. Petersburg Botanic Gardens. The name 'salt peter bush' is that given by Dippel and Koehne." (*Professor Hansen.*)

1029. COLUTEA CRUENTA.

From Sarepta, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)

Originally brought from Transcaucasia. A beautiful ornamental bush.

1030. CUCUMIS MELO.**Muskmelon.**

From Kazan, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (10 packages.)

A Kalmuck variety. Flesh yellow.

1031. TRIFOLIUM PRATENSE.**Red clover.**

From the experiment station at Valujka, province of Samara, Russia. Received through Prof. N. E. Hansen, May 24, 1898. Seed of 1897. (1 package.)

"Variety *pallida*."

1032. CUCUMIS MELO.**Muskmelon.**

From Saratof, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (10 packages.)

Variety "Bokhara;" white-fleshed, oval, yellow, smooth, 12 by 8 inches in diameter; seed very small; further described as early and delicious.

1033. MEDICAGO SATIVA.**Alfalfa.**

From the experiment station at Valujka, Samara province, Russia. Received through Prof. N. E. Hansen. (1 package.)

1034. MEDICAGO SATIVA × FALCATA.**Alfalfa.**

From the experiment station at Valujka, near Rovna, Samara province, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

"Natural hybrid of French and native yellow-flowered lucern (*M. falcata*) originated on the station grounds; the two species show a tendency to mix. Mari-laun (in Pflanzenleben, Vol. II, p. 558) calls such hybrids *M. media*."

1035. CUCUMIS MELO.**Muskmelon.**

From Kazan, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (4 packages.)

"Bokhara," white-fleshed; obtained from a Tartar vender.

1036. ASTRAGALUS ONOBRYCHIS.

From the Experiment Station at Valujka, Samara Province, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

The native esparsette. Closely related to the ground plum of the western prairies.

1037. APOCYNUM VENETUM.

From Department of Agriculture at St. Petersburg. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)

A fiber plant.

1038. CUCUMIS MELO.**Muskmelon.**

From Kazan, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (12 packages.)

"Winter Bokhara." Sold by a Tartar fruit vender. Does not ripen fully on vines. Dark, very large, oval; 15 by 18 inches in diameter.

1039. CLEMATIS.**Clematis.**

From Nerchinsk, Transbaikalia, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.

1040. RIBES GROSSULARIA.**Gooseberry.**

Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

Russian variety, originated by Yaroslav Niemetz from English gooseberry seed.

1041. RHODODENDRON.**Rhododendron.**

From Nerchinsk, Transbaikalia, Siberia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

1042. LEONTOPODIUM LEONTOPODIUM.**Edelweiss.**

From the Ural Mountains, Siberia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

1042a. LEONTOPODIUM ALPINUM.**Edelweiss.**

From the mountains of Siberia. Received through Prof. N. E. Hansen, May 24, 1898. (3 packages.)

1043. PYRUS.**Apple.**

From Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

1044. RIBES (?).**Currant.**

From Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
Prolific.

1045. PAEONIA.**Peony.**

From Nerchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898, under the name *Paeonia eileri*, which we are unable to verify. (1 package.)

1046. PANICUM MILIACEUM.**Millet.**

From Orenburg, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

"Best for dry sections."

1047. VICIA VILLOSA.**Sand vetch.**

From Kief, Russia. Obtained at the Kief Agricultural Exposition, September, 1897. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

- 1048. CITRULLUS VULGARIS. Watermelon.**
 From Uman Horticultural School, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
 A yellow-skinned variety exhibited at Kief fair, September, 1897. Seed given by Yaroslav Niemetz, Vinnitza, Podolia.
- 1049. CERATONIA SILIQUA. St. John's Bread.**
 From Nizhni Novgorod, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (8 packages.) Bought from a Persian merchant at Nizhni Novgorod fair.
 The carob. The sweet-fleshed pods are used for food in Italy and the Orient, and are supposed by some to have been used by John the Baptist. Often called Turkish or Persian locusts, or locust beans.
- 1050. CONRINGIA ORIENTALIS. Hare's-ear mustard.**
 From Valujka, Russia. Received through Prof. N. E. Hansen, May 24, 1898.
 "Wild oil plant," collected by the peasants for the extraction of oil.
- 1051. KOELERIA CRISTATA. Prairie June grass.**
 From Valujka, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
 "Wild steppe grass." Cattle like it best mown; grass small; seed germinates slowly; perennial.
- 1052. FESTUCA ELATIOR. Meadow fescue.**
 From Valujka, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
 Grows wild in Valujka.
- 1053. TRITICUM VULGARE. Wheat.**
 From Uralsk, on the Ural River, Russia. Received through Prof. N. E. Hansen, May 24, 1898.
 Turkestan variety.
- 1054. LATHYRUS TUBEROSUS.**
 From Rovnaya, Samara Province, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
 Grows wild at Rovnaya.
- 1055. ELYMUS SABULOSUS. Lyme grass.**
 From Valujka, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
 Grows wild in Valujka. Very like *E. condensatus* of the Pacific slope.
- 1056. ASTRAGALUS. Milk vetch.**
 From St. Petersburg. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
 Not yet determined at St. Petersburg. Grows wild on sandy soil, and cattle like it. Hairy when old, but herbaceous when very young.
- 1057. VITIS VINIFERA. Grape.**
 From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898.
 Professor Hansen writes: "Mixed cuttings from a Chinese vineyard. I grew a few plants from these cuttings, which I carried with me in the overland journey."

- 1058. TRITICUM VULGARE.** **Wheat.**
Received through Prof. N. E. Hansen, May 24, 1898.
- 1059. ONOBRYCHIS ONOBRYCHIS.** **Sainfoin.**
From Akmolinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898.
(1 package.)
Wild in Siberia.
- 1060. APOCYNUM VENETUM.**
From the Experiment Station at Valujka, near Rovnaya, Samara Province, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
A fiber plant.
- 1061. AGROPYRON.** **Wheat grass.**
From the Experiment Station at Valujka, near Rovnaya, Samara Province, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
Grows wild in Valujka.
- 1062. PANICULARIA.** **Manna grass.**
From the Experiment Station at Valujka, near Rovnaya, Samara Province, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
Only grass on wet saline soil at that locality.
- 1063. MELILOTUS OFFICINALIS.** **Yellow melilot.**
From the Experiment Station at Valujka, near Rovnaya, Samara Province, Russia. Received through Prof. N. E. Hansen, May 24, 1898.
Wild at Valujka, flowers yellow, good on saline soils; used for cheese flavor; very woody, strongly aromatic, resembling *Trigonella caerulea*.
- 1064. MEDICAGO LUPULINA.** **Black medic.**
From the Experiment Station at Valujka, near Rovnaya, Samara Province, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
As found wild.
- 1065. LOTUS CORNICULATUS.** **Bird's-foot trefoil.**
From the Valujka Experiment Station, Samara Province, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
"Variety tenuifolia." Growing on saline soils.
- 1066. CICER ARIETINUM.** **Chick pea.**
From the Agricultural school at Uralsk, on the Ural River, Russia. Received through Prof. N. E. Hansen, May 24, 1898.
"Schaferbse" (sheep pea). Originally from Turkestan. Used for fodder.
- 1067. LAGENARIA VULGARIS (?).** **Bottle gourd.**
From Asia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
From a Cossack captain with the Preczevalsky expedition in Asia, requested by Yaroslav Niemetz to collect seeds.
- 1068. HELIANTHUS.** **Sunflower.**
From Kief Agricultural Exposition, September, 1897. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)

1069. TRITICUM DURUM.**Wheat.**

From Saratof, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

"Beloturka spring wheat;" genuine, hard; grows best on new land. Prof. Hansen writes: "The best hard wheat in the Volga River region. Extensively shipped to Italy, where it is used for the manufacture of macaroni. In Russia it is mixed with softer wheats for making the highest grade of flour. Does not make good bread alone. On the English markets it sells lower than the softer American and European wheats; hence it finds its chief market in Italy."

1070. CITRULLUS VULGARIS.**Watermelon.**

From Agricultural Fair, Kief, September, 1897. Received through Prof. N. E. Hansen, May 24, 1898. (3 packages.)

"Monastery." So named because it was cultivated and selected for many years at a monastery.

1071. CUCUMIS MELO.**Muskmelon.**

From Caucasus. Received through Prof. N. E. Hansen from Yaroslav Niemetz, May 24, 1898. (3 packages.)

Mixed varieties.

1072. ZEA MAYS.**Maize.**

From Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (3 packages.)

New sweet "amber corn" of the Pyatigorsk farm.

1073. TRITICUM VULGARE.**Wheat.**

From Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

Variety "Szul-Bugh-Dai." Endures severe drought and makes excellent flour. (See No. 1174.)

1074. RUBUS.**Blackberry.**

From Uralsk, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (4 packages.)

Grows wild in Uralsk, on the Ural River.

1075. CITRULLUS VULGARIS.**Watermelon.**

From Russia. Received through Prof. N. E. Hansen, May 24, 1898. (4 packages.)

"Christmas melon." Flesh red, lasting till January.

1076. CUCUMIS MELO.**Muskmelon.**

From Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

"Marusja Lesevitzky." Flesh greenish.

1077. CUCURBITA.**Squash.**

From China. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

"Red Chinese squash No. 2." Brought by the great traveler G. N. Botaniin from China.

1078. HELIANTHUS.**Sunflower.**

From Kief fair, September, 1897. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)

Seeds used by the peasants much as we use peanuts.

- 1079. CUCUMIS MELO. Muskmelon.**
From Russia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
"Triumph of the Pyatigorsk farm." Long, with solid orange-colored flesh.
- 1080. CUCURBITA. Squash or pumpkin.**
From China. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
Variety "Chinese rose."
- 1081. CUCUMIS MELO. Muskmelon.**
From Russia. Received through Prof. N. E. Hansen, May 24, 1898. (3 packages.)
"Lida Lesevitzky." Cantaloupe, with thick very juicy orange-colored flesh.
- 1082. CUCUMIS MELO. Muskmelon.**
From Erivan, Transcaucasia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
"Dutma" earth melon, from the immediate vicinity of Mount Ararat. The Dutma melons are covered with earth at a certain time during the period of their growth; this process increases the delicacy of flavor. Some varieties are late keepers.
- 1083. CUCUMIS MELO. Muskmelon.**
From Transcaucasia. Received through Prof. N. E. Hansen, May 24, 1898. (7 packages.)
- 1084. CUCUMIS MELO. Muskmelon.**
From Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
"Spanish winter." Collected by Dr. Dieck in his Spanish travels. Fruit round, green.
- 1085. CUCUMIS MELO. Muskmelon.**
From Erivan, Transcaucasia, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
"Yellow muskmelons," grown near Mount Ararat.
- 1086. CUCUMIS SATIVUS. Cucumber.**
From Caucasus, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
A climbing cucumber.
- 1087. CUCUMIS MELO. Muskmelon.**
From Asia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
- 1088. CUCUMIS SATIVUS. Cucumber.**
From Kashgar, Kafiristan, Asia. Received through Prof. N. E. Hansen, May 24, 1898, from Yaroslav Niemetz. (1 package.)
"Schlinggurke" (climbing cucumber).
- 1089. CITRULLUS VULGARIS. Watermelon.**
From Odessa, Russia. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
Crimean variety suitable for preserving in sugar.

- 1090. CUCUMIS SATIVUS. Cucumber.**
From Batum, Transcaucasia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
A climbing cucumber.
- 1091. CUCUMIS MELO. Muskmelon.**
From Bokhara, Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
- 1092. CUCUMIS SATIVUS. Cucumber.**
From Tsian Sin, China. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
Chinese long variety.
- 1093. LAGENARIA VULGARIS. Bottle gourd.**
From Erivan, near Mount Ararat, Transcaucasia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
Pear-shaped ornamental variety.
- 1094. CUCUMIS SATIVUS. Cucumber.**
From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
Chinese climbing variety.
- 1095. CUCUMIS MELO. Muskmelon.**
From the Imperial Gardens at Nikita, near Yalta, in the Crimea. Received through Prof. N. E. Hansen, May 24, 1898. (4 packages.)
- 1096. CUCUMIS SATIVUS. Cucumber.**
From Russia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
"Huaig groo."
- 1097. CUCURBITA. Squash.**
From China, via Nerchinsk, Siberia. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
"Chinese squash." Originally from Tyand, China.
- 1098. ARTEMISIA. Wormwood.**
From Tashkend, Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
- 1099. SORGHUM HALEPENSE. Johnson grass.**
From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
The native variety.
- 1100. PHASEOLUS. Bean.**
From Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)
"Naish." The native Sarts use it for food, and the hay makes good winter fodder for cattle.

- 1101. MEDICAGO SATIVA.** **Turkestan alfalfa.**
 From Tashkend, Turkestan. Received through Prof. N. E. Hansen, May 24, 1898.
 (1 package.)
 Variety "*turkestanica*." (See No. 1159.)
- 1102. CUCUMIS MELO.** **Muskmelon.**
 From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (4
 packages.)
- 1103. CUCUMIS MELO.** **Muskmelon.**
 From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (2
 packages.)
- 1104. PYRUS BACCATA.** **Crabapple.**
 From Vernoe, Semiretchinsk Province, Russian Turkestan. Received through
 Prof. N. E. Hansen, May 24, 1898. (1 package.)
- 1105.**
 From Djarkent, Russian Turkestan (formerly a part of Chinese Turkestan).
 Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
 Chinese fruits from a rich Tarantin (native Mohammedan) merchant's house.
- 1106. APOCYNUM VENETUM.**
 From Djarkent, Russian Turkestan. Received through Prof. N. E. Hansen, May
 24, 1898. (1 package.)
 "Kasil kindyr" (red kindyr, Kirghiz name). A fiber plant much used for ropes
 and matting.
- 1107. PYRUS MALUS.** **Apple.**
 From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (4
 packages.)
- 1108. PYRUS COMMUNIS.** **Pear.**
 From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (2
 packages.)
- 1109. PYRUS MALUS.** **Apple.**
 From Djarkent, Russian Turkestan. Received through Prof. N. E. Hansen,
 May 24, 1898. (4 packages.)
 Red-fleshed small sweet apple. Professor Hansen writes: "This section was
 formerly a part of Chinese Turkestan, and red-fleshed apples are common. These
 apples, with blood-red flesh, are interesting, although none that I saw were of any
 special value for the American market. I secured many scions of these and other
 fruits in Chinese Turkestan, but lost all but some grape cuttings in a blizzard while
 endeavoring to reach Omsk, the nearest station on the Siberian railway. One of this
 race of apples, with the wood, cambium layer, bark, flowers, and skin and flesh of
 fruit red, has been introduced under the name of *Pyrus malus niedzwetzkyana* Dieck.
 It is about the size of the Whitney crab, and is worthy of attention, at least as a
 curiosity."
- 1110. VITIS VINIFERA.** **Grape.**
 From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (1
 package.)
 Large white grape, very sweet. Vines covered in winter with earth.

- 1111. PYRUS COMMUNIS.** **Pear.**
From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
- 1112. PYRUS COMMUNIS.** **Pear.**
From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (4 packages.)
- 1113. PYRUS COMMUNIS.** **Pear.**
From Djarkent, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
- 1114. ELAEAGNUS ANGUSTIFOLIA.** **Oleaster.**
From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (2 packages.)
Form known as *E. hortensis*. Fruit 1 to 1½ inches long, edible, and much eaten by the natives of Turkestan and western China. A nutritious meal is made from the dried berries, but it will scarcely find favor as a food plant in America (*Professor Hansen's notes*).
- 1115.**
From China. Received through Prof. N. E. Hansen May 24, 1898. (2 packages.)
Thorny leguminous bush on low steppes between the Chinese boundary and Kuldja.
- 1116. PYRUS COMMUNIS.** **Pear.**
From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (4 packages.)
- 1117. CUCUMIS MELO.** **Muskmelon.**
From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (6 packages.)
Small melon; very early.
- 1118. CUCUMIS MELO.** **Muskmelon.**
From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (4 packages.)
- 1119. CUCUMIS MELO.** **Muskmelon.**
From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (4 packages.)
"Bel-za-seh." Large and sweet.
- 1120. PYRUS MALUS.** **Apple.**
From Kuldja, China. Received through Prof. N. E. Hansen, May 24, 1898. (4 packages.)
Size of the Whitney crab; yellow, blushed, flesh very red throughout. (See No. 1109.)
- 1121. GLYCYRRHIZA GLABRA.** **Licorice.**
Received through Prof. N. E. Hansen, May 24, 1898. (See No. 1011.)
- 1122. TRITICUM VULGARE.** **Wheat.**
From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898.
• Spring variety from Aulie-ata (latitude 43°), about 188 miles northeast of Tashkend.

- 1123. PYRUS CYDONIA.** **Quince.**
 From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen,
 May 24, 1898. (4 packages.)
 Large, yellow, sweetish.
- 1124. CUCUMIS MELO.** **Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May
 24, 1898. (10 packages.)
- 1125. CUCUMIS MELO.** **Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May
 24, 1898. (28 packages.)
- 1126. CUCUMIS MELO.** **Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May
 24, 1898. (8 packages.)
 Variety "Kok-cha-tack" (yellow stone). Oval, flesh white, sweet; keeps all
 winter.
- 1127. CITRULLUS VULGARIS.** **Watermelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May
 24, 1898. (3 packages.)
 "Pear-shaped."
- 1128. CUCUMIS MELO.** **Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May
 24, 1898. (8 packages.)
- 1129. CUCUMIS MELO.** **Muskmelon.**
 From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen,
 May 24, 1898. (8 packages.)
 Variety "Boz-si-aol-se." Large, oblong, dark green, netted, with white flesh.
- 1130. CUCUMIS MELO.** **Muskmelon.**
 From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen,
 May 24, 1898. (14 packages.)
 Variety "Karakan." Large black-green melon.
- 1131. PYRUS CYDONIA.** **Quince.**
 From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen,
 May 24, 1898. (4 packages.)
 A very large and very downy quince.
- 1132. PHYSALIS ALKEKENGI.** **Strawberry tomato.**
 From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen,
 May 24, 1898. (6 packages.)
 The sack and fruit red.
- 1133. CUCUMIS MELO.** **Muskmelon.**
 From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen,
 May 24, 1898. (6 packages.)
 Long, oval, dark green melon.

- 1134. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (6 packages.)
 Variety "Ak-ei-ruk" (white-seeded). Heavily netted, oval, yellow-green melon with white flesh; $37\frac{1}{2}$ inches by 28 inches in circumference.
- 1135. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (8 packages.)
 Same as No. 1136 except that the flesh is white.
- 1136. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (16 packages.)
- 1137. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (8 packages.)
- 1138. PYRUS CYDONIA. Quince.**
 From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (12 packages.)
 Sour; of regular shape, broadly ovate, very pubescent.
- 1139. PRUNUS. Cherry.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (8 packages.) From General Koroekoff of Tashkend, Turkestan.
- 1140. CUCUMIS MELO. Muskmelon.**
 From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (4 packages.)
 One 25 by 20 inches in circumference. Yellowish green with dark green spots; very sweet. Flesh greenish.
- 1141. CUCUMIS MELO. Muskmelon.**
 From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (3 packages.)
 "Koo-toor." Round, dark green, netted, flesh white.
- 1142. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (8 packages.)
- 1143. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (20 packages.)
- 1144. CUCUMIS MELO. Muskmelon.**
 From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (6 packages.)
 Variety "Bargana." Light greenish yellow, with white flesh.
- 1145. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (8 packages.)

1146. CUCUMIS MELO.**Muskmelon.**

From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (8 packages.)

Variety "Ak-ko-eon" (white melon). Size, 25 by 36 inches, whitish green turning to white, netted; flesh white and very tender, delicious. A Sart variety. Very choice.

1147. CUCUMIS MELO.**Muskmelon.**

From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (16 packages.)

1148. CUCUMIS MELO.**Muskmelon.**

From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (3 packages.)

A remarkable melon, oval, yellowish with some green marbling, flesh green, melting, and very delicious, tender quite to the skin.

1149. PYRUS MALUS.**Apple.**

From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen, May 24, 1898. (1 package.)

Large red apple.

1150. MEDICAGO SATIVA.**Turkestan alfalfa.**

From Djarkent, Russian Turkestan. Received through Prof. N. E. Hansen, June 4, 1898.

Variety "*turkestanica*." Obtained in the overland journey. (See No. 1159.)

1151. MEDICAGO SATIVA.**Turkestan alfalfa.**

From Djarkent, Russian Turkestan. Received through Prof. N. E. Hansen, June 4, 1898.

Variety "*turkestanica*." Obtained in the overland journey. (See No. 1159.)

1152. MEDICAGO SATIVA.**Alfalfa.**

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898.

1153. TRITICUM DURUM.**Wheat.**

From Semipalatinsk, Siberia. Received through Prof. N. E. Hansen, June 4, 1898. (9 packages.)

"Arnautka" or "Beloturka," a hard, white wheat. Somewhat degenerated. Originally from the Volga River provinces. Interesting as showing the effect of cultivation in another locality. (See No. 1156.)

1154. TRITICUM VULGARE.**Wheat.**

From Semipalatinsk, Siberia. Received from Prof. N. E. Hansen, June 4, 1898. (7 packages.)

A Chinese variety.

1155. RUBUS.**Raspberry.**

From the Altai Mountains, Siberia. Received through Prof. N. E. Hansen, June 4, 1898. (12 packages.)

Wild raspberry from the Altai Mountains, near Semipalatinsk (latitude 50°).

- 1156. TRITICUM DURUM.** **Wheat.**
 From Semipalatinsk, Siberia. Received through Prof. N. E. Hansen, June 4, 1898. (5 packages.)
 "Arnautka," a hard white wheat, first quality; a spring variety. (See No. 1153.)
- 1157. TRITICUM VULGARE.** **Wheat.**
 From Semipalatinsk, Siberia. Received through Prof. N. E. Hansen, June 4, 1898. (10 packages.)
 Chinese; a spring variety.
- 1158. ELAEAGNUS ANGUSTIFOLIA.** **Oleaster.**
 From Djarkent, Russian Turkestan. Received through Prof. N. E. Hansen, June 4, 1898. (6 packages.)
 The form called *E. hortensis*. An edible market fruit. (See No. 1114.)
- 1159. MEDICAGO SATIVA.** **Turkestan alfalfa.**
 From Kopal, Siberia. Received through Prof. N. E. Hansen, June 4, 1898.
 Variety "*turkestanica*." Originally from Abakumovsky, near Kopal, Semiretchinsk Province, Siberia, N. lat. 46°. Professor Hansen writes:
 "I followed this plant from the cotton-growing sections of Bokhara and other parts of Russian Turkestan into western China and to its northern limits near Kopal, Siberia.
 "A large quantity of seed was obtained, but mostly from the cotton-growing sections (Bokhara, Samarkand, and Tashkend). The other five places were Sairam, about 80 miles north of Tashkend; 150 miles north of Merke (Merke is in lat. 43° and long. 73° east of Greenwich), in the Kirghiz Tartar steppes; Kuldja, China (lat. 43° 50', long. 81° 20' east), the farthest point east in my journey; Djarkent, lat. 44° 10', long. 80° east, and Kopal, lat. 45° 10', long. 79° east. These various importations should be kept separate, as the plants will probably differ in hardness. The last five places are north of the cotton belt. From the last four places only a small quantity of seed could be taken along in a rough adventuresome overland journey of over 2,000 miles. That from Merke and Kopal will probably be the hardest.
 "Prince Massalski of the department of agriculture at St. Petersburg, writes (in The Industries of Russia, Vol. III, p. 459):
 "'Lucern-clover, *Medicago sativa*, var. *turkestanica*, is the chief forage in use throughout Central Asia, and to the settled population of Turkestan is of the highest importance, since during the summer it forms the chief, and in winter, prepared in the shape of hay, the only fodder for cattle. It is of all the greater importance because within the region populated by settled inhabitants there are no meadows. Soft herbs and other grasses that grow up in the early spring in certain parts of the steppes are quickly dried up by the hot rays of the sun, and give place to coarse, prickly stubble, or in any case to less nutritive grasses that are in general unfitted for sheep, camels, or steppe cattle, and still less fitted for horses or the cattle of those who are settled in the oases, and are thus closely confined to the forelands or rivers, and in most cases are far removed from the steppes.' Prince Massalski describes the native methods of cultivation and irrigation and continues: 'The native lucern would seem to be a cattle fodder that can not be replaced in countries so dry and so hot as Turkestan and the Transcaspian Province. Parallel experiments that have been made in the Merv oases, in the Transcaspian Province, in sowing native and French lucern, under widely different conditions of water supply, have shown that the native lucern, particularly where there is a lack of water, is vastly superior to the French in the crops it yields, and that it is able to grow satisfactorily with a minimum supply of water, a supply so small that European lucern would perish from drought. This peculiarity of the native lucern is to be explained by its peculiar structure. It possesses a very large root system, and its leaves are covered with thick down; this, in conjunction with a deep-cut orifice on the leaf, enables the plant on the one hand to imbibe the moisture from the deeper layers of the soil, and on the other hand to exhale it in very small quantity.'" (See Nos. 1101, 1150, 1151, 1169.)
- 1160. CUCUMIS MELO.** **Muskmelon.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (20 packages.)
 Variety "Ak-na-waht" (white sugar).

- 1161. PHASEOLUS MUNGO.** **Green gram.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (16 packages.)
 Variety "*subtrilobata*." First soaked in warm water for one day, then soaked in cold water six days, the water being changed twice a day. In a wooden vessel in a warm room it germinates several inches, and these sprouts are then used as a salad. This is the process as noted in a Chinese mill, where the seed was obtained, by the aid of two interpreters. (*Professor Hansen's notes.*)
- 1162. TRITICUM VULGARE.** **Wheat.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (21 packages.)
 From the mountains; not irrigated. Obtained in the same Chinese mill as No. 1161.
- 1163. TRITICUM VULGARE.** **Wheat.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (17 packages.)
 Spring variety; irrigated. Obtained same place as No. 1161.
- 1164. ZIZYPHUS SATIVA (?).** **Jujube.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (6 packages.)
 According to Mr. Okohira, of the Japanese Legation, this is used extensively in North China as a medicine, especially as a base for cough sirups, and also for food as an inferior date. The Chinese name is "Tsao-tze," and it is frequently called the Chinese date.
- 1165. PHASEOLUS.** **Bean.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (6 packages.)
 "Hwang-tow" (yellow bean). From this is made a bean cheese, which is cut in slices and roasted with meat. Obtained in the same place as No. 1161. A mineral from the mountains, which has not yet been analyzed, was used in the manufacture. Also extensively used in Japan, where it is cooked with soja beans, according to Mr. Okohira.
- 1166. PISUM.** **Pea.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (2 packages.)
 The peas are ground into flour for macaroni, as per sample 1167. Obtained in the same Chinese mill as No. 1161. The process of manufacture was noted, but it was all by cheap labor.
- 1167. PISUM.** **Pea.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (2 packages.)
 Flour for pea macaroni. (See No. 1166.)
- 1168. PISUM.** **Pea.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (12 packages.)
 Macaroni is made from the peas. Obtained in the same Chinese mill as No. 1161.
- 1169. MEDICAGO SATIVA.** **Turkestan alfalfa.**
 From Merke, northern Turkestan. Received through Prof. N. E. Hansen, June 4, 1898. (40 packages.)
 Variety "*turkestanica*." (See No. 1159.)

1170. ZEA MAYS.**Maize.**

From Peru. Sent by a friend of the Assistant Secretary of War, Hon. G. L. Meiklejohn, and presented by him to this Department, June 25, 1898. (70 packages.)

Yellow.

1171. ZEA MAYS.**Maize.**

From Peru. Sent by a friend of the Assistant Secretary of War, Hon. G. L. Meiklejohn, and presented by him to this Department, June 25, 1898. (40 packages.)

Red-striped, with yellow ground.

1172. ZEA MAYS.**Maize.**

From Peru. Sent by a friend of the Assistant Secretary of War, Hon. G. L. Meiklejohn, and presented by him to this Department, June 25, 1898. (2 packages.)

White.

1173. PISUM.**Pea.**

From Moscow, Russia. Received through Prof. N. E. Hansen, June 4, 1898. (150 packages.)

Large Victoria field variety. Said to have been originally English, but selected for many years in Russia.

1174. TRITICUM VULGARE.**Wheat.**

From Moscow, Russia. Received through Prof. N. E. Hansen, June 4, 1898. (90 packages.)

"A fine native variety of Turkestan and a drought resister. Will stand intense heat, and I trust that western Kansas, Nebraska, and the South will find it useful." (*Professor Hansen.*) The native name is "Szul-bugh-dai." (See No. 1073.)

1175. LATHYRUS SATIVUS.**Bitter vetch.**

From Moscow, Russia. Received through Prof. N. E. Hansen, June 4, 1898. (360 packages.)

"The peasant name is 'tre-granni' (three-sided). Much cultivated in the Volga River provinces of Samara and Saratof, where the common field peas do not do well. It stands severe droughts and is much used for stock. The peasants use it for the table, but only in sections where the common field peas fail, as it is of poorer quality. Too free use of this pea has resulted in cases of a peculiar paralysis, both in man and beast (leguminosis). Good stockmen feed it in moderation with coarse fodder." (*Professor Hansen.*) Also referred to as the "Tschina" pea.

1176. TRITICUM VULGARE.**Wheat.**

From Moscow, Russia. Received through Prof. N. E. Hansen, June 4, 1898. (190 packages.)

Winter variety.

1177. ONOBRYCHIS ONOBRYCHIS.**Esparsette.**

From Moscow, Russia. Received through Prof. N. E. Hansen, June 4, 1898. (10 packages.)

1178. AVENA SATIVA.**Oat.**

From Moscow, Russia. Received through Prof. N. E. Hansen, June 4, 1898. (1,200 packages.)

Shatilof oat.

- 1179. VICIA VILLOSA.** **Sand vetch.**
From Moscow, Russia. Received through Prof. N. E. Hansen, June 4, 1898.
(610 packages.)
- 1180. FESTUCA ELATIOR.** **Meadow fescue.**
From Moscow, Russia. Received through Prof. N. E. Hansen, June 4, 1898.
(48 packages.)
- 1181. TRITICUM VULGARE.** **Wheat.**
From Samarkand, Turkestan, *via* Odessa, Russia. Sent by Prof. N. E. Hansen,
through the American minister, June 30, 1898. (60 packages.)
- 1182. CUCUMIS MELO.** **Muskmelon.**
From South Persia. Donated to the Department by Mr. C. Ahuger, of Askabad,
Transcaspia, July 18, 1898. (4 packages.)
- 1183. ERVUM LENS.** **Lentil.**
From Calcutta, India. Sent by R. F. Patterson, consul-general U. S. A., Cal-
cutta, and received July 27, 1898. (10 packages.)
- 1184. PUNICA GRANATUM.** **Pomegranate.**
From Tashkend, Turkestan. Received through Prof. N. E. Hansen, July 28, 1898.
(32 packages.)
This should be given careful attention, as it will probably prove hardier than the
varieties now cultivated in the United States. (*Professor Hansen's notes.*)
- 1185. MORUS.** **Mulberry.**
From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July
28, 1898. (20 packages.)
- 1186. CUCUMIS MELO.** **Muskmelon.**
From Tashkend, Turkestan. Received through Prof. N. E. Hansen, July 28, 1898.
(6 packages.)
Variety "Tschuk kari." Dried in the flesh.
- 1187. PYRUS CYDONIA (?).** **Quince.**
From Tashkend, Turkestan. Received through Prof. N. E. Hansen, July 28, 1898.
(20 packages.)
A native variety from a choice of the best specimens weighing as much as 1
pound. Sent without notes by a collector.
- 1188. CUCUMIS MELO.** **Muskmelon.**
From Tashkend, Turkestan. Received through Prof. N. E. Hansen, July 28, 1898.
(6 packages.)
"Kisil uruk." Red-fruited.
- 1189. RAPHANUS SATIVUS.** **Radish.**
From Tashkend, Turkestan. Received through Prof. N. E. Hansen, July 28, 1898.
(14 packages.)
Long red.
- 1190. BETA VULGARIS.** **Beet.**
From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July
28, 1898. (3 packages.)
Sart variety; light rose color.

- 1191. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (6 packages.)
 Variety "A-la-putshak."
- 1192. CUCUMIS SATIVUS. Cucumber.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (33 packages.)
 Turkestan green, medium long.
- 1193. CITRULLUS VULGARIS. Watermelon.**
 From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (28 packages.)
 Large, pear-shaped, white-seeded.
- 1194. CITRULLUS VULGARIS. Watermelon.**
 From Samarkand, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (18 packages.)
- 1195. ZIZYPHUS. Jujube.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (10 packages.)
 Professor Hansen states that the fruit is much eaten in Turkestan.
- 1196. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (17 packages.)
 Variety "Gul-abi." Originally from China.
- 1197. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (20 packages.)
 Variety "Zamtscha," originally from China.
- 1198. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (40 packages.)
 "Kari-kis," a Chinese variety.
- 1199. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (50 packages.)
 Mixed Chinese varieties.
- 1200. ELAEAGNUS. Oleaster.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (2 packages.)
 Its fruit is edible and sold in the market, according to Professor Hansen's notes. (See No. 1114.)
- 1201. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (144 packages.)
 "Kok-tscha," a cantaloupe variety.

- 1202. CUCUMIS MELO.** **Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen,
 July 28, 1898. (50 packages.)
 A Chinese variety called "Tschikin" and "Patscha."
- 1203. ZIZYPHUS.** **Jujube.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen
 July 28, 1898. (2 packages.)
 "A market fruit in Turkestan."
- 1204. CORIANDRUM SATIVUM.** **Coriander.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen,
 July 28, 1898. (2 packages.)
 Used as a condiment in soups, under the name "Kaschnutsch."
- 1205. DAUCUS CAROTA.** **Carrot.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen,
 July 28, 1898. (6 packages.)
 Sart variety; light yellow.
- 1206. CUCURBITA PEPO.** **Pumpkin.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen,
 July 28, 1898. (2 packages.)
 Used by the natives as substitute for carrots, under the name "Palaw."
- 1207. BRASSICA.** **Turnip.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen,
 July 28, 1898. (10 packages.)
- 1208. CUCUMIS MELO.** **Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July
 28, 1898. (10 packages.)
 Variety "A-lek-ke." Originally from China.
- 1209. ALLIUM CEPA.** **Onion.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July
 28, 1898. (13 packages.)
 A table variety. Turkestan white fancy onion; a good keeper.
- 1210. CUCURBITA (?).**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July
 28, 1898. (1 package.)
 A squash or gourd; the original label is missing.
- 1211. CUCURBITA (?).**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July
 28, 1898. (5 packages.)
 Probably a gourd; original label missing.
- 1212. CUCUMIS MELO.** **Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July
 28, 1898. (20 packages.)
 "Ak-ka-in." A white variety.

- 1213. BERBERIS VULGARIS. Tartarian barberry.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (10 packages.)
 "An edible market berry in Turkestan" (*Professor Hansen*). Form called *B. heteropoda*. Native of Turkestan and Tartary.
- 1214. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (204 packages.)
 Variety "Akitschick." Extra fine-looking seed.
- 1215. CUCUMIS MELON. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (132 packages.)
 Variety "Bassu-alde." Seed unusually fine-looking.
- 1216. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (192 packages.)
 A cantaloupe; the seed unusually fine-looking.
- 1217. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (60 packages.)
 "Kasak." "A cantaloupe variety; the earliest of all the white-fleshed muskmelons from Russian Turkestan."
- 1218. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (96 packages.)
 Variety "Tschirin Beschek." Originally from China.
- 1219. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (128 packages.)
 "Koi-casch" (a native Sart name, meaning "sheep's head.")
- 1220. CITRULLUS VULGARIS. Watermelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (64 packages.)
 A Sart variety of the largest size; skin black.
 "None of the Turkestan watermelons were especially valuable as far as I noted, but the muskmelons were far better than any we have. They are mostly from the cotton-growing sections, so will probably be valuable only in the South." (*Professor Hansen*.)
- 1221. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (16 packages.)
 Variety "Bassu-alde." Supposed to be a hybrid cantaloupe.
- 1222. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (128 packages.)
 Variety "Ak-uruk."

- 1223. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (128 packages.)
 Variety "Gur-bech." Originally from China.
- 1224. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (128 packages.)
 "Beschek." A Chinese variety.
- 1225. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (288 packages.)
 "Ak-ka-yur." A white variety.
- 1226. CUCUMIS MELO. Muskmelon.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (618 packages.)
 A mixture of native Turkestan varieties.
- 1227. ZIZYPHIUS. Jujube.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, July 28, 1898. (8 packages.)
 "Brought from Chodschent to Tashkend; an edible market fruit."
- 1228. CUCUMIS SATIVUS. Cucumber.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (20 packages.)
 Grown by a Dungan (Chinese Mohammedan) gardener.
- 1229. BRASSICA.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (8 packages.)
 Grown by a Dungan (Chinese Mohammedan) gardener, under the name "Burkar."
- 1230. BETA VULGARIS. Beet.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (2 packages.)
 Red. Grown by a Dungan (Chinese Mohammedan) gardener.
- 1231. RAPHANUS SATIVUS. Radish.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (6 packages.)
 Grown by a Dungan (Chinese Mohammedan) gardener.
- 1232. PHASEOLUS. Bean.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (2 packages.)
 Grown by a Dungan (Chinese Mohammedan) gardener.
- 1233. RAPHANUS SATIVUS. Radish.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (6 packages.)
 Grown by a Dungan (Chinese Mohammedan) gardener, as "Pekin."

- 1234. RAPHANUS SATIVUS. Radish.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (6 packages.)
 Grown by a Dungan (Chinese Mohammedan) gardener.
- 1235. BRASSICA OLERACEA. Cabbage.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (10 packages.)
 Probably not a leading variety, but to be eaten for greens. Grown by a Dungan (Chinese Mohammedan) gardener, and called "psee sai."
- 1236. APIUM GRAVEOLENS. Celery.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (2 packages.)
 For soups. Grown by a Dungan (Chinese Mohammedan) gardener, as "ching she."
- 1237. RAPHANUS SATIVUS. Radish.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (8 packages.)
 Winter variety. Grown by a Dungan (Chinese Mohammedan) gardener.
- 1238. ALLIUM CEPA. Onion.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (4 packages.)
 "Soo shai." "Schnitt Zwiebel." Grown by a Dungan (Chinese Mohammedan) gardener.
- 1239. LACTUCA SATIVA. Lettuce.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (3 packages.)
 Grown by a Dungan (Chinese Mohammedan) gardener, and called "ovsun."
- 1240. ALLIUM CEPA. Onion.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (2 packages.)
 Grown by a Dungan (Chinese Mohammedan) gardener.
- 1241. CAPSICUM. Red pepper.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (4 packages.)
 Grown by a Dungan (Chinese Mohammedan) gardener.
- 1242. NICOTIANA. Tobacco.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (4 packages.)
 Grown by a Dungan (Chinese Mohammedan) gardener, as "khi yung."
- 1243. ANETHUM GRAVEOLENS. Dill.**
 From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (2 packages.)
 Grown by a Dungan (Chinese Mohammedan) gardener as "khuk chang."

1244. SOLANUM.

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898.
(2 packages.)

Grown by a Dungan (Chinese Mohammedan) gardener, as "cheesa."

1245. ISATIS TINCTORIA.**Dyer's woad.**

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898.
(2 packages.)

"Ching sin." Grown for soups by a Dungan (Chinese Mohammedan) gardener.

1246.

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (5
packages.)

"Khi bah," a salad plant. Grown by a Dungan (Chinese Mohammedan) gardener.

1247. PHASEOLUS.**Bean.**

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (2
packages.)

Red variety. Used in confections and jellies with sugar; also cooked with meat
for cakes, as we use mince-meat.

Grown by a Dungan (Chinese Mohammedan) gardener.

1248. ALLIUM CEPA.**Onion.**

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (4
packages.)

"Lon soong," long onion. Grown by a Dungan (Chinese Mohammedan) gardener.

1249. LACTUCA SATIVA.**Lettuce.**

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898.
(4 packages.)

For soups. Grown by a Dungan (Chinese Mohammedan) gardener, as "ye-sur-sur."

1250. RAPHANUS SATIVUS.**Radish.**

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (4
packages.)

Yellow variety. Grown by a Dungan (Chinese Mohammedan) gardener.

1251. BRASSICA.

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898.
(6 packages.)

Grown by a Dungan (Chinese Mohammedan) gardener, and called "che leb."

1252. CORIANDRUM SATIVUM.**Coriander.**

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (4
packages.)

Grown by a Dungan (Chinese Mohammedan) gardener, as "yea swee."

1253. RAPHANUS.**Radish.**

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898.
(2 packages.)

Native names "hwang nee" and "pasa lok boh."

1254. DAUCUS CAROTA.**Carrot.**

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (8 packages.)

"Chung la bon." Grown by a Dungan (Chinese Mohammedan) gardener.

1255. BRASSICA OLERACEA.**Cabbage.**

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (8 packages.)

Grown by a Dungan (Chinese Mohammedan) gardener.

1256.

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (10 packages.)

Grown by a Dungan (Chinese Mohammedan) gardener.

1257. CUCURBITA.

From Kuldja, China. Received through Prof. N. E. Hansen, June 4, 1898. (4 packages.)

So-called "white melon" of China. It is grown for the seeds, which are eaten out of hand. Callers are regaled with these while they wait. Grown by a Dungan (Chinese Mohammedan) gardener.

1258. RUBUS STELLATUS.**Knesheneka.**

From Cook Inlet, near Sitka, Alaska. Received through Walter H. Evans, September 2, 1898.

According to Mr. Evans's report, a most excellent berry, representing the best from that region. Also called "morong."

1259. RIBES.**Currant.**

From Cook Inlet, Alaska. Received through Walter H. Evans, September, 1898.

"The currants are the finest I have ever seen anywhere." (*Evans.*)

1260. LINUM USITATISSIMUM.**Flax.**

Received from the Fiber Investigation Division through Mr. Chas. R. Dodge, September 12, 1898. (450 packages.)

1261. VITIS HYPOGLAUCA.**Grape.**

From East Australia. Received through Jared G. Smith of the Division of Agrostology, September 17, 1898.

Evergreen climber of enormous length, forming stout stem. Berries black, size of cherries. Bears slight frost, but should be sheltered from it for two or three years.

1262. MUCUNA UTILIS.**Velvet bean.**

From Florida. Received September 21, 1898. (24 packages.)

An annual leguminous plant, useful for grazing or for hay, but probably most valuable as a soil renovator. The plant starts slowly, but when once established it makes a rank growth of vines 4 to 10 feet in length, forming an excellent mulch for winter and a large amount of vegetable matter to plow under in spring.

Sow when the soil has become warm, just after the time for corn planting, in drills 3 to 5 feet apart, 6 to 12 inches apart in the row, or three or four seeds in a hill in checks like corn—about 1½ to 2 pecks of seed per acre. It is advisable to cultivate the land once or twice after the plants are up. (*L. H. Dewey.*)

1263-1282.

From Russia. Received from J. Niemetz, Vinnitza, through Prof. N. E. Hansen, September, 1898.

A collection of unnamed samples of seeds of shrubs and trees.

- 1283. PINUS CEMBRA** (?). **Pine.**
From Russia. Received from J. Niemetz, Vinnitza, through Prof. N. E. Hansen, September, 1898.
- 1284. PINUS.** **Pine.**
From Russia. Received from J. Niemetz, Vinnitza, through Prof. N. E. Hansen, September, 1898.
- 1285. PYRUS.**
From Russia. Received from J. Niemetz, Vinnitza, through Prof. N. E. Hansen, September, 1898.
- 1286.** **Yeast.**
From Hefe-Reinzucht Station, Geisenheim, Germany. Received through Mr. W. T. Swingle, November, 1898.
"Ay" yeast for the production of champagne.
- 1287.** **Yeast.**
From Germany. Received through W. T. Swingle, November, 1898.
"Bordeaux" for red wine.
- 1288.** **Yeast.**
From Germany. Received through W. T. Swingle, November, 1898.
"Assmanshausen" (Rheingau) for red wine.
- 1289.** **Yeast.**
From Germany. Received through W. T. Swingle, November, 1898.
"Steinberg" 93 (Rheingau) for white wine and cider.
- 1290.** **Yeast.**
From Germany. Received through W. T. Swingle, November, 1898.
"Zeltinger" (Mosel) for white wine and cider.
- 1291.** **Yeast.**
From Portugal. Received through W. T. Swingle, November, 1898.
"Loureiro" for port wine and pineapple cider.
- 1292. OROXYLON INDICUM.**
From Cawnpore, India. Received through Geo. W. S. Mayer.
So-called "Palega pajaretic" of Rheede. "The bark and fruits are used as a mordant in dyeing and tanning. A tree found throughout India up to altitudes of 3,000 feet." (Watt.)
- 1293. ELAEAGNUS.** **Oleaster.**
From Paris. Received through W. T. Swingle.
Narrow gray foliage, effect of willow or olive. Extraordinary abundance of yellow-red fruits gives curious tone to bushes from a distance. Hardier than olive and grows on drier soil than the willow.
- 1294. BUPHTHALMUM SPECIOSUM.**
From Botanic Garden, Leipzig, Germany. Received through W. T. Swingle.
A composite, with large crisped leaves and sunflower-like heads with numerous slender rays 1 inch long.

1295. MEDICAGO SATIVA.**Alfalfa.**

From Samarkand. Received through Prof. N. E. Hansen, September, 1898. (30 packages.)

1296. PHASEOLUS SEMIERECTUS.**Phasemy.**

From British Guiana. Received through Government Botanic Gardens. (4 packages.)

A highly valuable leguminous fodder plant, 6 to 10 feet high.

1297. ACTINOTUS HELIANTHI.

From Sydney, Australia. Received through J. H. Maiden, director Botanic Gardens, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

An "everlasting" flower.

1298. FICUS RUBIGINOSA.**Port Jackson fig.**

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

A beautiful evergreen shade-tree, quite hardy.

1299. EUGENIA.

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

A tree with edible fruit received as "*Eugenia brachyandra*."

1300. CRYPTOCARYA TRIPLINERVIS.

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

1301. CUPANIA SERRATA.

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

1302. GREVILLEA ASPLENIFOLIA.

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (2 packages.)

1303. CRATAEGUS SPATHULATA.**Hawthorn.**

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

1304. CASUARINA TORULOSA.**Forest oak.**

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

A tree 70 feet high; wood tough and durable. (*Von Mueller*.)

1305. STERCULIA ACERIFOLIA.**Flame tree.**

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

- 1306. HELICHRYSUM BRACTEATUM.** **Everlasting.**
 From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)
 An "everlasting" flower.
- 1307. CLEMATIS ARISTATA.** **Clematis.**
 From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)
- 1308. DRACAENA FRAGRANS.**
 From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)
- 1309. CURTISIA FAGINEA.**
 From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)
 A tree 40 feet high; wood tough, heavy, durable; good for tools and furniture. Native of South Africa.
- 1310. HYMENOSPORUM FLAVUM.**
 From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)
- 1311. STERCVLIA QUADRIFIDA.** **Kurrajong.**
 From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)
- 1312. PANAX ELEGANS.** **Laurel.**
 From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)
- 1313. STENOCARPUS SALIGNUS.** **Silky oak.**
 From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)
- 1314. PULTENAEA LINOPHYLLA.**
 From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)
- 1315. RICINOCARPUS PINIFOLIUS.**
 From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)
- 1316. CASSINIA LONGIFOLIA.**
 From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

1317. TECOMA STANS.

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

A beautiful ornamental flowering shrub, received as "*Tecoma velutina hort.*"

1318. GREVILLEA PUNICEA.

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

1319. MORINDA JASMINOIDES.

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

1320. EUCALYPTUS SALIGNA.**Gray gum.**

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

A tree often 100 feet high and 6 to 8 feet in diameter. Wood valuable, very durable. Grows in rich bottom lands. Quite hardy.

1321. ABERIA CAFFRA.**Kei apple.**

From Sydney, Australia. Received through J. H. Maiden, director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

A tall shrub. "The best South African hedge plant." (*MacOwan.*)

1322. TABERNAEMONTANA ORIENTALIS.**Bitter bark.**

From Sydney, Australia. Received through J. H. Maiden, Director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

1323. RULINGIA PANNOSA.**Black kurrajong.**

From Sydney, Australia. Received through J. H. Maiden, Director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

1324. PETROPHILA PULCHELLA.

From Sydney, Australia. Received through J. H. Maiden, Director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

1325. EUCALYPTUS OBCORDATA.

From Sydney, Australia. Received through J. H. Maiden, Director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

1326. CALLITRIS ARBOREA.

From Sydney, Australia. Received through J. H. Maiden, Director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

A South African conifer, growing at from 3,000 to 4,000 feet altitude. Trunks often 8 to 12 feet in diameter.

1327. HEDYSCEPE CANTERBURYANA.

From Sydney, Australia. Received through J. H. Maiden, Director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (2 packages.)

An ornamental palm.

1328. HEDYSCEPE CANTERBURYANA.

From Sydney, Australia. Received through J. H. Maiden, Director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (2 packages.)

1329. PTYCHOSPERMA ELEGANS.

From Sydney, Australia. Received through J. H. Maiden, Director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (3 packages.)

An ornamental palm.

1330. HOWEA FORSTERIANA.

From Sydney, Australia. Received through J. H. Maiden, Director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (3 packages.)

An ornamental palm.

1331. DIOSCOREA TRANSVERSA.

Long yam.

From Sydney, Australia. Received through J. H. Maiden, Director Botanic Garden, October 17, 1898. Communicated by Division of Agrostology. (1 package.)

1332. ANANAS SATIVUS.

Pineapple.

From West Palm Beach, Florida. Received through G. C. Matthams, October 17, 1898. Originally from Puerto Rico. Plants.

1333. ANANAS SATIVUS.

Pineapple.

From West Palm Beach, Florida. Received through G. C. Matthams, October 17, 1898. "Abraka." Plants.

1334. VICIA VILLOSA.

Sand vetch.

From Russia. Received through Prof. N. E. Hansen, February, 1898.

1335. BROMUS INERMIS.

Smooth brome-grass.

From Russia. Received through Prof. N. E. Hansen, February, 1898.

This lot of seed consisted of 12 tons from the Penza province, in the Volga River region of Russia (latitude 53°). Professor Hansen writes: "It appears to me to be time to quit calling this species Austrian or Hungarian brome grass. Awnless or smooth brome grass is a much better name. It is native to most, if not all, parts of European Russia and extends far into Siberia and Turkestan. Dr. Regel (in 'Descriptiones Plantarum Novarum et Minus Cognitarum,' Fasciculus VIII, St. Petersburg, 1881, p. 57) gives its distribution in detail in Central Asia near Tashkend, the capital of Russian Turkestan, and in the high Thian Schan (or Tien-shan) Mountains separating Turkestan from western China, usually known as Chinese Turkestan. The distribution in central Asia is given as traced by the explorers Krause, A. Regel, Schrenck, Karelin, Kirilow, Fetisow, and Semenow, mostly or all sent out by the St. Petersburg Botanic Gardens. Aitchison, an English explorer, is also mentioned as having found it at a height of 11,000 to 12,000 feet in the mountains of Afghanistan.

At the agricultural school at Uralsk, on the Ural River (annual rainfall 12.6 inches), in extreme eastern European Russia, *Bromus inermis* and *Triticum ramosum* were native and regarded as their best grasses for the steppes. At the Marinskii Agri-

cultural School and Experiment Farm near Saratof, on the Volga (annual rainfall 17.6 inches), *Bromus inermis* was native and regarded as their best grass, having survived on dry hills where timothy and red and white clover failed.

The best Russian authorities do not think this grass equal to timothy in feeding value, but it flourishes in sections where timothy is an utter failure. Its chief value will probably be in dry regions.

It may appear that this grass as cultivated hitherto in America really came to us largely from Russia by way of Austria and Hungary. The seed is largely sold in Russia for home sowing and for export.

At the experiment station at Ames, Iowa, this species produced under very favorable conditions a ton and a half of cured hay per acre the first season. The seed was planted about April 1 and the crop cut in August. A strong leafy aftergrowth followed. This is as personally reported by Prof. James Atkinson. (*Professor Hansen.*)

1336. PANICUM MILIACEUM.

Millet.

From Russia. Received through Prof. N. E. Hansen, February, 1898. (10 packages.)

From Orenburg, Russia, on the boundary between European Russia and Siberia. Endures very severe drought. The seed is large and is much used, when hulled, for food by the peasants and the Kirghiz Tartars. "Red lump variety."

1337. FESTUCA OVINA (?).

Sheep's fescue.

From Russia. Received through Prof. N. E. Hansen, February, 1898. (50 packages.)

1338. HELIANTHUS ANNUUS.

Sunflower.

From Russia. Received through Prof. N. E. Hansen, February. (24 packages.)

Gray Russian variety.

Sunflowers are an important crop in the southern and southeastern provinces of European Russia, and the acreage has steadily increased since the thirties, when the peasant Bokarev discovered that a good table oil could be made from the seeds. A striped variety is grown for the seeds, which form a cheap dainty for the peasants, who eat the kernels as a nut. The gray variety is used for oil. In 1888 the crop was over 5,000,000 bushels. The average crop is 361 pounds per acre from favorable soils, although crops of over 900 pounds per acre are raised some years. More than 80 per cent of all the mills are concentrated in the provinces of Voronezh and Saratof, and the value of the oil in 1889 was 2,188,700 rubles. The oil cake or residue left after the oil is pressed out finds ready sale for cattle feed in foreign markets, the export in 1891 amounting to 1,852,000 rubles. The husks, stalks, and heads are used for fuel, which is a great help in the dry, forestless steppe provinces. Nikiforov says: "On the whole, the sunflower is an extremely useful plant and a valuable aid in the rural economy of the southeastern zone of Russia, especially in the years of scarcity in the cereal crops." (*Professor Hansen.*)

1339. PISUM SATIVUM.

Pea.

From Russia. Received through Prof. N. E. Hansen, February, 1898. "Rostof sugar."

In the district of Rostof, 150 miles northeast of Moscow, dried-green peas are produced in great quantity for market, and the Rostof sugar is the best variety for this purpose.

1340. PISUM ARVENSE (?).

Field pea.

From Russia. Received through Prof. N. E. Hansen, February, 1898.

1341. TRITICUM VULGARE.

Wheat.

From Russia. Received through Prof. N. E. Hansen, February, 1898. (1 package.)

"Summer Romanof." Largely grown in northern Russia.

1342. SECALE CEREALE.**Rye.**

From Russia. Received through Prof. N. E. Hansen, February, 1898. (600 packages.)

Variety "Winter Ivanof;" largely grown in northern Russia.

1343. FAGOPYRUM FAGOPYRUM.**Buckwheat.**

From Russia. Received through Prof. N. E. Hansen, February, 1898.

"Siberian." A recent introduction in European Russia from Siberia, and promising for cold regions.—(*Professor Hansen.*)

1344. CARAGANA ARBORESCENS.**Siberian pea tree.**

From Russia. Received through Prof. N. E. Hansen, February, 1898. (40 packages.)

This shrub is very extensively grown in Russia as a hedge plant. If not trimmed, it attains a height of 15 to 18 feet, but it can be kept trimmed low. Also used for a nurse tree in the Government timber plantations east of the Volga, as it endures extreme drought. This species has proved hardy in Manitoba and Assiniboia, Canada, and should be much more extensively grown.—(*Professor Hansen.*)

1345. CARTHAMUS TINCTORIUS.**Safflower.**

From Russia. Received through Prof. N. E. Hansen, February, 1898. (40 packages.)

"Hitherto grown for its red dye stuff, but recently has come into prominence in the Volga River region for the oil extracted from the seeds. The oil is said to approach olive oil for table use, but does not keep as well. Professor Williams, of the Agricultural Academy at Moscow, said it was a good drier for paints. At the experiment stations along the Volga I found it under trial with a view to replacing the sunflower as an oil plant, as the sunflower has been attacked by insect pests in the last few years. The many church fasts create a large demand for table oils. Careful selection was being practiced at one station to eliminate the thorns by saving seed from the few thornless plants. It endures very severe drought. With cotton-seed oil so cheap I do not think the plant will have special value in the United States, and the many thorns make it unpleasant to handle."—(*Professor Hansen's notes.*)

1346. ERVUM LENS.**Lentil.**

From Russia. Received through Prof. N. E. Hansen, February, 1898. (2 packages.)

Russian variety. Much grown along the Volga River. Does well in dry regions.

1347. SALSOLA.

From Russia. Received through Prof. N. E. Hansen, February, 1898. (10 packages.)

Sand binders.

1348. LUFFA (?).**Gourd.**

From Peru. Received through Victor Eguiguren, Peruvian minister to the United States. October 19, 1898.

A cucurbitaceous plant similar to *Luffa cylindrica* and used for a similar purpose, i. e., for scrubbing sponges. Also employed in the manufacture of delicate boxes and toy baskets. The Peruvian name is "jabonillo" (little soap).

1349. CORYLUS AVELLANA.**Filbert.**

From Gand, Belgium. Received through W. T. Swingle, October 29, 1898. "Aveline de Brunswick."

- 1350. CORYLUS AVELLANA. Filbert.**
From Gand, Belgium. Received through W. T. Swingle, October 29, 1898.
"Aveline grosse longue."
- 1351. CORYLUS AVELLANA. Filbert.**
From Gand, Belgium. Received through W. T. Swingle, October 29, 1898.
"Aveline grosse ronde."
- 1352. CORYLUS AVELLANA. Filbert.**
From Gand, Belgium. Received through W. T. Swingle, October 29, 1898.
"Aveline à feuilles pourpres."
- 1353. CORYLUS AVELLANA. Filbert.**
From Gand, Belgium. Received through W. T. Swingle, October 29, 1898.
"Aveline des Anglais."
- 1354. CORYLUS AVELLANA. Filbert.**
From Gand, Belgium. Received through W. T. Swingle, October 29, 1898.
"Emperor."
- 1355. CORYLUS AVELLANA. Filbert.**
From Gand, Belgium. Received through W. T. Swingle, October 29, 1898.
"Garibaldi."
- 1356. CORYLUS AVELLANA. Filbert.**
From Gand, Belgium. Received through W. T. Swingle, October 29, 1898.
"Imperial."
- 1357. CORYLUS AVELLANA. Filbert.**
From Gand, Belgium. Received through W. T. Swingle, October 29, 1898.
"Imperatrice Eugenie."
- 1358. CORYLUS AVELLANA. Filbert.**
From Gand, Belgium. Received through W. T. Swingle, October 29, 1898.
"Merveille de Bollwiller."
- 1359. CORYLUS AVELLANA. Filbert.**
From Gand, Belgium. Received through W. T. Swingle, October 29, 1898.
"Prolifique à coque service."
- 1360. CORYLUS AVELLANA. Filbert.**
From Gand, Belgium. Received through W. T. Swingle, October 29, 1898.
"Louise."
- 1361. HELIANTHUS ANNUUS. Sunflower.**
From Russia. Received through Prof. N. E. Hansen. (8 packages.)
White variety.
- 1362. TRITICUM. Wheat.**
From Cawker City, Kans. Received from C. H. Hawkins, November 2, 1898.
(1 package.)
" 'Moscow' wheat is a hard, bearded, winter wheat grown from seed procured in Russia in January, 1896. It is a prolific stooler and very hardy, yielding from 5 to 20 bushels more to the acre than the "Turkey," used here for the last eighteen years. The largest yield this year was 42 bushels per acre, measured, weighed, and ground product, and it was the only wheat that escaped rust."

- 1363. GOSSYPIUM. Cotton.**
From Peru. Received through Hon. Victor Eguiguren, Peruvian minister to the United States, October 19, 1898.
Piura or Peruvian cotton (tawny) from Piura River, Peru. It is sometimes known as vegetable wool, and has attracted considerable attention in Liverpool. "Possibly *Gossypium religiosum* L."
- 1364. CYNARA SCOLYMUS. Artichoke.**
From Paris. Received through W. T. Swingle, November 3, 1898. (100 packages.)
"Large Laon or Paris."
- 1365. CYNARA SCOLYMUS. Artichoke.**
From Paris. Received through W. T. Swingle, November 3, 1898. (10 packages.)
"Green Provence or Globe."
- 1366. CYNARA SCOLYMUS. Artichoke.**
From Paris. Received through W. T. Swingle, November 3, 1898. (10 packages.)
Variety "Gros camus de Bretagne" (large flat Brittany).
- 1367. CYNARA SCOLYMUS. Artichoke.**
From Paris. Received through W. T. Swingle, November 3, 1898. (10 packages.)
Variety "Violet hatif" (early purple).
- 1368. Yeast.**
From Geisenheim on the Rhein, Germany. Received direct from Dr. Julius Wortmann, November 4, 1898. "Steinberg, 1893."
- 1369. Yeast.**
From Geisenheim on the Rhein, Germany. Received direct from Dr. Julius Wortmann, November 4, 1898. "Zeltinger, 1895."
- 1370. VACCINIUM. Cranberry.**
From the neighborhood of Sitka, Alaska. Received through Prof. C. C. Georgeson, October 20, 1898.
Plants growing in moss.
- 1371. VACCINIUM. Cranberry.**
From the neighborhood of Sitka, Alaska. Received through Prof. C. C. Georgeson, October 20, 1898.
- 1372. VIBURNUM PAUCIFLORUM. High-bush cranberry.**
From Upper Cook Inlet region, Alaska. Received through Prof. C. C. Georgeson, November 18, 1898. (8 packages.)
"It is abundant everywhere on the high ground in open woods. It is generally associated with poplar and birch, and in many places forms thickets of underbrush among these. The berry is red, very acid, the size of a large red currant, and contains a single flat seed. It ripens in the latter part of August and beginning of September. While it is not palatable raw because of its acidity, it can be made into a palatable dish when cooked or made into jelly, but it can scarcely be recommended for culture. The bush is often 8 to 10 feet high, with slender branches, long internodes, and opposite leaves."
- 1373. PYRUS SAMBUCIFOLIA. Mountain ash.**
From Sitka, Alaska. Received through Prof. C. C. Georgeson, November 18, 1898. (4 packages.)
"A highly ornamental tree when loaded with berries in fall and winter. It is not abundant. These berries were gathered from trees which had been transplanted from the woods to a yard for ornament."

1374. VICIA.**Vetch.**

From Upper Cook Inlet region, Alaska. Received through Prof. C. C. Georgeson, November 18, 1898. (1 package.)

"A promising forage plant for Alaska. Abundant in many places on good soil along the seacoast. Collected in the latter part of August when only a few pods were ripe."

1375. ECHINOPANAX HORRIDUM.**Devil's club.**

From Sitka, Alaska. Received through Prof. C. C. Georgeson, November 18, 1898. (1 package.)

"Abundant everywhere in the woods, especially under spruce timber. It produces tall, slender, simple stems, 6 to 12 feet high, covered thickly with slender, sharp prickles from the ground to the top and crowned with a thick cluster of large palmate leaves, reminding one of an ifealia. The seeds were brought as a curiosity. It has no economic value."

1376. VACCINIUM PARVIFLORUM.**Red huckleberry.**

From the mountains about Sitka, Alaska. Received through Prof. C. C. Georgeson, November 18, 1898. (2 packages.)

"Small bush with glossy, oblong leaves. Grows wherever the blue huckleberry is found, but not so abundant. The berry is bright red, rich, sprightly vinous in flavor. Professor Georgeson thinks it one of the best berries to be found anywhere. Jelly can be made from it much superior to red currant jelly."

1377. RUBUS CHAMAEMORUS.**Cloudberry.**

From Sitka, Alaska. Received through Prof. C. C. Georgeson, November 18, 1898. (2 packages.)

Quite abundant in open woods and in clearings where the sun can reach it. Plant very small, only a few inches high. Berry yellow, consisting of a few large drupes, each with a large seed. The berries are gathered and eaten by the Indians, also sold by them when they can find a market. Ripe in July and August. They make a most delicious jam, common on the table of white housekeepers in their season. The large size of the seeds is the chief objection to the berry. Also called "squawberry" and "moroshka."

1378. VACCINIUM OVALIFOLIUM.**Huckleberry.**

From Sitka, Alaska. Received through Prof. C. C. Georgeson, November 18, 1898. (6 packages.)

"There are several abundant species in Alaska, of which the largest is *Vaccinium ovalifolium*. This produces very large berries of excellent flavor which do not mature until September. They are gathered and sold by the Indian women, and also eaten constantly by the Indians. The chief drawback to their use is that the berries are frequently wormy. The sample received was mostly of the large, late berries."

1379. RUBUS SPECTABILIS.**Salmon berry.**

From Sitka, Alaska. Received through Prof. C. C. Georgeson, November 18, 1898. (6 packages.)

"A species of raspberry of very robust growth. Found everywhere in openings, especially on rich soil. The berries vary in color between yellow and red. They are sometimes of extraordinary size. Professor Georgeson saw some as large as Seckel pears. In taste they are insipid, but make good jam and preserves. They ripen early in July. They may be useful for crossing with the cultured raspberry to get a larger berry and hardier plant. It is found chiefly in southeastern Alaska."

1380. RIBES BRACTEOSA.**Currant.**

From Sitka, Alaska. Received through Prof. C. C. Georgeson, November 18, 1898. (14 packages.)

"A vigorous bush abundant only in certain localities. It has long, loose racemes with few berries. The berries are covered with a thick, white bloom which is not

removed by handling. They have a disagreeable odor, and a strong, slightly bitter taste. They make good jam and are a specific for sore throat, and strengthen the vocal organs in a remarkable manner. Used both by white people and Indians. Ripe in the fall. Mr. Walter Evans says that the bloom is rubbed off by the Indians in order that they may be mixed with the more valuable fruits of *Vaccinium ovalifolium*."

1381. RIBES RUBRUM.**Red currant.**

From Upper Cook Inlet region, Alaska. Received through Prof. C. C. Georgeson, November 18, 1898. (26 packages.)

Professor Georgeson does not know if it is the same species as the cultivated red currant. It looks like it except that many of the bushes bear pear-shaped berries. Found quite abundant in the upper Cook Inlet region, where it grows in open woods associated mostly with deciduous trees. Some bushes were unusually large and loaded with berries. The latter were ripe in the latter part of August and were gathered by both Indians and prospectors. They are acid, with possibly a little less of the ribes flavor than the cultivated. It is worthy of cultivation as it is.

1382. PICEA CANADENSIS.**Spruce.**

From Tyonek, Cook Inlet. Received through Prof. C. C. Georgeson, November 18, 1898. (2 packages.)

1383. VACCINIUM PARVIFOLIUM.**Red huckleberry.**

From Sitka, Alaska. Received through Prof. C. C. Georgeson, November 18, 1898. (18 packages.)

Small bush with glossy, oblong leaves. Grows wherever the blue huckleberry is found, but not so abundantly. The berry is bright red, rich, sprightly, vinous in flavor. Professor Georgeson thinks it one of the best berries to be found anywhere. Jelly made from it is much superior to red currant jelly.

1384. PANICUM MILIACEUM.**Millet.**

From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, June 4, 1898. From Mr. Durrschmidt. (30 packages.)

Native red variety.

1385. PHASEOLUS MUNGO.**Green gram.**

From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, June 4, 1898. From Mr. Durrschmidt. (40 packages.)

A native forage plant.

1386. SESAMUM INDICUM.**Sesame.**

From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, June 4, 1898. From Mr. Durrschmidt. (72 packages.)

"Prince Massalski, of the Agricultural Department at St. Petersburg, in describing the rural industries of Turkestan, writes: 'Among oil plants are grown sesame (*Sesamum indicum*), flax, saffron (*Carthamus tinctorius*), garden cress (*Camelina sativa*), the castor bean (*Ricinus communis*), the cotton shrub and the poppy, the sesame being the most important of them all; it is generally sown as the second sowing after the winter wheat crop has been gathered, requires but little water, and yields on an average from 533 to 800 pounds per acre, and under favorable circumstances twice as much. Oil is pressed from the seeds of the sesame, and its stalks are used for fuel. The natives scarcely ever prepare pure sesame oil, but generally a mixture of sesame, garden cress, and cotton seed, so that if badly refined the oil gives any dish seasoned with it that peculiar odor with which every traveler in the East is so well acquainted, but when properly prepared it has rare qualities.'" (Professor Hansen's notes.)

1387. PANICUM MILIACEUM.**Millet.**

From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, June 4, 1898, from Mr. Durrschmidt. (30 packages.)

White native variety.

- 1388. PANICUM MILIACEUM. Millet.**
 From Tashkend, Russian Turkestan. Received through Prof. N. E. Hansen, June 4, 1898. From Mr. Durrschmidt. (10 packages.)
 Black native variety.
- 1389. GOSSYPIUM. Cotton.**
 From Paita, Department of Piura, Peru. Furnished by Mr. Edward Fowks; transmitted through Hon. Irving B. Dudley, Legation of the United States, Lima, Peru. Received November 25, 1898. (10 packages.)
 Variety "Egypto;" Peruvian seed.
- 1390. GOSSYPIUM. Cotton.**
 From Paita, Department of Piura, Peru. Furnished by Mr. Edward Fowks; transmitted through Hon. Irving B. Dudley, Legation of the United States, Lima, Peru. Received November 25, 1898. (10 packages.)
 Variety "Peruano."
- 1391. SOLANUM TUBEROSUM. Potato.**
 From Zacatecas, Mexico. Received through Dr. Edward Palmer, December 1, 1898.
 Wild.
- 1392. SOLANUM TUBEROSUM. Potato.**
 From Zacatecas, Mexico. Received through Dr. Edward Palmer, December 1, 1898.
 Wild.
- 1393. CRATAEGUS. Hawthorn.**
 From Zacatecas, Mexico. Received through Dr. Edward Palmer, December 1, 1898.
- 1394. FICUS CARICA. Fig.**
 From Zacatecas, Mexico. Received through Dr. Edward Palmer, December 1, 1898.
 "Panas."
- 1395. PHYSALIS. Ground cherry.**
 From Zacatecas, Mexico. Received through Dr. Edward Palmer, December 1, 1898.
 The numerous species of *Physalis* are known to the Mexicans as "tomato."
- 1396. PHYSALIS. Ground cherry.**
 From Zacatecas, Mexico. Received through Dr. Edward Palmer, December 1, 1898.
- 1397. PHYSALIS. Ground cherry.**
 From Zacatecas, Mexico. Received through Dr. Edward Palmer, December 1, 1898.
- 1398. PHYSALIS. Ground cherry.**
 From Zacatecas, Mexico. Received through Dr. Edward Palmer, December 1, 1898.
- 1399. PHYSALIS. Ground cherry.**
 From Zacatecas, Mexico. Received through Dr. Edward Palmer, December 1, 1898.

- 1400. PHYSALIS.** **Ground cherry.**
From Zacatecas, Mexico. Received through Dr. Edward Palmer, December 1, 1898.
- 1401. SECHIUUM EDULE.** **Chayota plant.**
From Zacatecas, Mexico. Received through Dr. Edward Palmer, December 1, 1898.
A climbing cucurbit of Mexican origin, grown also in the West Indies and Algiers. The fruit weighs from 1 to 3 pounds. It contains but one seed and should be planted whole. The plant should be experimented with all through the South. See No. 1953.
- 1402. PHYSALIS FUSCO-MACULATA.** **Ground cherry.**
From Jardin des Plantes, Montpellier, France. Received December 5, 1898. (2 packages.)
- 1403. PHASEOLUS SEMIERECTUS.** **Phasemy.**
From the Botanic Gardens, British Guiana. Received December 9, 1898. (2 packages.)
- 1404. PHASEOLUS SEMIERECTUS.** **Phasemy.**
From the Botanic Gardens, British Guiana. Received December 12, 1898. (4 packages.)
- 1405. CYPHOMANDRA BETACEA.** **Tree tomato.**
From Ecuador. Sent by the Rev. Luis Sodiro, S. J., of the Botanic Garden at Quito, through Señor Perry M. de Leon, American consul at Guayaquil. (2 packages.)
- 1406. PSIDIUM GUAJAVA.** **Guava.**
From Ecuador. Sent by the Rev. Luis Sodiro, S. J., of the Botanic Garden at Quito, through Señor Perry M. de Leon, American consul at Guayaquil. (2 packages.)
A variety cultivated at Quito.
- 1407. PSIDIUM GUAJAVA.** **Guava.**
From Ecuador. Sent by the Rev. Luis Sodiro, S. J., of the Botanic Garden at Quito, through Señor Perry M. de Leon, American consul at Guayaquil. (2 packages.)
A variety cultivated at Quito.
- 1408. PSIDIUM GUAJAVA.** **Guava.**
From Ecuador. Sent by the Rev. Luis Sodiro, S. J., of the Botanic Garden at Quito, through Señor Perry M. de Leon, American consul at Guayaquil. (2 packages.)
A variety cultivated at Quito.
- 1409. PSIDIUM GUAJAVA.** **Guava.**
From Ecuador. Sent by the Rev. Luis Sodiro, S. J., of the Botanic Garden at Quito, through Señor Perry M. de Leon, American consul at Guayaquil. (2 packages.)
The variety sometimes called *P. pyriferum*.

1410. SOLANUM QUITENSE.

From Ecuador. Sent by the Rev. Luis Sodiro, S. J., of the Botanic Garden at Quito, through Señor Perry M. de Leon, American consul at Guayaquil. (2 packages.)

Valued at Quito, under the name "naranjilla," for its edible acid berries, which are used in making preserves. Father Sodiro mentions also another variety with a sweet fruit growing to the eastward of Quito.

1411. TACSONIA MOLLISSIMA.

From Ecuador. Sent by the Rev. Luis Sodiro, S. J., of the Botanic Garden at Quito, through Señor Perry M. de Leon, American consul at Guayaquil. (2 packages.)

1412. TACSONIA PINNATISTIPULA.

From Ecuador. Sent by the Rev. Luis Sodiro, S. J., of the Botanic Garden at Quito, through Señor Perry M. de Leon, American consul at Guayaquil. (2 packages.)

1413. RUBUS GLAUCUS.**Raspberry.**

From Ecuador. Sent by the Rev. Luis Sodiro, S. J., of the Botanic Garden at Quito, through Señor Perry M. de Leon, American consul at Guayaquil. (2 packages.)

A native species cultivated in Ecuador.

1414. OPUNTIA TUNA.**Tuna.**

From Ecuador. Sent by the Rev. Luis Sodiro, S. J., of the Botanic Garden at Quito, through Señor Perry M. de Leon, American consul at Guayaquil. (2 packages.)

The forms ascribed to this species in different parts of the world differ much in characters. This seed should be tried with reference to possible hardness.

1415. PASSIFLORA LIGULARIS.**Granadilla.**

From Ecuador. Sent by the Rev. Luis Sodiro, S. J., of the Botanic Garden at Quito, through Señor Perry M. de Leon, American consul at Guayaquil. (2 packages.)

1416. ANONA CHERIMOLIA.**Cherimoyer.**

From Ecuador. Sent by the Rev. Luis Sodiro, S. J., of the Botanic Garden at Quito, through Señor Perry M. de Leon, American consul at Guayaquil. (2 packages.)

1420. SOLANUM ATROPURPUREUM.

From Santa Barbara, California. Received through Mr. D. G. Fairchild, December, 1898.

1421. PSIDIUM CUNEATUM.**Guava.**

From Santa Barbara, California. Received through Mr. D. G. Fairchild, December, 1898.

1426. VIOLA ODORATA.**Violet.**

From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.

"La France." Novelty of 1896; flowers single, large, and fragrant, with long rigid stems.

[This and the following numbers, to 1444, apply to a collection of violets purchased from Millet, Horticulteur at Bourg-la-Reine, Seine, France, by Mr. W. T. Swingle. On arrival they were turned over to the Division of Vegetable Physiology and Pathology for propagation and experiment, that Division having been long engaged with investigations on this flower crop. Should any prove of special merit they will be announced and distributed later.]

- 1427. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Princesse de Sumonte." An Italian novelty with single flowers, mauve and white; makes fine perfumery; good for forcing.
- 1428. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 An ever-bearing variety with single, straw-yellow flowers; very beautiful.
- 1429. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 Variety "Nana compacta." An ever-bearing variety with very fragrant, single, fine, violet-blue colored flowers; flowers profusely in spring.
- 1430. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 Variety "Mademoiselle A. Pages." A perpetual-flowering, odorous, delicate rose-colored single flower.
- 1431. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "R. Augustine." An ever-flowering variety, with dark, single violets and very dark leaves.
- 1432. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Amiral Avellan." A large rose violet with single flowers; good for bouquets.
- 1433. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Princesse de Galle." A very large, deep blue, single flower; flowers from September until April.
- 1434. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Madame E. Arene." Large ever-flowering sort, deep violet.
- 1435. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Quatre saisons dite." Large single flowers best for winter forcing.
- 1436. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Brune de Bourg-la-Reine." A late flower; one of the best for bouquets.

- 1437. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Gloire de Bourg-la-Reine." Very vigorous; flowers single but very large and very odorous; leaves large and dark green.
- 1438. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Souvenir de Millet Père." A large single, blue flower; very sweet odor: flowers well in winter.
- 1439. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Patrie." Very double; very odorous; flowers all the year.
- 1440. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Madame Millet." Double, rose-colored, and very odorous; flowers freely; good for forcing.
- 1441. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Parme ordinaire." Pale double flowers.
- 1442. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Parme de Toulouse." Double; leaves and flowers larger than *Parme ordinaire*.
- 1443. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Parme Marie-Louise." To compare with American strain.
- 1444. VIOLA ODORATA.** **Violet.**
 From Bourg-la-Reine, Seine, France. Received through W. T. Swingle, December, 1898.
 "Parme sans filet." Double; flower is like *Parme ordinaire*; produced abundantly during the winter; said to require less care because of the absence of runners.
- 1445. ULEX EUROPAEUS.** **Furze.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (9 packages.)
 "A perennial leguminous shrub, native of northern Europe, where it is highly esteemed as a forage plant for dry and barren hillsides in places too steep or where the soil is too thin to admit of the cultivation of better ones. In some parts of Ireland and Wales the farm horses are almost entirely maintained upon it during the winter months, the crushed 2-year-old branches being fed at the rate of about 40 pounds per day. Twenty or 25 pounds of seed are required for an acre. It is a valuable forage plant to sow on barren hillsides. Sheep are very fond of it and fatten quickly upon it." (*Jared G. Smith.*)
 It may be added that the "crushing" referred to is required on account of the exceedingly spiny nature of this shrub. It will grow in sandy or siliceous soils, but

is said not to thrive in limestone regions. May be employed as a sand binder. It will endure frost, but is injured by very severe temperatures, especially in exposed situations. Should be sown at the time of the early spring crops, either alone or drilled in with a cereal. In the latter case about 15 pounds to the acre is considered sufficient.

Furze is also used in Europe as a hedge plant, and for this purpose is sowed in the row, about 7 pounds to the mile. Also called gorse and whin.

1446. ULEX EUROPAEUS.

Foxtail furze.

From France. Received through Mr. W. T. Swingle, December, 1898. (8 packages.)

An improved variety of the wild furze, having a somewhat regular pyramidal shape with more crowded branches. The spines are also less rigid, so that they may be grazed without going through the bruising process. The seed is rather difficult to obtain. For an acre 15 or 20 pounds is considered sufficient. It has been suggested that this is a step in the direction of a spineless furze to be obtained by selection.

1447. ULEX NANUS.

Dwarf furze.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

A much smaller species than *Ulex europaeus*. It is of spreading habit and thrives in moist situations, even in swampy places, where the other species would not grow. It might prove of use as a winter soiling crop in regions inclined to be barren, but its utility is likely to be local.

1448. ASTRAGALUS FALCATUS.

From France. Received through Mr. W. T. Swingle, December, 1898. (8 packages.)

A species native to the Caucasus. It should be tried as a forage plant in the Rocky Mountain region.

1449. BRASSICA NAPUS.

March rape.

From France. Received through Mr. W. T. Swingle, December, 1898. (18 packages.)

This is a quick-growing form of the winter rape and may be sown either in the fall or spring for producing a very early crop of forage. In Europe it is valued for reseeding deficient places in fields of winter rape. Uses and methods of cultivation follow those of the regular winter rape, of which Mr. Jared G. Smith writes briefly as follows:

"A succulent and nutritious forage plant, closely related to the Swede turnips. It is adapted to deep, rich, and warm loams and sandy soils. It has been widely cultivated in the northern United States and Canada, and succeeds on any rich and well-drained soil, provided the summers are not too hot and dry. If the ground is in good condition and free from weeds it may be sown broadcast at the rate of 3 to 5 pounds of seed per acre. If the land is wet, however, rape should be sown in raised drills, when 1 or 2 pounds will be sufficient. The time for sowing the seed will vary with the object sought and the climate. For soiling purposes it may be sown in May in the States bordering on Canada, and cut or eaten off when it is sufficiently advanced. It will grow up again and may be used a second time in the same manner, but ordinarily the best results are obtained when it is sown during the latter part of June or the first half of July. When put in earlier the hot suns of August seem to hasten its maturity, and the yield is not satisfactory. If sown in drills, it should be cultivated as long as a horse can be driven between the rows. Sheep may be pastured upon a field of rape by cutting it up into small pens by means of movable hurdles, so that the different parts of the field may be depastured in rotation. Cattle should not be turned into a field, because they will trample and destroy much more than they eat. Rape fed to cows increases the flow of milk, and there is less danger of the milk being tainted than when turnips or turnip tops are fed. There is considerable danger in turning hungry sheep or cattle into a field, because of a liability to bloat. It is also a good rule never to turn animals into a field in the early morning."

1450. CORONILLA VARIA.**Coronilla.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"*Coronilla bigarrée*" (mottled coronilla).

A perennial leguminous plant, described as having a spreading habit and a pleasing appearance. It will thrive in barren calcareous soils and withstand drought, but the fodder is said not to be wholesome in the green state. To be planted only for experiment.

1451. CORONILLA SCORPIOIDES.**Coronilla.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1452. VICIA ERVILIA.**Black bitter vetch.**

From France. Received through Mr. W. T. Swingle, December, 1898. (52 packages.)

An annual plant, producing an abundant crop of forage, which must, however, be fed with caution, since in too large quantities both the green fodder and the dried seed are considered heating. A small ration is thought to render horses more spirited. The seed is also fed to pigeons and fowls. Recommended more particularly as a soiling crop. Should be tried in drier regions, as it is popular in Algeria. It might be sown in the fall in warmer latitudes, and in the spring at the North. The estimates of amount of seed necessary per acre vary from 35 to 100 pounds.

1453. VICIA FABA.**Horse bean.**

From France. Received through Mr. W. T. Swingle, December, 1898. (52 packages.)

A variety called in France the "*féverole de Picardie*" or Picardy bean; smaller and earlier than the so-called Lorraine bean (No. 1454).

1454. VICIA FABA.**Horse bean.**

From France. Received through Mr. W. T. Swingle, December, 1898. (42 packages.)

The largest and most vigorous of the French varieties used for spring planting, and called in that country the "*Lorraine bean*." It is grown especially in the north of France. Reaches a height of 4½ feet and ripens late.

1455. VICIA FABA.**Horse bean.**

From France. Received through Mr. W. T. Swingle, December, 1898. (43 packages.)

The less improved type of this plant, of which Mr. Jared G. Smith says: "A coarse, erect, rank-growing annual, of considerable value as a forage plant, grown in the Eastern United States and more extensively in Europe. The beans, which contain about 33 per cent of starch, are used for fattening cattle, but their use, if long continued without change or without proper admixture of other foods, often results in paralysis, on account of the bitter, poisonous alkaloids which the seeds contain."

In France it is planted in October and November, and resists the cold well. It is also used as a soiling crop, and planted with various climbing species of *Vicia* for them to climb upon. About 150 pounds of seed is required per acre.

1456. GALEGA OFFICINALIS.**Goat's rue.**

From France. Received through Mr. W. T. Swingle, December, 1898. (13 packages.)

"A perennial legume, with erect, branching, leafy stems 1½ to 2 feet high, pinnate leaves and purple flowers borne in a long-stalked spike. A forage plant of value on account of its resistance to drought, which has been recommended for the Northern prairies and central Rocky Mountain districts. It is usually fed green, as it makes a poor quality of hay, and is not readily eaten by stock until they have become accustomed to its taste. The air-dried hay contains 17 per cent of crude protein." (*Jared G. Smith.*)

Said not to be able to withstand severe frosts, especially if immature. The stems contain a fiber, and the use of them in the manufacture of paper has been suggested. For an acre 25 or 30 pounds of seed is required.

1457. CYTISUS SCOPARIUS.**Common broom.**

From France. Received through Mr. W. T. Swingle, December, 1898. (9 packages.)

A leguminous shrub, recommended for sandy regions. It is evergreen, and the young shoots are browsed by sheep and other animals in winter. In addition, it is noted as a soiling crop, and the stalks have been successfully used in paper making. About 15 pounds of seed is required per acre.

1458. GENISTA TINCTORIA.**Dyer's broom.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Formerly more extensively grown for a yellow coloring matter, which was extracted from the young shoots and flower clusters. For this purpose *Reseda luteola* has largely replaced it. In addition, however, it yields a fiber which in Italy is spun into thread. Ten pounds of seed is required to the acre.

1459. LATHYRUS CICER.**Winter flat pea.**

From France. Received through Mr. W. T. Swingle, December, 1898. (43 packages.) "Jarosse." "Gesse chiche." "Jaret."

An annual forage plant, which may be sowed either in the fall or spring. Valued in France and Germany as becoming available very early in the spring. Sheep and cattle eat it with apparent relish, but it is considered too heating for horses. Hardy and resistant to drought and can be grown on barren soils, whether calcareous or sandy. The plants reach a height of about 2 feet, and it is customary to sow with the seed a small quantity of rye or oats for them to climb upon.

"Annual. Forage well liked by sheep and cows; too heating for horses. Seed suspected and even very dangerous as food for mankind; noxious also to most animals; hardy and succeeds very well in all kinds of land, even on bad lands, whether calcareous or siliceous. The usual time for seeding is the autumn, but it may also be done from March to April. It enters sometimes into mixtures for forage plants to be cut green. The custom is to mix with it a little rye and oats to support its almost climbing stalks. It may also be used as green fertilizer to be plowed under." (*Vilmorin.*)

The seed weighs 58 to 62 pounds per bushel; 134 to 223 pounds is generally sown per acre.

1460. LATHYRUS SYLVESTRIS.**Wild everlasting pea.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"Gesse sauvage." "Gesse vivace des bois."

"For many years this plant has been untiringly recommended as a very lasting and very productive forage plant, which only the scarcity of its seeds prevented from entering into general use. Some years ago experiments with it were begun again in Germany, and these are conducted with much conviction and ardor. The results published are most encouraging, but the scarcity and the high price of the seed have not decreased. This *Lathyrus* must be ranged, therefore, rather among the study plants than among those in use and practically adopted." (*Vilmorin.*)

The seed weighs about 66 pounds per bushel.

1461. LATHYRUS SYLVESTRIS WAGNERI.**Flat pea.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"Gesse vivace des bois améliorée." (Common everlasting pea, improved.)

"A perennial, native of eastern Europe and northern Asia, which has of recent years been highly recommended as a forage plant on account of its drought-resisting qualities. The plant looks much like the ornamental sweet pea, with many weak leafy stems which interlace in great tangled masses. The handsome rose-colored flowers are borne in loose clusters, and are followed by pods not unlike those of the

field pea. Analyses of the hay made at the Michigan station showed 27 per cent crude protein. The growth of the plant at first is slow, and it is recommended to plant the seeds in beds, from which they may be transplanted at the beginning of the second season to the place they are to occupy in the field. Several cuttings may be taken each season in favorable localities, and the average life of a field is from fifteen to twenty-five years. In this country the best results have been obtained with the flat pea in California, in the arid Southwest, and in the Southern States. The hay is relished by domestic stock of all kinds, and on account of its highly nutritious character it is of much value for soiling purposes. It is of especial importance as a forage plant for arid regions, provided the lands can be irrigated. When once fully established it holds the ground for many years. Its root system is somewhat similar to that of alfalfa, inasmuch as it will not thrive on lands which are undrained or where the ground water stands within less than 10 or 15 feet from the surface. When once its roots have penetrated into the subsoil the plant will withstand the hottest and driest summer. On rich soil the growth is often 4 or 5 feet high." (*Jared G. Smith.*)

1462. LATHYRUS PRATENSIS.**Meadow pea.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"A prostrate perennial, native to and cultivated in the colder portions of Europe and Asia. The yield is quite large. It can be utilized for sheep pasturage, the bitter foliage not being relished by other stock. Suited for cultivation in alpine regions." (*Jared G. Smith.*)

"Perennial, trailing, proposed as forage, nowhere used because of the extreme difficulty of obtaining the seed, which is very scarce and difficult to gather. It succeeds in dry or moist and even in wet soils, but these must be of good quality." (*Vilmorin.*)

The seed weighs 58 pounds per bushel.

1463. INDIGOFERA TINCTORIA.**Indigo.**

From France. Received through Mr. W. T. Swingle, December, 1898. (8 packages.)

"A leguminous plant, cultivated as an annual for the production of dyestuff. It was grown very extensively in colonial times and early in the present century in Virginia, the Carolinas, Georgia, and Louisiana, and it would doubtless grow well in those States now, but it is not probable that its cultivation would prove successful in competition with the synthetic production of indigo and its production from plants in India and Venezuela, where two or three crops may be cut each year. Seed should be sown in April or early in May, and the plants should be cultivated during the early part of the summer and mowed in August or September." (*L. H. Dewey.*)

The seed weighs about 67 pounds per bushel. It is sown in drills at the rate of 3 to 5 pounds per acre or broadcast at the rate of 11 to 14 pounds.

1464. IRIS.**Iris.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"Krishum du Kashmyre."

Received as "*Iris pabularia*," a name not yet verified.

"A curious plant, belonging unquestionably by its flowers and seeds to the genus *Iris*, but furnishing a remarkable abundance of delicate green leaves resembling those of a grass. It is used about Kashmyr as a forage, litter, and fiber plant. It does not seem to be an object of culture in the country of its origin any more than in Europe." (*Vilmorin.*)

The seed, which is produced abundantly, weighs 81.2 pounds per bushel.

1465. CENTAUREA JACEA.**Meadow knapweed.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"Jaccée des prés." "Chevalon."

"Perennial, a suitable plant for aftermath in elevated meadows, suitable to enter into natural and artificial mixtures. Its presence among the herbage is considered an indication of good quality. The stem and leaves contain a yellow coloring

matter. Under this name several species and varieties closely related to it and having nearly the same qualities are frequently confounded in commerce and cultivation." (*Vilmorin.*)

The seed weighs 31 pounds per bushel, and 7 to 10 pounds are sown per acre.

1466. ERVUM LENS.

Lentil.

From France. Received through Mr. W. T. Swingle, December, 1898. (21 packages.)

"Lentille petite à la reine." "Lentillon de Mars." (Small queen or March lentil.)

Variety "*minus.*"

"Annual. Cultivated generally for its seed; it gives also a very useful fodder; requires wholesome, dry siliceous or gravelly soils. Seeding takes place in March and April; mixed with a little oats or rye to support it." (*Vilmorin.*)

Weights 62 pounds per bushel; 90 to 107 pounds are sown per acre. In some countries it is sown, especially if for forage, at the rate of 143 pounds per acre.

1467. ERVUM LENS.

Lentil.

From France. Received through Mr. W. T. Swingle, December, 1898. (44 packages.)

"Lentille petite rouge." "Lentillon d'hiver rouge." (Small or winter red lentil.)

Variety "*hiemale.*"

"Annual. Employed like *E. lens minus*. It is cultivated principally in northern and eastern France. Sown in September, alone if for the seed, in a mixture with rye or winter oats if for fodder." (*Vilmorin.*)

Ninety to 107 pounds per acre is sown for seed; as high as 143 pounds for forage.

1468. LOTUS ULIGINOSUS.

Bird's-foot trefoil.

From France. Received through Mr. W. T. Swingle, December, 1898. (8 packages.)

"Lotier velu" (hairy lotus).

"Perennial; a very good plant for meadows and damp woods, demanding more humidity than *L. corniculatus*; taller and gives more fodder; succeeds quite well in the shade, in peat bogs, heaths, and acid marshes, not calcareous; has been proposed for the formation of artificial prairies and is very suitable for mixtures for meadows and natural pastures. This lotus is a little more prolific in its seeds than *L. corniculatus*. It may be sown from March to May and even in autumn." (*Vilmorin.*)

The seed weighs about 62 pounds per bushel; 7 to 9 pounds are sown per acre.

1469. MEDICAGO SATIVA.

Alfalfa.

From France. Received through Mr. W. T. Swingle, December, 1898. (9 packages.)

"Luzerne de Provence" (Provence lucern).

"Perennial; root very long, axial; plant early, very productive, and of very long duration. It succeeds in all good wholesome soils, deep, and even damp, but without an excess of humidity. It may be found growing, though less vigorously, on dry, light soils, on slopes and escarpments, even on dunes. It is sown generally in spring with a cereal, but even in summer with flaxseed, buckwheat, or haricot beans. In climates where the winters are mild one may sow at the end of the summer or early in autumn, together with rye or winter barley, but only on dry and light soils. The differences existing between plants springing from Provence seed and those from seed of other localities have been contested, and if they exist at all, they are due perhaps only to the fact that the Provence seed is handsomer, better filled, and more uniformly good, sprouts more thickly, and furnishes more vigorous plants and in greater number upon the same area. Nevertheless, there are places where an absolute preference is given to seed gathered in the north." (*Vilmorin.*)

The seed weighs 58 to 62 pounds per bushel; 18 to 22 pounds is sown per acre.

1470. MEDICAGO SATIVA.

Alfalfa.

From France. Received through Mr. W. T. Swingle, December, 1898. (9 packages.)

"Luzerne de pays ou de Poitou" (country or Poitou lucern).

1471. *MEDICAGO SATIVA.*

Alfalfa.

From France. Received through Mr. W. T. Swingle, December, 1898. (9 packages.)

"Luzerne rustique" (hardy lucern).

"*Medicago falcata-sativa.*"

"Perennial, intermediate between the ordinary lucern and the Swedish lucern (*M. falcata*); very vigorous, very hardy, accommodating itself better than the cultivated or ordinary lucern to mediocre, dry, and shallow soils and to arid lands; but it is somewhat later and does not come up again so quickly; appreciated in certain localities in Germany, where it has begun to spread." (*Vilmorin.*)

The seed weighs 58 to 62 pounds per bushel; 18 to 22 pounds is sown per acre.

1472. *MEDICAGO LUPULINA.*

Black medic.

From France. Received through Mr. W. T. Swingle, December, 1898. (8 packages.)

"Luzerne lupuline." "Minette."

"An annual or biennial clover, widely grown as a pasture plant in wet meadows and on stiff, clayey soils which are too poor to grow alfalfa or clover. On rich, moist soil it sometimes makes an enormous growth, but ordinarily its growth is in pastures. It is sometimes recommended to be sown mixed with white clover for lawns, as it remains green through the driest summers." (*Jared G. Smith.*)

"Biennial; cultivated alone or mixed with grains, also with clover or other plants. Forage fine, of good quality; used also like clover on lands of mediocre quality, arid, calcareous, chalky, or sandy; pasture early, very good for sheep. It can not be mown, but after pasturing it comes up rapidly under the teeth of the animals. To be sown with the March cereals; in the South it may be sown in September or October." (*Vilmorin.*)

The seed weighs 58 to 62 pounds per bushel; 13 to 18 pounds is required per acre.

1473. *MADIA SATIVA.*

Madia.

From France. Received through Mr. W. T. Swingle, December, 1898. (9 packages.)

"Madia du Chile."

"A rank-growing annual, native of both Chile and California, which has been recommended as furnishing an excellent summer sheep forage. The leaves are clammy, with a viscid exudation, and the plant has a rank odor. Its chief merit is its rapid growth. It is cultivated in the arid Southwest and California and makes a palatable and nutritious food for sheep. An excellent lubricating oil is extracted from the seeds." (*Jared G. Smith.*)

"Annual. Very good plant to plow under as green fertilizer. Good pasture for sheep, which accommodate themselves also very well to the dry straw after the removal of the seeds, which are oleaginous.

"The *Madia sativa* is quite hardy, resisting the winter, especially in wholesome and light soils lying southward. It is able to bear drought, but it shuns cold and damp soils. It is an early plant of a rapid growth, productive of seed, not very choice as to the quality of its territory and meriting cultivation in spite of its strong, disagreeable odor and the viscous nature of its leaves, inconveniences of small importance which may even become advantageous in keeping off the insects. To be sown from the middle of March to the beginning of June, or also in autumn, especially in the South." (*Vilmorin.*)

The seed weighs 35 to 39 pounds per bushel; 7 to 9 pounds per acre is required if sown in rows, and 16 to 18 pounds if broadcast.

1474. *MELILOTUS OFFICINALIS.*

Hungarian melilot.

From France. Received through Mr. W. T. Swingle, December, 1898. (11 packages.)

"Mélilot grand des bois" (large wood melilot). "Mélilot de Hongrie."

"*Melilotus linearis* Poir."

"Biennial, productive, succeeds in poor lands but especially on such as are fertile and humid, along streams and rivers, etc.; quality of forage contested." (*Vilmorin.*)

Twenty-two pounds is generally sown per acre.

1475. ACHILLEA MILLEFOLIUM.**Yarrow.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"Millefeuille."

"A perennial composite with simple stems, twice pinnately parted leaves, and white or pink flat-topped flower clusters. Common in old fields and meadows throughout the eastern United States and extending westward through the prairie region. In this country it is usually considered a weed; but in Europe, and especially in England, is held to be a very valuable addition to sheep pastures." *Jared G. Smith.*

"Perennial of long duration, very early, good pasture for sheep alone or mixed in compositions of grasses; can bear drought well even on dry lands. Suitable for hardy turf on meager and dry lands. Sown in spring or at the end of the summer and in autumn." (*Vilmorin.*)

The seed weighs 23 to 27 pounds per bushel; $4\frac{1}{2}$ to $5\frac{1}{2}$ pounds is required per acre.

1476. SINAPIS ALBA.**White mustard.**

From France. Received through Mr. W. T. Swingle, December, 1898. (20 packages.)

"Moutarde blanche."

"Annual, very good forage for cows at the end of summer and in autumn; to be sown for forage in August or September, upon the stubble of a cereal after lightly working the ground; for seed harvesting sow in April. For forage, to be eaten green, alone or in mixture with other plants. It may be sown successively from spring to the end of summer. The seed is oleaginous and serves frequently for the manufacture of the spice of this name, but its most important use is as a medicine for mankind." (*Vilmorin.*)

The seed weighs 50 to 54 pounds per bushel; 11 to 13 pounds per acre is sown for forage, $4\frac{1}{2}$ to $5\frac{1}{2}$ pounds for seed.

1477. BRASSICA NIGRA.**Black mustard.**

From France. Received through Mr. W. T. Swingle, December, 1898. (32 packages.)

"Moutarde noire d'Alsace" (black Alsatian mustard). Large-seeded.

"Annual plant of rapid growth, cultivated more for the sake of its oil and medical properties than for forage. The seed serves for the manufacture of mustard used for seasoning and for the preparation of ground mustard, the basis of sinapisms, but it may also be used as a very quickly developing forage plant.

"Two principal varieties are distinguished in commerce—the Sicilian black mustard, flowering and seeding very early, and the Alsace black mustard, with larger, broader, and more yellowish leaves." (*Vilmorin.*)

The seed weighs 50 to 54 pounds per bushel; $5\frac{1}{2}$ to 7 pounds per acre is required for forage, $2\frac{3}{4}$ pounds per acre for seed production.

1478. BRASSICA NIGRA.**Black mustard.**

From France. Received through Mr. W. T. Swingle, December, 1898. (32 packages.)

"Moutarde noire de Sicile" (black Sicilian mustard).

Small-seeded. (See No. 1477.)

1479. BRASSICA NAPUS.**Summer rape.**

From France. Received through Mr. W. T. Swingle, December, 1898. (9 packages.)

"Navette d'été ou quarantaine."

Variety "*sylvestris.*"

"Used for the same purpose as the winter rape, less productive, but earlier, and preferred for autumn seeding and the production of green spring forage in localities where the winters are mild. For spring and summer seeding, with the purpose of obtaining the product during the same year, this summer rape should be employed to the exclusion of all others." (*Vilmorin.*)

1480. URTICA DIOICA.**Stinging nettle.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"Ortie dioïque." "Grande ortie."

"Perennial, of long duration; gives several cuts of early green forage, of good quality, especially when half-wilted. It is preferred by cows, and much used for mules. The seed, which is oleaginous, is preferred by the fowls and used by horse dealers for the feed of horses. It grows in arid, sandy, and stony land, on dust piles, along the roadside, on the outskirts of the woods, and, finally, also in very dry or very cold places where few other plants would succeed as well. To be sown with but a slight cover over the seed, either in spring or at the end of the summer and in autumn. It frequently does not sprout until the following spring. Stalk textile." (*Vilmorin.*)

In spite of its various uses the nettle is hardly to be recommended for cultivation. The seed weighs about 15½ pounds per bushel; 9 pounds is required per acre.

1481. ISATIS TINCTORIA.**Dyer's woad.**

From France. Received through Mr. W. T. Swingle, December, 1898. (6 packages.)

"Pastel." "Vouède." "Guède."

"Biennial; forage green, very hardy; will bear frosts and is very early; good winter and spring pasture for sheep, on dry and calcareous lands. It accommodates itself to mediocre, sandy, gravelly, or even calcareous soils. When cultivated for the coloring matter it demands a richer soil than for forage, and must not be acid. The seed, it is said, may be used as feed for cattle.

"This plant, which may render very important services on account of its extreme earliness and the quality of its forage, merits a far more frequent employment on very poor lands. Sown from March to July, sometimes in autumn, in very fertile soils." (*Vilmorin.*)

The seed weighs about 7½ pounds per bushel; 9 to 11 pounds is sown per acre.

1482. SANGUISORBA SANGUISORBA.**Common field burnet.**

From France. Received through W. T. Swingle, December, 1898. (13 packages.)

"Pimpernelle ordinaire."

"Perennial; excellent pasture even in winter, especially for sheep and rabbits; soils of the poorest, dry, sandy, or calcareous; it resists the extremes of heat and cold. In some localities the seed is ground to feed cattle. To be sown from March to September, either alone or with esparcet, with white or violet clover, wild chicory, rye grass," etc. (*Vilmorin.*)

The seed weighs about 23 pounds per bushel; 27 pounds is sown per acre.

1483. VICIA MONANTHA.**One-flowered lentil.**

From France. Received through Mr. W. T. Swingle, December, 1898. (42 packages.)

"Jarosse d'Auvergne," "Lentille à une fleur."

"Forage annual of good quality; seeds used like the lentils; excellent for very poor, sandy, siliceous, or schistose soils. To be sown in autumn with a little rye or oats to support it." (*Vilmorin.*)

The seed weighs 58 to 62 pounds per bushel; 71 to 90 pounds is sown per acre.

1484. RAPHANUS SATIVUS.**Radish.**

From France. Received through Mr. W. T. Swingle, February, 1899. (8 packages.)

"The Ardèche field radish, which is grown in the south of France more for feeding cattle than for table use. It is a very long-rooted and rather late radish, and yields a heavier crop of leaves than of roots. It is a plant of no account for kitchen-garden culture, and even for cattle-feeding purposes neither it nor the corkscrew radish is very extensively grown. Experience has shown, however, that they are not without merit in this respect, and we think that in many cases it would be found advantageous to cultivate some of the larger varieties of radishes for cattle-feeding purposes, as is done in the case of beet roots, carrots, and turnips."

The seed represents a recently improved strain of this variety, and may prove of interest as a fodder crop.

1485. PISUM ARVENSE.**Field pea.**

From France. Received through Mr. W. T. Swingle, December, 1898. (42 packages.)

"Pois gris de printemps" (gray spring field pea). "Bisaille."

Annual. Plant very vigorous, able to attain about 6 feet in height, with numerous long and slender stems and branches. Seed reddish or slightly bronze. Forage highly esteemed, both green and dry, especially for sheep.

A cereal with a stout stalk, such as rye or oats, is usually sown, at the same time with the pea, to serve as support for it. It enters frequently into mixtures for green fodder. Sown ordinarily in March if for seed, and as late as June if intended for fodder; sown usually broadcast. (*Vilmorin.*)

The different varieties of forage peas weigh 54 to 62 pounds per bushel; 143 to 178 pounds is sown per acre.

1486. PISUM ARVENSE.**Field pea.**

From France. Received through Mr. W. T. Swingle, December, 1898. (44 packages.)

"Pois gris d'hiver" (gray winter field pea).

"More hardy and productive than the preceding (pois gris de printemps); better suited for dry and gravelly lands. Seed usually smaller, rounder, and of a more greenish tint than the spring pea; to be sown in autumn, September or October." (*Vilmorin.*)

1487. PISUM ARVENSE.**Partridge pea.**

From France. Received through Mr. W. T. Swingle, December, 1898. (41 packages.)

"Pois perdrix."

"A more vigorous variety and more productive than the preceding (spring field pea); winter and spring; but it suffers sometimes from frosts in the climate of Paris, and demands a richer soil and a more equable climate. It is cultivated principally in western France. Seed yellow, marbled with brown; quite rare in commerce." (*Vilmorin.*)

1488. RAPHANUS SATIVUS.**Radish.**

From France. Received through Mr. W. T. Swingle, December, 1898. (8 packages.)

"Raifort champêtre de l'Ardèche" (Ardèche field radish).

"Large radish, with a root 30 to 40 cm. long; color violet or white, with the neck rose-colored; good feed for cows; sown after the harvest has been gathered in, in July or August, like turnip seed, and sometimes mixed with it; it succeeds better than the turnip in very light and poor soil." (*Vilmorin.*)

The seed weighs 50 to 54 pounds per bushel; 4½ pounds are sown per acre.

1489. GLYCYRRHIZA GLABRA.**Licorice.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"Reglisse." "Reglisse officinale."

"Perennial. The subterranean stems or rhizomes and the roots, which furnish the sap known under the name of *licorice*, are also used in the distillery and in the preparation of the drink called *coco*. Land soft, rich, deep, moist, but not wet. Reproduced easily by suckers, stolons from the root, and rhizomes planted in February or March, in rows about 28 inches apart, and about 12 inches apart in the row. Sowing is not customary, because of the scarcity of the seed and the slowness of this mode of propagation. Ten thousand to 11,200 plants are set per acre." (*Vilmorin.*)

1490. SCABIOSA ARVENSIS.**Field scabious.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"Scabieuse des champs."

"This and *S. succisa* are eaten by animals in pastures. For this reason some authors have advised their cultivation, but they seem to have been adopted nowhere." (*Vilmorin.*)

1491. SCABIOSA SUCCISA.**Scabious.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"Scabiense succise."

See No. 1490.

1492. GLYCINE HISPIDA.**Soy bean.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"An erect annual legume, with hairy stems and leaves, which has been cultivated in China and Japan from remote antiquity. It was long grown in botanic gardens, but when the facts concerning its use as a human food by oriental nations came to light about twenty years ago, it was largely introduced into this country and Europe, where thorough trials of its forage and food value have been made. There are a large number of named varieties, which vary in the color of their seeds and the length of time which the plants require to come to maturity. The seed is planted at the rate of half a bushel to the acre, in drills $2\frac{1}{2}$ to 3 feet apart, and cultivated about the same as Indian corn. In Virginia soy beans are planted between the hills of corn, so that two crops are produced on the same field at the same time. The yields of seed are often enormous. Soy beans are fed to stock green as silage, or as hay. The stems are rather woody and do not make the best quality of hay, but as either ensilage or green forage they are unsurpassed. The hay contains from 14 to 15 per cent crude protein and 3 to 6 per cent of fat. The beans contain from 32 to 42 per cent protein, and from 12 to 21 per cent of fat in fresh material. When fed to milch cows, a ration of soy beans increases the yield of milk, improves the quantity of the butter, and causes the animal to grow rapidly in weight. It is an excellent addition to a ration for feeding cattle. In China and Japan, where the soy bean is an article of diet, substances similar to butter, oil, and cheese, as well as a variety of dishes, are prepared from it. The yield of green forage amounts to from 6 to 8 tons per acre, and the beans from 40 to 100 bushels. The feeding value of the bean has been found to be greater than that of any other known forage plant except the peanut." (*Jared G. Smith.*)

1493. GLYCINE HISPIDA.**Soy bean.**

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

"Soja hispida à grain noir" (black-seeded *Soja hispida*).

1494. SPERGULA ARVENSIS.**Spurrey.**

From France. Received through Mr. W. T. Swingle, December, 1898. (13 packages.)

"Spergule ordinaire."

"An annual, producing a low tangled mass of succulent stems with numerous whorled linear leaves. It produces a crop in eight or ten weeks, and is valuable as a catch crop in short seasons and for soiling sheep and milch cows. It has been especially recommended as a first crop on the pine barrens of Michigan to turn over for green manure. The air-dried hay contains about 12 per cent of crude protein." (*Jared G. Smith.*)

"Small annual plant of moist and sandy soils; excellent green forage, especially for cows; it is hardly possible to use it in any other than the fresh state. The butter produced from the milk of cows fed on this plant is called 'Spurrey butter,' and is considered in Holland and Belgium of a superior quality. Dry hay is rarely made of it, nevertheless the straw left after beating out the seed forms a good fodder for cows and sheep. May succeed in stubble fields; good vegetable fertilizer to be plowed under green; may be cultivated on moist, light, sandy, or clayey-siliceous soils; it prefers foggy and humid climates. To be sown from March to May, but especially upon stubble after the harvest in August, to obtain one or two cuttings or to plow under as green fertilizer early in the winter. Sometimes the plant is allowed to run to seed, and in this case it may become biennial by reseeding with the seed falling out naturally before or during the harvesting. Spurrey is sometimes used in mixtures for green cutting." (*Vilmorin.*)

The seed weighs about $46\frac{1}{2}$ pounds per bushel; 18 to 27 pounds, or, according to some, 45 to 54 pounds, is to be sown per acre.

1495. TRIFOLIUM PRATENSE.**Brittany red clover.**

From France. Received through Mr. W. T. Swingle, December, 1898. (9 packages.)

"Trèfle violet de Bretagne." Brittany.

"A variety of *Trifolium*, ordinarily very vigorous and productive, of a luxuriant vegetation, especially suitable and better than the others for making hay, while the clovers of Bordeaux, Beauce, etc., are more frequently reserved for green consumption or for pasturing.

"We devote to the Brittany violet clover a short special note, because, for several years the seed has been found more regularly in the market; one must pay a higher price than for the common clover if he wishes to get the true Brittany violet clover, of which the seed is large and generally of a dark violet color." (*Vilmorin*.)

1496. TRIFOLIUM INCARNATUM.**Crimson clover.**

From France. Received through Mr. W. T. Swingle, December, 1898. (18 packages.)

"Trèfle incarnat hatif" (Early crimson clover).

"An annual, native of the Mediterranean region, which has been long cultivated in the warmer portions of Europe, and is now grown in many of the Eastern and Southern States for an early soiling crop. The stems are erect, tufted, soft-hairy all over, from 1 to 2 feet high, and the bright scarlet flowers are borne in elongated heads. In Virginia and southward it should be sown in autumn to furnish winter and early spring forage. It is susceptible to drought. It is not suited to the Northern and Northwestern States, as it suffers severely from excessive cold. Twenty pounds of seed should be sown per acre. Hay made of crimson clover contains about 13 per cent of crude protein. To make the best hay it must be cut when in full bloom; cut later there is some danger in feeding it, especially to horses, on account of the bristly hairy bracts of the inflorescence, which form hair balls in the stomach. A number of such cases, resulting in considerable loss, have been reported during the past seasons." (*Jared G. Smith*.)

1497. TRIFOLIUM INCARNATUM.**Crimson clover.**

From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)

"Trèfle incarnat tardif" (late crimson clover).

"Variety of the preceding, from ten to fifteen days later, and which has thus the advantage of following it in fruit." (*Vilmorin*.)

1498. TRIFOLIUM INCARNATUM.**Crimson clover.**

From France. Received through Mr. W. T. Swingle, December, 1898. (18 packages.)

"Trèfle incarnat très tardif à fleur blanche" (crimson clover, very late, with white flowers).

"A variety from eight to ten days later than the preceding, but less hardy; germination capricious and incomplete; suffers from cold and insects, and is very much subject to degeneration; the seed is white, while that of others is yellow." (*Vilmorin*.)

1499. TRIFOLIUM PANNONICUM.**Hungarian clover.**

From France. Received through Mr. W. T. Swingle, December, 1898. (6 packages.)

"Trèfle de Pannonie" (Pannonian clover).

"A perennial species indigenous to southern Europe, closely allied to red clover and much earlier, but less readily eaten by stock." (*Jared G. Smith*.)

1500. TRIFOLIUM ALEXANDRINUM.**Egyptian clover.**

From France. Received through Mr. W. T. Swingle, December, 1898. (9 packages.)

"Trèfle d'Alexandrie" (Alexandrian clover).

"An erect, annual clover, native of Egypt, which in warm climates and upon rich soils makes an exceedingly rapid growth. Two or three heavy crops may be taken

from a field in one season. Twenty pounds of seed are required for an acre. An excellent species for trial in the Southern States, wherever cane and cotton may be grown." (*Jared G. Smith.*)

1501. TRIFOLIUM HYBRIDUM.

Alsike clover.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"Trèfle hybride" (hybrid clover). "Trèfle d'Alsike."

"A perennial, in size and general appearance intermediate between white and red clover. It is better adapted than any other species in general cultivation to wet meadows or marshy lands, but because of its shallow root system will not withstand drought. The branching, leafy stems grow 1 to 3 feet high and the young flower heads are at first white and later become rose-colored. Its leaves are slightly bitter, and on this account the forage is not so well liked by stock as that of red or white clover; but it will grow on lands which are too wet for the other species, thriving even in marshy places where the subsoil is impervious to water and the drainage is bad. It may also be cultivated in the far north and in high altitudes, as it has the power of withstanding severe cold. The forage is succulent and more difficult to cure for hay than red clover. The air-dried hay contains from 10 to 13 per cent of crude protein. It is a very good honey plant for bees. The seed weighs 65 pounds to the bushel, and 12 pounds will sow an acre." (*Jared G. Smith.*)

1502. LESPEDEZA STRIATA.

Japan clover.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"Trèfle du Japon."

"An annual legume, native of China, which was accidentally introduced into South Carolina about thirty-five years ago, and has become naturalized throughout the Southern States as far west as Texas. Because of its many good qualities it is the most highly esteemed of all forage plants for this region. It will grow on worn fields and sterile or exhausted soils, spreading rapidly over the surface, preventing further washing of the land. In such localities it grows prostrate on the surface, forming a dense mat of turf. In rich soils, especially such as are calcareous, it grows 20 or 30 inches high, and when mown, makes an excellent quality of hay, greedily eaten by all kinds of stock. It is distinctively a summer forage, appearing about the first of June, and dying down at the first touch of frost. In sandy soils it suffers greatly from hot weather. The acreage of meadow and pasture lands devoted to this clover is increasing rapidly. Its roots penetrate deeply into the soil and, in common with most other leguminous plants, Japan clover, by means of the tubercles on its roots, collects nitrogen from the air, so that because of its steady and rapid growth it is one of the best crops to turn under as green manure, and is one of the best for renovating old fields. The feeding value is high, though less than that of clover and cowpeas. Seed should be sown broadcast at the rate of half a bushel to the acre, either in autumn with oats or winter rye, or alone in spring." (*Jared G. Smith.*)

1503. ANTHYLLIS VULNERARIA.

Kidney-vetch.

From France. Received through Mr. W. T. Swingle, December, 1898. (18 packages.)

"Trèfle jaune des sables" (yellow sand clover).

"A low perennial legume, which is found wild over a large part of Europe. It grows naturally in very dry and sterile soils along the roadsides, wherever the soil is thin and the subsoil calcareous. It is recommended as furnishing a palatable though scant forage on dry, calcareous soils, in places that are too poor to support even white clover. The product of the first year is small, so that it is only a profitable crop when sown with grain. The second year the plant throws up tall stems, often 3 or 4 feet high. It is not recommended to sow this crop in the United States, except experimentally upon such barren soils as have been described, and then only after the better species have been tried and found to be failures." (*Jared G. Smith.*)

1504. VICIA SATIVA.

Vetch.

From France. Received through Mr. W. T. Swingle, December, 1898. (9 packages.)

"Vesce commune de printemps" (common spring vetch).

"An annual trailing herb, 12 to 20 inches high, with 4 to 5 angled stems, simple or

branched from the base. The leaflets are broadest above the middle, blunt or notched at the end, and tipped with an abrupt point; they number usually from 10 to 14. The rather large purple flowers are borne 1 or 2 together at the base of the leaf. The plant is soft-hairy all over. This native of Europe and Western Asia has been cultivated for upward of twenty centuries, and is considered one of the best soiling crops in cool, moist climates. In the United States it has only proved adaptable to cultivation in the New England States and Canada. Vetches are sown in April or May, at the rate of 2 bushels of seed per acre, and the crop is ready to cut by the middle of June or the first of July. Where they can be grown, they are a very good summer feed for horses, but must not be fed earlier than full bloom, on account of their diuretic action. They are good for soiling sheep and milch cows, and are said to very materially increase the flow of milk. Because of the high price asked for seed, and the extreme susceptibility of vetches to dry hot weather, their cultivation is not recommended. A greater and surer return can always be had from red clover." (*Jared G. Smith.*)

"Annual. Excellent and abundant green forage, to be employed either alone or mixed with various other plants. To be sown with a little barley or oats for support when the seed is well harrowed in, from March to July. The vetch prefers land of quite good quality, a little heavy and moist, though wholesome, to lands too light or too compact and humid." (*Vilmorin.*)

The seed weighs 62 pounds per bushel; 186 pounds is sown per acre.

1505. VICIA SATIVA.

Vetch.

From France. Received through Mr. W. T. Swingle, December, 1898. "Vesce de printemps de Bretagne" (Brittany spring vetch).

1506. VICIA SATIVA.

Vetch.

From France. Received through Mr. W. T. Swingle, December, 1898. (9 packages.)

Variety "*hyemalis*" (winter).

"A variety of the preceding; requires wholesome land; may be sown from September to the middle of November, either alone or mixed with barley, rye, or winter oats; it forms the basis for mixtures of green forage; to be sown in autumn for spring cutting." (*Vilmorin.*)

The seed weighs 62 pounds per bushel, and 186 pounds is sown per acre.

1507. VICIA SATIVA.

Vetch.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"Vesce blanche" (white vetch).

"Annual; not so high as the common vetch; earlier, hardy, cultivated more especially for its seed, which is of a white or whitish color, and is used in some localities for human food. This variety appears to have merit as a forage plant. Flower violet."

The seed weighs about 62 pounds per bushel; 186 pounds is sown per acre.

1508. VICIA MACROCARPA.

Vetch.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"Vesce à gros fruit" (large-fruited vetch).

"Annual; distinguished from the common winter vetch by its larger foliage, closer and more numerous leaflets, and especially by its pods, which, when green, are very large, cylindrical, swollen, thick, fleshy, attaining the size of a small finger, and resembling those of a small potage pea. The seed is also very large.

This variety, originally from Algeria, is much preferred by the Arabs, especially at the time when the pods, still green and succulent, have attained their full development. To obtain good results with it, the sowing in the South and in warmer climates should be done in the autumn rather than in the spring; even in the North it will be well to sow in the autumn or at the close of winter, very early, in January or February at latest, without which the result may leave much to be desired. In conclusion, this excellent variety appears to have more interest for the southwestern or southern parts of France than for the climate of Paris." (*Vilmorin.*)

The seed weighs 62 pounds per bushel; 160 to 200 pounds is sown per acre.

1509. VICIA NARBONENSIS.**Narbonne vetch.**

From France. Received through Mr. W. T. Swingle, December, 1898. (43 packages.)

"Vesce de Narbonne."

"Annual; very vigorous and very early, remarkable in its stalks, its foliage, and its general appearance, which recalls that of a small bean, but earlier. To be sown early in spring in the North. In more temperate climates than ours (latitude of Paris) it may and even should be sown in autumn. This species has been confounded for some time with *V. macrocarpa*, and sold under that name. It is generally sown alone, but it may be found advantageous to have it enter mixtures for green cutting, which are to be sown early in spring, or to mix it with oats or rye or some other cereal grass. (*Vilmorin.*)

The seed, which is very large, weighs about 62 pounds per bushel, and is sown at the rate of 160 to 200 pounds per acre.

1510. VICIA CRACCA.**Cow vetch.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"Vesce multiflore" (many-flowered vetch).

"A downy pubescent perennial with compound leaves of 20 to 24 narrowly oblong, abruptly pointed leaflets, and numerous blue or purple reflexed flowers in a one-sided spike. Common in the borders of thickets from New England to the upper prairie region. The species is cultivated in Europe for fodder, and is recommended for cultivation in wet meadows. In the shade it yields a return three times larger than in open places. It would, therefore, be valuable in the woodland pastures and alpine regions." (*Jared G. Smith.*)

"This and *V. tenuifolia*, which have been recommended, are perennial plants, rich in herbage and liked by animals, but the seeds are scarce and the germination is capricious. The vetches require the support of other plants with erect stalks." (*Vilmorin.*)

1511. VICIA ANGUSTIFOLIA.**Vetch.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"Vesce a feuille étroite" (narrow-leaved vetch).

1512. VICIA BIENNIS.**Biennial vetch.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"Vesce bisannuelle."

"Biennial and perennial, hardy, very large species, yields much fodder, demands the support of some other plant with firm erect stalk; very scanty in seeds." (*Vilmorin.*)

1513. VICIA SEPIUM.**Hedge vetch.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"Vesce des haies."

"Perennial. A common plant [in France] along borders and paths in the woods; it prefers shade and moisture, but succeeds equally well in good wholesome and even dry soils. Seeds scarce." (*Vilmorin.*)

1514. VICIA FULGENS.**Vetch.**

From France. Received through Mr. W. T. Swingle, December, 1898. (22 packages.)

"Vesce écarlate" (scarlet vetch).

"An annual species recently discovered in Algeria, remarkable for its rapid growth and for the beauty of its bright-red flowers spotted with brown; it is cultivated as an ornamental plant; it merits an equal recommendation as a forage plant." (*Vilmorin.*)

1515. VICIA DUMETORUM.**Vetch.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

1516. ONOBRYCHIS ONOBRYCHIS.**Common sainfoin.**

From France. Received through Mr. W. T. Swingle, December, 1898. (33 packages.)

"Sainfoin ordinaire." "Bourgogne esparcette."

"A deep-rooting perennial legume, extensively cultivated in the temperate portions of Europe on dry, calcareous soils which are too barren for clover or alfalfa. The stems are erect or ascending, 1 to 2 feet high, ribbed and downy, the leaves unequally pinnate, composed of 6 to 12 pairs of opposite leaflets, with an odd terminal one. The bright pink flowers are numerous in spike-like racemes, borne on a long stalk. A permeable, well-drained subsoil is essential for its growth. Like alfalfa, it is quickly killed whenever the ground becomes saturated with water, and is therefore not suited for growth in wet meadows or in marshy lands. There is no better plant for growing on barren hills, but it does better on the sunny slopes than those facing north. It is rather difficult to establish, as the plants are easily killed when young, but when once well rooted, sainfoin will live from twenty to twenty-five or sometimes a hundred years, provided the soil is rich enough. One crop of hay can be cut each year. It should be cut at the time of full bloom, which in the latitude of Washington, D. C., is about the 1st of May. In England the average yield ranges from $1\frac{1}{2}$ to $2\frac{1}{2}$ tons per acre, and the hay is better and more nutritious than that of red clover. Eighty pounds of seed should be sown per acre, anytime from the middle of May to the end of June, and, unlike alfalfa, it should be covered quite deeply to insure germination. If shelled seed is to be had, half as much will suffice. Fresh seed must always be used, as it loses its vitality if kept a year. It can be grown in any part of the United States, and should be more extensively cultivated, especially in localities where the ground is too dry and too barren for red clover. The yield of seed ranges from 10 to 25 bushels of 40 pounds. Sainfoin should not be pastured closely, as it does not have the same recuperative ability as the clovers." (*Jared G. Smith.*)

1517. ONOBRYCHIS ONOBRYCHIS.**Sainfoin.**

From France. Received through Mr. W. T. Swingle, December, 1898. (23 packages.)

"Sainfoin à deux coupes" (double-cropping sainfoin).

This has been given the varietal name *biferum* (two-cropped).

Perennial, hardy. More vigorous than the preceding, giving ordinarily two cuts, but requiring for this a richer land. Preferred to the preceding in mixtures with clover, lucern, or other plants of which more than one cutting is required." (*Vilmorin.*)

The seed weighs 23 to 25 pounds per bushel, and 125 to 156 pounds is sown per acre.

1518. HEDYSARUM CORONARIUM.**Sulla.**

From France. Received through Mr. W. T. Swingle, December, 1898. (26 packages.)

"Sainfoin d'Espagne" (Spanish sainfoin).

Perennial or biennial, very vigorous and rich in fodder, of doubtful merit; cultivated in Sicily and Calabria; can not bear the winter in the latitude of Paris, but succeeds perfectly in Algiers.

Seed not abundant in commerce, weighing $15\frac{1}{2}$ to 19 pounds per bushel; sown at the rate of 90 pounds per acre.

1519. PHALARIS CANARIENSIS.**Canary grass.**

From France. Received through Mr. W. T. Swingle, December, 1898. (18 packages.)

"Alpiste." "Graine de Canarie."

"Annual. Seed used as bird feed; the straw is very good fodder for horses and horned cattle. It is frequently used in mixtures for forage to be cut green. For the seeds, it is to be sown broadcast on well-worked, wholesome, and well-manured

land; gathered in July and August. For green forage, to be sown from April to July and to be cut three or four months later." (*Vilmorin.*)

The seed weighs about 58 pounds per bushel and is sown 16 to 18 pounds per acre for seed and 22 to 27 pounds per acre for forage.

1520. LOLIUM PERENNE.

English rye grass.

From France. Received through Mr. W. T. Swingle, December, 1898. (21 packages.)

"Anglais de Pacey."

"Pacey's English rye grass is a long-enduring perennial variety, with very abundant foliage, with ear and straw shorter, of more robust habits, more resistant and lasting than the ordinary English rye grass, a fact which recommends it particularly and should make it preferable for the formation of turf and lawns; it is less productive of seed than any of the other varieties of rye grass." (*Vilmorin.*)

The seed weighs 26 to 31 pounds per bushel.

1521. LOLIUM ITALICUM.

Italian rye grass.

From France. Received through Mr. W. T. Swingle, December, 1898. (42 packages.)

"Rye grass d'Italie."

"Very early; producing seed abundantly during the same year, and even within three or four months after the sowing; very productive, with the leaves larger and stalks higher and more leafy than the English rye grass; hay of very good quality both green and dry; for artificial prairies, meadows, and pastures; not very lasting unless on rich and irrigated lands, where this annual may become biennial and even triennial. It is distinguished by a special disposition to come up again and a remarkable continuity of growth, much greater than in the English rye grass; it gives three to four cuttings in Vendée, Bretagne, and in Normandy, and as many as eight in the rich irrigated soils of Milan. It may be employed alone or mixed with red clover, crimson clover, timothy, etc. It forms a part of various mixtures for green fodder; it is also used to reseed clovers which have become too thin. It is on the whole an excellent grass and one of the most productive ones; not suitable for lawns." (*Vilmorin.*)

The seed weighs 15½ to 19 pounds per bushel and is sown at the rate of 45 to 54 pounds per acre.

1524. POPULUS TRICHOCARPA.

Poplar.

From Chatenay, Seine, France. Received through Mr. W. T. Swingle, December, 1898.

New sort; extraordinarily vigorous; resembles Balsam poplar; said to be free from diseases and of great promise for extensive plantations.

1525. BUXUS MICROPHYLLA.

Box.

From Chatenay, Seine, France. Received through Mr. W. T. Swingle, December, 1898.

"*Burus rotundifolia glauca.*"

Hardy; said to be the finest large-leaved box.

1527. FRAGARIA VESCA.

Wood strawberry.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

The parent of the four-season ever-bearing strawberries. Seed.

1528. FRAGARIA VESCA.

Wood strawberry.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"Rouge" (red). Seed.

1529. FRAGARIA VESCA.

Wood strawberry.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"À fruit blanc" (white-fruited). Seed.

- 1530. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
"Rouge amélioré" (improved red). Seed.
- 1531. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
"Belle de Meaux." Seed.
- 1532. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
"Berger." Seed.
- 1533. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
"Janus perfectionné." Seed.
- 1534. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
"Sans filets, rouge" (without runners, red). Seed.
- 1535. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
"Sans filets, à fruit rouge" (without runners, fruit red). Seed.
- 1536. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (Twenty-five plants.)
"Fraisier des 4 saisons, rouge" (ever-bearing, red).
- 1537. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (Twenty-five plants.)
"Fraisier des 4 saisons, à fruit rouge amélioré" (ever-bearing, improved red).
- 1538. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (Twenty-five plants.)
"Fraisier des 4 saisons, sans filets" (ever-bearing, without runners). "Gaillon rouge."
- 1539. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (Twenty-five plants.)
"Fraisier des 4 saisons sans filets" (ever-bearing, without runners). "Gaillon blanc."
- 1540. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (Twenty-five plants.)
"Fraisier des 4 saisons" (ever-bearing). "Belle de Meaux."

- 1541. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (Twenty-five plants.)
"Fraisier des 4 saisons" (ever-bearing). "Berger."
- 1542. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (Twenty-five plants.)
"Fraisier des 4 saisons Janus amélioré" (ever-bearing. Improved Janus).
- 1543. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (Twenty-five plants.)
"Fraisier remontant à gros fruit" (perpetual strawberry, large-fruited). "Leon XIII."
The oldest of the large ever-bearing strawberries.
- 1544. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (Twenty-five plants.)
"Fraisier remontant à gros fruit" (large-fruited perpetual). "St. Joseph" (Jeanne d'Arc?)
The great novelty of 1898; represented as the best ever-bearing strawberry known; best advertised plant in France.
- 1545. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. Twenty-five plants.
"Fraisier remontant à gros fruit" (large-fruited perpetual strawberry). "Jeanne d'Arc;" probably the same as St. Joseph.
- 1546. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. Ten plants.
"Fraisier remontant à gros fruit" (large-fruited perpetual strawberry). "St. Antoine de Padoue."
The as yet unannounced novelty for 1899, said to be the best ever-bearing strawberry in existence.
- 1547. FRAGARIA VESCA. Wood strawberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. Twenty-five plants.
"Fraisier Louis Gauthier." Not properly an ever-bearing strawberry. The runners produce fruit promptly, yielding thereby a succession throughout the summer, although each stock bears but one stem.
- 1548. VITIS VINIFERA. Grape.**
From Bourg-la-Reine, Seine, France. Received through Mr. W. T. Swingle, December, 1898. Four cuttings, 50 cm. (1½ feet) long.
"Sarfütger." Table grape, Russian variety. Berries white, 1 cm. (two-fifths of an inch) in diameter.
- 1549. VITIS VINIFERA. Grape.**
From Bourg-la-Reine, Seine, France. Received through Mr. W. T. Swingle, December, 1898. Four cuttings, 50 cm. (1½ feet) long.
"Saperawi." Table grape, Russian variety. Fruit black, 1 by 1.5 cm. (.4 by .6 of an inch); stems rosy.
"Has a red juice, and is preferred in Russia to the various *teinturiers*, since, unlike them, it does not injure the wine to which it is added for coloring purposes."

- 1550. VITIS VINIFERA.** **Grape.**
 From Bourg-la-Reine, Seine, France. Received through Mr. W. T. Swingle, December, 1898. Four cuttings 50 cm. (1½ feet) long.
 "Salalcanskoi." Table grape, Russian variety. Fruit rosy-white, 2 by 1 cm. (.8 by .4 inch).
- 1551. VITIS VINIFERA.** **Grape.**
 From Bourg-la-Reine, Seine, France. Received through Mr. W. T. Swingle, December, 1898. Four cuttings, 50 cm. (1½ feet) in length. "Carao de Moka."
 Table grape, Russian variety. Fruit 2 by 1 cm. (.8 by .4 inch) in diameter.
- 1553. ROBINIA.** **Locust.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 A shrub producing large quantities of large rose-colored flowers, grafted on the ordinary locust.
- 1554. ROBINIA PSEUDACACIA.** **Locust.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Said to be the finest variety of *Robinia pseudacacia*. Should be propagated by grafts.
 Variety "fastigiata."
- 1555. ROBINIA PSEUDACACIA.** **Locust.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Variety "tortuosa."
- 1556. CARAGANA FRUTESCENS.** **Pea tree.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Siberian shrub, 2 m. (6 feet) high, with yellow flowers; hardy.
- 1557. CARAGANA MICROPHYLLA.** **Pea tree.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1558. PYRUS CHAMAEMESPILUS.** **Thorn.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Native of central Europe; hardy.
- 1559. AMORPHA FRUTICOSA.** **Lead plant.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 "Amorpha croceo-lanata."
- 1560. AMORPHA FRUTICOSA.** **Lead plant.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 "Amorpha lewisii."

- 1561. AMORPHA FRUTICOSA.** **Lead plant.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 "*Amorpha glabra*."
- 1562. PIERIS OVALIFOLIA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 "*Andromeda japonica*." Erect evergreen shrub which flowers for six months; hardy.
- 1563. ASIMINA TRILOBA.** **Papaw.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Probably "*asimina à trois lobes*."
- 1564. ARBUTUS UNEDO.** **Strawberry tree.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Native of the Pyrenees, 5 m. (15 feet) high; half-hardy; valuable fruit and ornamental tree; plant for stock.
- 1565. ARBUTUS ANDRACHNE.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
- 1566. ATRIPLEX HALIMUS.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Mr. Swingle thinks this species is grown on sand dunes and alkali soils. Care must be taken or it may spread and be a bad weed. Half-hardy.
- 1567. ALNUS CORDIFOLIA.** **Alder.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1568. ALNUS OBLONGATA.** **Alder.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1569. MELIA FLORIBUNDA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Hardy (?) with fragrant white and violet flowers in July.
- 1570. COLUTEA ARBORESCENS.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Native of eastern France; grows to a height of 3 m. (9 feet); has yellow flowers; suitable for dry soils; hardy.
- 1571. CORNUS CAPITATA.** **Cornel.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Native of Nepal; 3 to 4 m. (9 to 12 feet) high; flowers with large yellow bracts; fruit like a large strawberry.

- 1572. BETULA NANA.** **Dwarf birch.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Alps to Scandinavia.
- 1573. ERYTHEA EDULIS.** **Fan palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1574. BUDDLEIA CURVIFLORA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Half-hardy Chinese shrub; flowers lilac and violet.
- 1575. BUDDLEIA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 "*Buddleia variabilis.*"
- 1576. BUDDLEIA GLOBOSA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Hardy ornamental shrub from the Andes of Peru.
- 1577. BUPLEURUM FRUTICOSUM.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Shrub of southern France $1\frac{1}{2}$ m. (5 feet) high; tender evergreen shrub for dry soils.
- 1578. CNEORUM TRICOCCON.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1579. CERATONIA SILIQUA.** **St. John's bread.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (80 packages.)
 Small, tender tree; best varieties must be grafted. Should be planted for stocks.
- 1580. CEANOTHUS OVATUS.** **New Jersey tea.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 "*Ceanothus fontaneseanus.*" Hardest species; origin doubtful, but supposed to be American.
- 1581. CEANOTHUS.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Miscellaneous varieties.
- 1582. PRUNUS AVIUM.** **Bird cherry.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (20 packages.)
 Wild cherry, native of France; grows to a height of 15 m. (45 feet); fruit used in liquors; wood valuable; foliage turns red in autumn; hardy; should be tried for stocks.

- 1583. PRUNUS LAUROCERASUS. Cherry laurel.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 From Trebizonde; grows 5 m. (15 feet) high; has large evergreen foliage; tender.
- 1584. ELAEAGNUS MULTIFLORA. Oleaster.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 "*Elaeagnus edulis*."
 Cultivated extensively at Pau, southern France, by M. Tourasse, for preserves; half hardy.
- 1585. QUERCUS ROBUR. Oak.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Loamy, calcareous soils of France; used in truffle culture.
- 1586. QUERCUS COCCIFERA. Oak.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Utilized in truffle culture; shrub $\frac{1}{2}$ to 4 m. ($1\frac{1}{2}$ to 12 feet) high; yields kermes, which is like cochineal; evergreen.
- 1587. ZANTHOXYLUM BUNGEI. Prickly ash.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Native of southern China; tender.
- 1588. ZANTHOXYLUM PIPERITUM. Prickly ash.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1589. CLETHRA ARBOREA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 An arborescent species from Madeira; tender.
- 1590. CORNUS MAS. Cornel.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 One of the improved sorts; yellow-flowered; should be propagated by grafting.
- 1591. COTONEASTER BUXIFOLIA. Cotoneaster.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Native of mountains of Nepal; tender; evergreen; fruits bright red.
- 1592. COTONEASTER MICROPHYLLA. Cotoneaster.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 "*Cotoneaster thymaefolia*." A native of mountains of Nepal; evergreen; tender.

- 1593. COTONEASTER ROTUNDIFOLIA.** **Cotoneaster.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Native of mountains of Nepal; evergreen; tender.
- 1594. COTONEASTER MICROPHYLLA.** **Cotoneaster.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Native of mountains of Nepal; evergreen; tender; branches grow reflexed to the soil; flowers white and fragrant; fruits red.
- 1595. COTONEASTER HORIZONTALIS.** **Cotoneaster.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 China; prostrate shrub with evergreen leaves and small, bright-orange fruits; hardy; very beautiful species.
- 1596. COTONEASTER SIMONDSII.** **Cotoneaster.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Native of mountains of Nepal; half hardy.
- 1597. COTONEASTER TOMENTOSA.** **Cotoneaster.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 European; hardy.
- 1598. CRYPTOMERIA JAPONICA.** **Japanese cedar.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (8 packages.)
 Variety "*lobbii*."
- 1599. CRATAEGUS CHLOROSARCA.** **Thorn.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (8 packages.)
 Manchuria; fine pyramidal species with black fruits.
- 1600. CRATAEGUS PYRACANTHA.** **Thorn.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (8 packages.)
 Very ornamental, having bright-orange berries.
 Variety "*lalandii*."
- 1601.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (24 packages.)
 "Epine sanguine de Siberie" (Siberian red thorn).
- 1602. BERBERIS VULGARIS.** **Barberry.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (8 packages.)
 "*Berberis heteropoda*."
 Turkestan variety; fruit eaten in Russia.

- 1603. BERBERIS LYCIUM.** **Barberry.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
Fine foliage.
- 1604. EUCALYPTUS ACMENIOIDES.** **White mahogany.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1605. EUCALYPTUS.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
"*Eucalyptus amplifolia.*"
Pyramidal tree of rapid growth; very large leaves.
- 1606. EUCALYPTUS AMYGDALINA.** **Peppermint tree.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
For rich soils; hardy; yields much essential oil.
- 1607. EUCALYPTUS.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
"*Eucalyptus andreana.*"
Very fine weeping species.
- 1608. EUCALYPTUS INCRASSATA.** **Mallee.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1609. EUCALYPTUS LARGIFLORENS.** **Bastard box.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
Wood valuable; half hardy; dry soil.
- 1610. EUCALYPTUS BOTRYOIDES.** **Swamp mahogany.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
For wet soils.
- 1611. EUCALYPTUS CALOPHYLLA.** **Red gum.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
Very ornamental; slow-growing; will grow on dry soils; good for avenues.
- 1612. EUCALYPTUS CAPITELLATA.** **Stringybark.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
Very fine tree for avenues.
- 1613. EUCALYPTUS CITRIODORA.** **Lemon-scented gum.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
Yields much essential oil; dry soil.

1614. EUCALYPTUS COCCIFERA.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

One of the most hardy.

1615. EUCALYPTUS DIVERSICOLOR.**Karri.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Wood valuable; dry soil.

1616. EUCALYPTUS GLOBULUS.**Fever-tree.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Very hardy.

1617. EUCALYPTUS PAUCIFLORA.**White gum.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Hardy.

1618. EUCALYPTUS CORNUTA.**Yate.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Hardy.

1619. EUCALYPTUS CORYMBOSA.**Bloodwood.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Dry soil; yields very good firewood; bark used for making filter paper; tree yields gum.

1620. EUCALYPTUS CORYNOCALYX.**Sugar gum.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Suitable for dry climates.

1621. EUCALYPTUS COSMOPHYLLA.**Scrub gum.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Fine ornamental tree.

1622. EUCALYPTUS CREBRA.**White ironbark.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Wood valuable.

1623. EUCALYPTUS DECIPIENS.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1624. EUCALYPTUS EUGENIOIDES.**White stringybark.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1625. EUCALYPTUS EXIMIA.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1626. EUCALYPTUS FICIFOLIA.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1627. EUCALYPTUS AMYGDALINA.**Peppermint tree.**

From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)

Resembles *E. goniocalyx*, which attains a large size and has a hard, close-grained wood, but it is less particular about soil.

1628. EUCALYPTUS MARGINATA.**Jarrah.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

The best Australian tree for bridge timbers, railway sleepers, etc.

1629. EUCALYPTUS.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"Foeld bay."

Fine species with drooping branches like those of the weeping willow.

1630. EUCALYPTUS OBLIQUA.**Stringybark.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Handsome species; grows in poor soils; wood hard, close-grained, yields rather poor firewood.

1631. EUCALYPTUS GLOBULUS.**Blue gum.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Used for firewood; recommended for street paving by Naudin.

1632. EUCALYPTUS GOMPHOCEPHALA.**Touart.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Fond of calcareous soils and wet ground.

1633. EUCALYPTUS.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"*Eucalyptus gompho-cornuta*."

1634. EUCALYPTUS GONIOCALYX.**Spotted gum.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Attains a very large size; requires good soils, not wet; wood hard, close-grained.

1635. EUCALYPTUS.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

"*Eucalyptus gracilipes*." Species very close to *E. leucoxyton*, with which it is sometimes confused. It differs chiefly in the young state; in the adult state the chief difference is in its much brighter foliage.

- 1636. EUCALYPTUS GUNNII.** **Cider gum.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 This and *E. coriacea* are particularly hardy species.
- 1637. EUCALYPTUS HAEMASTOMA.** **Spotted gum.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Wood rich in resin, and used for torches in New Zealand; good for fuel and for coarse carpentry.
- 1638. EUCALYPTUS HEMIPHLOIA.** **Box.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Tree of medium size; wood hard, excellent for fuel. (*Vilmorin.*)
- 1639. EUCALYPTUS.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 "*Eucalyptus jugalis.*"
 A small tree, 15 to 18 feet high. (*Vilmorin.*)
- 1640. EUCALYPTUS CORNUTA.** **Yate.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1641. EUCALYPTUS LEUCOXYLON.** **Ironbark.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Yields good firewood, which burns with bright flame. Used for street paving in Melbourne.
- 1642. EUCALYPTUS LONGIFOLIA.** **Woolly butt.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Very good firewood.
- 1643. EUCALYPTUS MACRANDRA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1644. EUCALYPTUS MACROCARPA.** **Morrel.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1645. EUCALYPTUS MACRORRHYNCHA.** **Stringybark.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1646. EUCALYPTUS MACULATA.** **Spotted gum.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1647. EUCALYPTUS MARGINATA.** **Jarrah.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Used for street paving in London and Paris. See No. 1628.

- 1648. EUCALYPTUS MEGACARPA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1649. EUCALYPTUS MELLIODORA** **Yellow box.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1650. EUCALYPTUS MICROCORYS.** **Tallow wood.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
Yields poor firewood.
- 1651. EUCALYPTUS STELLULATA.** **Green gum.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1652. EUCALYPTUS INCRASSATA.** **Mallee.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1653. EUCALYPTUS OBLIQUA.** **Stringybark.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
Yields poor firewood.
- 1654. EUCALYPTUS OBTUSIFLORA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1655. EUCALYPTUS OCCIDENTALIS.** **Flat-topped yate.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1656. EUCALYPTUS PANICULATA.** **Red ironbark.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1657. EUCALYPTUS PILULARIS.** **Blackbutt.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1658. EUCALYPTUS PIPERITA.** **Peppermint tree.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1659. EUCALYPTUS PLANCHONIANA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
- 1660. EUCALYPTUS PREISSIANA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
- 1661. EUCALYPTUS PUNCTATA.** **Leather-jacket.**
From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)

1662. EUCALYPTUS.

From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)

"*Eucalyptus quadrialata*."

1663. EUCALYPTUS RAVERETIANA.**Gray gum.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1664. EUCALYPTUS REDUNCA.**White gum.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1665. EUCALYPTUS REGNANS.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1666. EUCALYPTUS RESINIFERA.**Forest mahogany.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Best known of the resinous sorts. The kino of Botany Bay.

1667. EUCALYPTUS RISDONII.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1668. EUCALYPTUS ROBUSTA.**Swamp mahogany.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1669. EUCALYPTUS ROSTRATA.**Red gum.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Used for telegraph poles, for street paving in Melbourne, and for making filter paper.

1670. EUCALYPTUS ROSTRATA × RESINIFERA.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1671. EUCALYPTUS RUDIS.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1672. EUCALYPTUS RUDIS × ROSTRATA.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1673. EUCALYPTUS SALIGNA.**Flooded gum.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1674. EUCALYPTUS SIDEROPHLOEA.**Red iron-bark.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

- 1675. EUCALYPTUS SIEBERIANA.** **Cabbage gum.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1676. EUCALYPTUS STUARTIANA.** **Turpentine tree.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
Yields poor firewood.
- 1677. EUCALYPTUS TERETICORNIS.** **Slaty gum.**
From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1678. EUCALYPTUS BOTRYOIDES × ROSTRATA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
“*Eucalyptus trabuti*.”
- 1679. EUCALYPTUS URNIGERA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
One of the most hardy species.
- 1680. EUCALYPTUS VIMINALIS.** **Manna gum.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
Yields manna; poor firewood.
- 1681. GLEDITSIA MACRACANTHA.** **Honey locust.**
From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
Variety “*fontanesii*.” From China.
- 1682. GLEDITSIA SINENSIS.** **Chinese honey locust.**
From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
- 1683. GLEDITSIA CASPICA.** **Caspian honey locust.**
From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
From the Caspian Sea; not entirely hardy; most beautiful of all the species.
- 1684. GLEDITSIA MACRACANTHA.** **Honey locust.**
From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
- 1685. PHILLYREA LATIFOLIA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
Originally from the Mediterranean; tender evergreen shrub 4 m. (12 feet) high.
- 1686. PHILLYREA ANGUSTIFOLIA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
Originally from the Mediterranean; tender shrub 3 to 4 m. (9 to 12 feet) high.

1687. FONTANESIA PHILLYRAEOIDES.

From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)

A Syrian shrub 2 to 3 m. (6 to 9 feet) high; half hardy; flowers in spring.

1688. RUSCUS HYPOPHYLLUM.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

An Italian shrub 65 cm. (26 inches) high; evergreen; tender; good for borders.

1689. FRAXINUS OXYPHYLLA.**Ash.**

From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)

Mediterranean species; somewhat tender.

1690. FRAXINUS.**Ash.**

From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)

Probably *Fraxinus xanthoxyloides*. Somewhat tender.

1691. CERCIS SILIQUASTRUM.**Judas tree.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

Native of south Europe; half-hardy shrub 3 m. (6 feet) high; valuable for growing on walls which face the south; both flowers and foliage beautiful.

1692. CERCIS SILIQUASTRUM.**Judas tree.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

Variety "*flore albo*" (white-flowered).

1693. CERCIS SILIQUASTRUM.**Judas tree.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

Variety "*flore carneo*" (with flesh-colored flowers).

1694. VITEX.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

Probably *Vitex negundo*. A small tender shrub originally from China.

1695. JUNIPERUS MACROCARPA.**Juniper.**

From France. Received through Mr. W. T. Swingle, December, 1898. (25 packages.)

Grown in the sandy soils of southern Europe; half hardy.

1696. JUNIPERUS LYCIA.**Juniper.**

From France. Received through Mr. W. T. Swingle, December, 1898. (25 packages.)

1697. JUNIPERUS SABINA.**Juniper.**

From France. Received through Mr. W. T. Swingle, December, 1898. (25 packages.)

Form called *Juniperus tamariscifolia*.

- 1698. ILEX AQUIFOLIUM.** **Holly.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Form called *Ilex balearica*. Native of Balearic Islands; hardy.
- 1699. IDESIA POLYCARPA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (25 packages.)
 Deciduous tree 10 to 12 m. (30 to 36 feet) high; nearly hardy; ornamental. The fruits are eaten in Japan, where it is native.
- 1700. INDIGOFERA DOSUA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Native of mountains of Nepal; 1 to 1.5 m. (3 to 4½ feet) high; rose-purple flowers in May; tender.
- 1701. LESPEDEZA BICOLOR.** **Bush clover.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
 Manchurian; hardy.
- 1702. LEYCESTERIA FORMOSA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Native of Nepal; undershrub; half hardy; red-violet fruits make a pretty effect.
- 1703. LYCIUM EUROPÆUM.** **Box thorn.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Solanaceous plant; south Europe; tender; bright-red fruits.
- 1704. LYCIUM HORRIDUM.** **Box thorn.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
- 1705. MAGNOLIA CAMPBELLI.** **Magnolia.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Native of the Himalaya Mountains. A large tree like *M. grandiflora*, but deciduous. One of the finest of the genus; reaches 3 feet in diameter; hardy.
- 1706. BERBERIS FORTUNEI.** **Barberry.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Native of the extreme Orient; bush 1 m. (3 feet) high; tender.
- 1707. CELTIS ORIENTALIS.** **Nettle tree.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
- 1708. HYPERICUM CALYGINUM.** **St. John's-wort.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
 Native of Levant; small shrub; flowers yellow, 8 cm. in diameter; grows well in shade under trees; evergreen; nearly hardy.

- 1709. HYPERICUM HIRCINUM.** **St. John's-wort.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
 Native of Spain; 1 m. (3 feet) high; flowers all summer.
- 1710. HYPERICUM PATULUM.** **St. John's-wort.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
- 1711. ALBIZZIA JUBLIBRISSIN.** **Silk tree.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (25 packages.)
 Native of western Asia; 8 m. (25 feet) high; deciduous; half hardy.
- 1712. MORUS ALBA.** **Mulberry.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Cultivated in China and Japan for silk.
- 1713. MORUS ALBA.** **Mulberry.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Variety "*rosea*."
- 1714. MORUS.** **Mulberry.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 "*Morus cedrona*."
- 1715. MORUS ALBA TATARICA.** **Mulberry.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
- 1716. MORUS ALBA.** **Mulberry.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (20 packages.)
 Variety sometimes called *Morus moretti*.
- 1717. MORUS ALBA.** **Mulberry.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
- 1718. MYRICA.** **Wax myrtle.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Native of France; shrub 1 m. (3 feet) high; flowers in May.
- 1719. MYRICA NAGI.** **Wax myrtle.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
- 1720. MYRTUS COMMUNIS.** **Bridal myrtle.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Form called *M. tarentina*.

- 1721. VACCINIUM ULIGINOSUM.** **Bog bilberry.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Native of France; 35 cm. (1 foot) high; moist soil.
- 1722. OXYCOCCUS OXYCOCCUS.** **Cranberry.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
 European cranberry; grows in marshes.
- 1723. RHAMNUS ALATERNUS.** **Buckthorn.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (25 packages.)
 Native of south France; half hardy; 3 to 4 m. (9 to 12 feet) high; evergreen; used for stocks for the improved varieties.
- 1724. RHAMNUS DAHURICA.** **Buckthorn.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (25 packages.)
 Used for dyestuffs; half hardy.
- 1725. JUGLANS REGIA.** **Walnut.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
- 1726. JUGLANS REGIA.** **Walnut.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
- 1727. JUGLANS REGIA.** **Walnut.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
- 1728. JUGLANS.** **Walnut.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
- 1729. JUGLANS.** **Walnut.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
- 1730. ULMUS CAMPESTRIS.** **Elm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. 10 packages.
"Ulmus modiolina."
 A race of the European elm with large leaves and twisted grain of wood.
- 1731. OSTRYA CARPINIFOLIA.** **Hop hornbeam.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
- 1732. POPULUS NIGRA.** **Black poplar.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Native of Europe; formerly much cultivated, but now replaced by American species.

1733. POPULUS DELTOIDES.**Cottonwood.**

From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)

The poplar most frequently cultivated in France; there are various improved varieties propagated by cuttings.

1734. PHELLODENDRON AMURENSE.

From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)

1735. PHOTINIA ARBUTIFOLIA.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

Native of California; for stocks.

1736. PINUS MARITIMA.**Pine.**

From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)

Grows 15 to 25 m. (45 to 75 feet) high in sandy land; trunk very straight.

1737. PINUS PINASTER.**Pine.**

From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)

More vigorous than *P. maritima*; native of Corsica, Italy, and Spain.

1738. PINUS SYLVESTRIS.**Pine.**

From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)

Variety "*riqaensis*."

1739. PINUS SYLVESTRIS.**Pine.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

Variety "*riqaensis*."

1740. PINUS LARICIO.**Larch pine.**

From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)

Variety "*calabrica*." Valuable tree for ornamental and for forest planting.

1741. PINUS AUSTRIACA.**Pine.**

From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)

1742. PINUS LARICIO.**Larch pine.**

From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)

1743. PINUS.**Pine.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"*Pinus japonica*."
Seeds edible.

1744. PINUS CANARIENSIS.**Pine.**

From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)

- 1745. PINUS EDULIS.** **Pine.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Tender.
- 1746. PINUS THUNBERGII.** **Pine.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1747. PISTACIA VERA.** **Pistachio.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Tender; used for stocks.
- 1748. (Blank.)**
- 1749. DIOSPYROS EBENUM.** **Ebony.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1750. DIOSPYROS LUCIDA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Variety "*latifolia*." Native of Japan; tender.
- 1751. DIOSPYROS LUCIDA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Variety "*latifolia*."
- 1752. DIOSPYROS VIRGINIANA.** **Persimmon.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Form called "*Diospyros pubescens*."
- 1753. PRUNUS DOMESTICA.** **Plum.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Stock for almonds and other stone fruits.
- 1754. RHUS CORIARIA.** **Sicilian sumac.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Native of southern Europe; shrub 1 to 1½ m. (3 to 4½ feet) high; half hardy; used in dyeing and tanning.
- 1755. GLYCYRRHIZA GLABRA.** **Licorice.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
- 1756. RHODODENDRON FERRUGINEUM.** **Rhododendron.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Native of the Alps and Pyrenees; bush 60 to 80 cm. (2 to 2¾ feet) high; hardy.

- 1757. RHODODENDRON HIRSUTUM.** **Rhododendron.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Native of the Alps; 1½ m. (4½ feet) high; hardy.
- 1758. ROSA MOSCHATA.** **Musk rose.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Has large bunches of small flowers, very beautiful. Probably only half hardy. Flowers continuously.
- 1759. ABIES SIBIRICA.** **Siberian fir.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
- 1760. SCHINUS TEREBINTHIFOLIUS.** **Pepper tree.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
 Highly prized as ornamental; superior to *S. molle* as street and lawn tree; foliage most striking; probably half hardy. Suitable for trial in Florida.
- 1761. TAXODIUM MUCRONATUM.** **Cypress.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Native of Mexico; probably half hardy.
- 1762. SMILAX ASPERA.** **Greenbrier.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Native of Mediterranean region; tender.
- 1763. SMILAX WALTERI.** **Greenbrier.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1764. SMILAX.** **Greenbrier.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 "*Smilax hastata*" [probably *S. bona-nox* from North America].
- 1765. PYRUS HYBRIDA.** **Wildapple.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (24 packages.)
 Native of northern Europe; hardy; much like *P. aucuparia*.
- 1766. EXOCHORDA GRANDIFLORA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Native of China; shrub 2 m. (6 feet) high; large flowers.
- 1767. EXOCHORDA ALBERTI.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

- 1768. SPIRAEA SORBIFOLIA.** **Spiraea.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Native of Japan or Nepal (?); shrub 2 m. (6 feet) high; white flowers in large panicle; tender.
- 1769. STERCULIA PLATANIFOLIA.** **Chinese parasol.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (25 packages.)
 Native of China; tender; 15 to 20 m. (45 to 60 feet) high; try for shade tree in the South; used for street tree in Japan.
- 1770. STYRAX JAPONICUM.** **Storax.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 A small, hardy, and pretty tree with white flowers; to be tried for hedges.
- 1771. STYRAX OBASSIA.** **Storax.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1772. STYRAX OFFICINALE.** **Storax.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Native of southern France; grows 3 to 4 m. (9 to 12 feet) high; has large white flowers like the orange; half hardy; try in the South.
- 1773. RHUS VERNICIFERA.** **Lacquer tree.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Shrub 3 m. (9 feet) high; tender.
- 1774. RHUS CORIARIA.** **Sicilian sumac.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Native of southern Europe; grows 3 m. (9 feet) high; hardy; used in tanning.
- 1775. RHUS GLABRA.** **Sumac.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1776. SAMBUCUS NIGRA.** **Elder.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 Native of France; grows 4 to 5 m. (12 to 15 feet) high; half hardy; fruit used to color wine, etc.; pith superior to that of American species.
- 1777. SAMBUCUS RACEMOSA.** **Elder.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (25 packages.)
 Native of southern Europe; grows 4 m. (12 feet) high; fruit red; hardy.
- 1778. THUJA ORIENTALIS.** **Arbor-vitae.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Form called *Thuja tatarica*.

- 1779. THUJA ORIENTALIS.** **Arbor-vitae.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Form called *Thuja filiforme*.
- 1780. THUJA PLICATA.** **Arbor-vitae.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Native of northwestern America; hardy.
- 1781. TILIA TOMENTOSA.** **Linden.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
 A fine ornamental tree, native of Hungary; flowers later than other species and holds its leaves longer; half hardy. There are several improved varieties.
- 1782. LIGUSTRUM NEPALENSE.** **Privet.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
 Evergreen shrub, commonly grafted on *L. vulgare*; tender.
- 1783. VITIS HETEROPHYLLA.** **Grape.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1784. VIRGILIA CAPENSIS.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1785. MIMOSA ACANTHOCARPA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1786. ACACIA CALAMIFOLIA.** **Broom wattle.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1787. ACACIA CAPENSIS.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1788. ACACIA FARNESIANA.** **Cassie.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1789. ACACIA CEBIL.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1790. ACACIA SPADICIGERA (?).**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1791. ACACIA CRASSIUSCULA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1792. ACACIA CULTRIFORMIS.

From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)

1793. ACACIA CYANOPHYLLA.

From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)

Grown in dry soil; try for tanning.

1794. ACACIA CYANOPHYLLA.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

Variety "*decipiens*."

1795. ACACIA DEALBATA.**Silver wattle.**

From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)

Native of Australia; a vigorous tree 10 m. (30 feet) high, growing rapidly in moist soil; flowers used for bouquets and perfumery; half hardy.

1796. ACACIA DECURRENS.**Black wattle.**

From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)

Improved source of tannin and available for perfumery making; try carefully in Florida.

1797. ACACIA DECIPIENS.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

1798. ACACIA DORATOXYLON.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

Yields scented wood.

1799. ACACIA EBURNEA.

From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)

1800. ACACIA ELATA.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1801. ACACIA FARNESIANA.**Cassie.**

From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)

1802. ACACIA GLOMEROSA.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1803. ACACIA PULCHELLA.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1804. ACACIA HOMALOPHYLLA.**Myall.**

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1805. ACACIA HORRIDA.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1806. ALBIZZIA LEBBECK.**Siris acacia.**

From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)

1807. ACACIA SALIGNA.**Tan wattle.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"*Acacia leiophylla decipiens.*"

1808. ACACIA BYNOEANA.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

1809. ALBIZZIA SALIGNA.

From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)

1810. ACACIA LINIFOLIA.**Sallee.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

Variety "*glauca.*"

1811. ACACIA (?).

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

"*Acacia linophylla.*"

1812. ACACIA LONGIFOLIA.**Golden wattle.**

From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)

Grows 45 m. (135 feet) high and bears lemon-yellow flowers in long spikes. It serves as a stock for all Australian species.

1813. ACACIA LINEARIS.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

Variety "*latifolia.*"

1814. ALBIZZIA LOPHANTHA.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

A native of Australia. It grows 3 to 5 m. (9 to 15 feet) high and bears small sulphur-yellow flowers.

1815. ALBIZZIA LOPHANTHA.

From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)

Variety "*neumanni.*"

1816. ALBIZZIA LOPHANTHA.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Variety "*speciosa.*"

- 1817. ACACIA MACRADENIA.** **Myall.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)
 One of the most beautiful species; very early.
- 1818. ACACIA MELANOXYLON.** **Blackwood.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)
 Valuable for wood and tan bark.
- 1819. ACACIA DECURRENS.** **Black wattle.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (16 packages.)
 Valuable for wood and tan bark.
- 1820. ACACIA MICROBOTRYA.** **Badjong.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1821. ACACIA MYRTIFOLIA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
- 1822. ALBIZZIA JULIBRISSIN.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)
- 1823. ACACIA ARABICA.** **Babool.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1824. ALBIZZIA ODORATISSIMA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1825. ACACIA ARMATA.** **Kangaroo-thorn.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 "*Acacia ornithophora.*"
- 1826. ACACIA ARMATA.** **Kangaroo-thorn.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 "*Acacia paradoxa.*"
- 1827. ACACIA PENNINERVIS.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1828. PIPTADENIA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
P. peregrina or *P. colubrina.*

- 1829. ALBIZZIA PROCERA.** **Tee-coma.**
From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
- 1830. ACACIA PROMINENS.**
From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
- 1831. ACACIA PUGIONIFORMIS.**
From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
- 1832. ACACIA LEPROSA.** **Native hickory.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1833. ACACIA NERIIFOLIA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (13 packages.)
Variety "*floribunda*." Used in perfumery.
- 1834. ACACIA RICEANA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
- 1835. ACACIA RIPARIA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1836. ACACIA SIDEROXYLON.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
"*Acacia sideroxylon*."
- 1837. ACACIA LONGIFOLIA.** **Golden wattle.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1838. ACACIA SPECTABILIS.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1839. ACACIA SPIRORBIS.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1840. ACACIA STENOPHYLLA.** **Ironwood.**
From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
- 1841. ACACIA SUAVEOLENS.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

1842. ACACIA XYLOCARPA.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

1843. ACACIA TRINERVIS.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

1844. ACACIA VESTITA.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package)

From St. Helena.

1845. BIXA ORELLANA.**Arnotto.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

Small tree; seeds yield a dye, now used especially in coloring butter.

1846. CAESALPINIA SEPIARIA.**Mysore thorn.**

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1847. CAESALPINIA TINCTORIA.

From France. Received through Mr. W. T. Swingle, December, 1898. (4 packages.)

1848. CALLISTEMON COCCINEUS.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1849. CALLISTEMON.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

"*Callistemon falcatus*."

1850. CALLISTEMON HYBRIDUS.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1851. CALLISTEMON LANCEOLATUS.**Red bottle-brush.**

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

Used as a stock for all other species, large tree; in France, a shrub 2 to 3 m. (6 to 9 feet) high.

1852. CALLISTEMON LINEARIS.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1853. CALLISTEMON SALIGNUS.**Stonewood.**

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1854. CALLISTEMON PHOENICEUS.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1855. CALLISTEMON PINIFOLIUS.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1856. CALLISTEMON RIGIDUM.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1857. CALLISTEMON SALIGNUS.**Stonewood.**

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1858. CALLISTEMON SPECIOSUS.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

Produces red flowers in spring.

1859. CASSIA POLYANTHA.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

1860. CASUARINA CUNNINGHAMIANA.**She-oak.**

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

Called *C. tenuissima*.

1861. CASUARINA DISTYLA.**She-oak.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

1862. CASUARINA GLAUCA.**She-oak.**

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1863. CASUARINA STRICTA.**She-oak.**

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

Form known as *C. quadrivalvis*.

1864. CASUARINA STRICTA.**She-oak.**

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1865. CASUARINA SUBEROSA.**She-oak.**

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1866. CASUARINA TORULOSA.**She-oak.**

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

1867. CINCHONA LEDGERIANA.**Peruvian bark.**

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

- 1868. CINCHONA.** **Peruvian bark.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
"Cinchona schuhkuft."
- 1869. CINCHONA LANCIFOLIA.** **Peruvian bark.**
From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
- 1870. CINCHONA OFFICINALIS.** **Peruvian bark.**
From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
- 1871. CINCHONA PITAYENSIS.** **Peruvian bark.**
From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
- 1872. CINCHONA SUCCIRUBRA.** **Peruvian bark.**
From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
- 1873. DAMMARA AUSTRALIS.** **Kauri pine.**
From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
Native of Australia; source of one of the dammar resins of commerce.
- 1874. MEIBOMIA GYRANS.** **Telegraph plant.**
From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
Native of Bengal; biennial, $\frac{1}{2}$ m. ($1\frac{1}{2}$ feet) high; a curiosity on account of the continual movement of the leaves.
- 1875. DORYANTHES.** **Giant lily.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
Sent as *D. guilfoylei*, a name not yet verified. Fine plant, with large flowers; probably tender.
- 1876. DURANTA PLUMIERI.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
The form called *Duranta ellisia*. Try in Florida, where the species is useful as an ornamental shrub.
- 1877. DURANTA PLUMIERI.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
Form called *Duranta inermis*. Try in Florida, where the species is useful as an ornamental shrub.
- 1878. ERYTHRINA CRISTA-GALLI.**
From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
Native of South America; there a large tree; a shrub in France; half hardy.

- 1879. ERYTHRINA CAFFRA.** **Kafir tree.**
From France. Received through Mr. W. T. Swingle, December, 1898. (10 packages.)
- 1880. (Blank.)**
- 1881. ERYTHRINA CORALLODENDRON.** **Coral tree.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1882. ERYTHRINA CORALLOIDES.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1883. ERYTHRINA FUSCA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1884. ERYTHRINA INDICA.** **Coral tree.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1885. ERYTHRINA INSIGNIS.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1886. CYTISUS CANARIENSIS.** **Broom.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1887. GREVILLEA BANKSII.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1888. GREVILLEA HILLIANA.** **Silky oak.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1889. GREVILLEA PYRAMIDALIS.**
From France. Received through Mr. W. T. Swingle, December, 1898. (6 packages.)
- 1890. HAEMATOXYLON CAMPECHIANUM.** **Logwood.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
Furnishes the well-known dyestuff.
- 1891. HONCKENYA FICIFOLIA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
Fine shrub, with purple flowers; native of Lagos.
- 1892. GONOLOBUS MARITIMUS.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
Fine tropical climber.

- 1893. IPOMOEA SIDAEOFOLIA.** **Morning glory.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
A rapid grower, producing a fine effect when in flower; one of the most beautiful of the family.
- 1894. PITHECOLOBIUM SAMAN.** **Rain tree.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
- 1895. TIPUANA SPECIOSA.**
From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
A tree reaching 20 m. (60 feet) high, of extremely rapid growth. It is injured by a temperature of 4^o C. (25^o F.).
- 1896. MEDICAGO ARBOREA.** **Tree medic.**
From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
- 1897. MELIANTHUS MAJOR.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
A native of the Cape, 2½ m. (7½ feet) high, the foliage fine; a honey plant (?).
- 1898. MELICocca BIJUGA.** **Jenip.**
From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
Tropical edible fruit.
- 1899. MUSA ENSETE.** **Abyssinian banana.**
From France. Received through Mr. W. T. Swingle, December, 1898. (15 packages.)
A fine ornamental plant, grown only from seed, unusually hardy; stem 2½ m. (7½ feet); leaves 2.5 by .6 m. (7½ by 2 feet).
- 1900. MUSA.** **Banana.**
From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
Sent under name of "*Musa martini*."

A large, elegant handwritten signature in black ink, appearing to read 'W. G. Harlan', is positioned at the top of the page.

Mr. Harlan.

U. S. DEPARTMENT OF AGRICULTURE.
DIVISION OF BOTANY.

INVENTORY NO. 3.

SEEDS OF SACCHARINE SORGHUMS

DISTRIBUTED BY THE

SECTION OF SEED AND PLANT INTRODUCTION.

17795

INVENTORY OF SACCHARINE SORGHUMS.

For several years past the Division of Chemistry of this Department has been conducting experiments in the culture of sorghum, particularly with a view to the increase of the sugar content by the selection of seed after analysis of the fresh juice of individual canes. The improved seeds are to be made available to the experiment stations and to the interested public through the Section of Seed and Plant Introduction. Distribution is to be conducted in accordance with the following numbered list, the publication of which is expected to serve the double purpose of use in the form of labels, and as a convenient means of reference to the numbers in connection with the work of planting and experimenting with the resulting crop.

O. F. COOK,

Special Agent in Charge of Seed and Plant Introduction.

WASHINGTON, D. C., April 10, 1899.

INVENTORY.

2283. ANDROPOGON SORGHUM.

Sorghum.

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Early Amber." Average of analyses: Total solids, 22.0-22.4 per cent; cane sugar, 16.0-16.6 per cent; coefficient of purity, 73.1-74.3; reducing sugars, 1.70.

2284. ANDROPOGON SORGHUM.

Sorghum.

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Early Amber." Average of analyses: Total solids, 20.6-22.0 per cent; cane sugar, 14.9-15.9 per cent; coefficient of purity, 72.1-74.6; reducing sugars, 1.76-2.13.

2285. ANDROPOGON SORGHUM.

Sorghum.

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Early Amber." Average of analyses: Total solids, 20.2-20.8 per cent; cane sugar, 14.2-15.0 per cent; coefficient of purity, 70.7-72.9; reducing sugars, 1.82-2.05.

2286. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Early Amber." Average of analyses: Total solids, 18.9-20.2 per cent; cane sugar, 13.2-14.4 per cent; coefficient of purity, 66.7-71.4; reducing sugars, 1.97-2.37.

2287. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Early Amber." Average of analyses: Total solids, 18.6-19.7 per cent; cane sugar, 12.75-13.75 per cent; coefficient of purity, 68.0-71.3; reducing sugars, 1.61-2.57.

2288. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Early Amber." Average of analyses: Total solids, 16.7-19.4 per cent; cane sugar, 10.5-13.1 per cent; coefficient of purity, 62.7-66.8; reducing sugars, 1.76-2.76.

2289. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 22.45 per cent; cane sugar, 17.45 per cent; coefficient of purity, 77.3; reducing sugars, 2.30.

2290. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 22.7 per cent.

2291. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 22.3-23.0 per cent; cane sugar, 16.8 per cent; coefficient of purity, 75.4.

2292. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 21.2-22.7 per cent.

2293. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 21.2-21.8 per cent; cane sugar, 15.5-15.9 per cent; coefficient of purity, 72.9-75.0; reducing sugars, 2.5.

2294. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 20.2-22.7 per cent.

2295. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 20.95 per cent; cane sugar, 15.3 per cent; coefficient of purity, 72.9; reducing sugars, 2.84.

2296. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 19.7-21.2 per cent; cane sugar, 14.2 per cent; coefficient of purity, 72.1.

2297. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 18.2-20.3 per cent; cane sugar, 13.9 per cent; coefficient of purity, 68.5; reducing sugars, 3.18.

2298. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 21.3-22.0 per cent; cane sugar, 16.0-16.9 per cent; coefficient of purity, 73.7-76.3; reducing sugars, 3.0.

2299. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 21.0-21.8 per cent; cane sugar, 15.4-15.9 per cent; coefficient of purity, 70.9-74.1.

2300. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 20.5-21.2 per cent; cane sugar, 14.5-15.4 per cent; coefficient of purity, 69.1-73.8; reducing sugars, 3.2-3.5.

2301. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seeds selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 20.68 per cent; cane sugar, 15.65 per cent; coefficient of purity, 75.7; reducing sugars, 1.15.

2302. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 20.0-20.1 per cent; cane sugar, 15 per cent; coefficient of purity, 74.7-75.0.

2303. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 19.2-19.3 per cent; cane sugar, 14.1-14.6 per cent; coefficient of purity, 73.4-76.1.

2304. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Folger's Early." Average of analyses: Total solids, 18.5-18.65 per cent; cane sugar, 13.4-13.8 per cent; coefficient of purity, 72.1-74.9.

2305. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 22.7-23.2 per cent; cane sugar, 17.3-17.7 per cent; coefficient of purity, 76.1-76.5; reducing sugars, 0.68.

2306. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 21.8 per cent; cane sugar, 17.0 per cent; coefficient of purity, 77.8; reducing sugars, 0.71.

2307. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 21.1-21.7 per cent; cane sugar, 15.9-16.3 per cent; coefficient of purity, 75.1-75.5; reducing sugars, 0.93.

2308. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 20.9-21.4 per cent; cane sugar, 15.8 per cent; coefficient of purity, 75.7; reducing sugars, 0.89.

2309. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 20.2-20.6 per cent; cane sugar, 15.2-15.2 per cent; coefficient of purity, 73.8-75.3; reducing sugars, 1.16.

2310. ANDROPOGON SORGHUM. Sorghum.

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 19.8-20.1 per cent; cane sugar, 14.5 per cent; coefficient of purity, 73.2; reducing sugars, 1.07.

2311. ANDROPOGON SORGHUM. Sorghum.

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 19.2-19.6 per cent; cane sugar, 14.0-14.1 per cent; coefficient of purity, 71.8-73.2; reducing sugars, 1.40.

2312. ANDROPOGON SORGHUM. Sorghum.

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 18.8-19.1 per cent; cane sugar, 13.5 per cent; coefficient of purity, 71.7; reducing sugars, 1.13.

2313. ANDROPOGON SORGHUM. Sorghum.

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 18.1-18.8 per cent; cane sugar, 12.9-13.1 per cent; coefficient of purity, 69.7-71.2; reducing sugars, 1.72.

2314. ANDROPOGON SORGHUM. Sorghum.

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 22.4-23.4 per cent.

2315. ANDROPOGON SORGHUM. Sorghum.

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 21.7-22.2 per cent; cane sugar, 16.1-16.5 per cent; coefficient of purity, 73.9-74.4.

2316. ANDROPOGON SORGHUM. Sorghum.

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 20.6-21.1 per cent; cane sugar, 14.9-15.5 per cent; coefficient of purity, 71.8-73.8.

2317. ANDROPOGON SORGHUM. Sorghum.

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Colman." Average of analyses: Total solids, 19.8-20.1 per cent; cane sugar, 14.4-14.6 per cent; coefficient of purity, 72.3-73.6.

- 2318. ANDROPOGON SORGHUM. Sorghum.**
Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.
Variety, "Colman." Average of analyses: Total solids, 18.7-19.6 per cent; cane sugar, 13.0-13.8 per cent; coefficient of purity, 69.6-71.3.
- 2319. ANDROPOGON SORGHUM. Sorghum.**
Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture.
Variety, "Colman." Harvested September 26, 1898. Group I.
- 2320. ANDROPOGON SORGHUM. Sorghum.**
Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture.
Variety, "Colman." Harvested September 26, 1898. Group II.
- 2321. ANDROPOGON SORGHUM. Sorghum.**
Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture.
Variety, "Colman." Harvested September 26, 1898. Group III.
- 2322. ANDROPOGON SORGHUM. Sorghum.**
Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture.
Variety, "Colman." Harvested September 26, 1898. Group IV.
- 2323. ANDROPOGON SORGHUM. Sorghum.**
Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture.
Variety, "Colman." Harvested September 26, 1898. Group V.
- 2324. ANDROPOGON SORGHUM. Sorghum.**
Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture.
Variety, "Colman." Harvested September 26, 1898. Group VI.
- 2325. ANDROPOGON SORGHUM. Sorghum.**
Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture.
Variety, "Colman." Harvested September 26, 1898. Group VII.
- 2326. ANDROPOGON SORGHUM. Sorghum.**
Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.
Variety, "Collier." Average of analyses: Total solids, 23.2-23.9 per cent; cane sugar, 18.4-18.6 per cent; coefficient of purity, 77.7-79.2.
- 2327. ANDROPOGON SORGHUM. Sorghum.**
Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.
Variety, "Collier." Average of analyses: Total solids, 22.2-23.9 per cent.

2328. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Collier." Average of analyses: Total solids, 21.7-22.2 per cent; cane sugar, 17.3-17.4 per cent; coefficient of purity, 78.2-79.9.

2329. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Collier." Average of analyses: Total solids, 21.2-22.6 per cent; cane sugar, 16.5-17.3 per cent; coefficient of purity, 76.5-78.0.

2330. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Collier." Average of analyses: Total solids, 22.4 per cent.

2331. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Collier." Average of analyses: Total solids, 22.1-22.5 per cent; cane sugar, 16.6-17.6 per cent; coefficient of purity, 74.3-75.3; reducing sugars, 0.80-0.97.

2332. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Collier." Average of analyses: Total solids, 21.0-22.0 per cent; cane sugar, 15.7-16.1 per cent; coefficient of purity, 73.5-74.6; reducing sugars, 0.87-1.13.

2333. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Collier." Average of analyses: Total solids, 20.9-21.0 per cent; cane sugar, 15.4-15.4 per cent; coefficient of purity, 73.2-73.7.

2334. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Collier." Average of analyses: Total solids, 22.6-22.9 per cent; cane sugar, 17.2-17.3 per cent; coefficient of purity, 75.5-76.1.

2335. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Collier." Average of analyses: Total solids, 21.6-22.2 per cent; cane sugar, 16.2-16.4 per cent; coefficient of purity, 73.8-75.0.

2336. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Collier." Average of analyses: Total solids, 19.1-21.6 per cent; cane sugar, 13.9-15.8 per cent; coefficient of purity, 70.0-74.2.

2337. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Collier." Average of analyses: Total solids, 18.3-21.2 per cent; cane sugar, 13.8-16.5 per cent; coefficient of purity, 73.4-75.4.

2338. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "McLean." Average of analyses: Total solids, 21.8-22.8 per cent.

2339. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "McLean." Average of analyses: Total solids, 20.7-21.3 per cent; cane sugar, 16.1-16.3 per cent; coefficient of purity, 76.6-78.0; reducing sugars, 0.69-1.05.

2340. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "McLean." Average of analyses: Total solids, 19.68-19.70 per cent; cane sugar, 15.1-15.2 per cent; coefficient of purity, 76.7-77.2; reducing sugars, 1.03.

2341. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "McLean." Average of analyses: Total solids, 20.9 per cent; cane sugar, 15.3-15.8 per cent; coefficient of purity, 73.4.

2342. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "McLean." Average of analyses: Total solids, 19.9 per cent; cane sugar, 14.0-15.2 per cent; coefficient of purity, 70.3.

2343. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "McLean." Average of analyses: Total solids, 18.7-19.2 per cent; cane sugar, 12.9-14.4 per cent; coefficient of purity, 67.5-75.3.

2344. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "McLean." Average of analyses: Total solids, 18.9 per cent; cane sugar, 14.6 per cent; coefficient of purity, 77.2; reducing sugars, 1.21.

2345. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Denton." Average of analyses: Total solids, 22.5-22.8 per cent; cane sugar, 17.1-17.3 per cent; coefficient of purity, 75.1-77.0; reducing sugar, 0.98-1.08.

2346. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Denton." Average of analyses: Total solids, 21.3-21.5 per cent; cane sugar, 16.1-16.3 per cent; coefficient of purity, 74.9-76.4; reducing sugars, 0.82-1.28.

2347. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Denton." Average of analyses: Total solids, 20.4 per cent; cane sugar, 15.5 per cent; coefficient of purity, 76.2; reducing sugars, 1.36.

2348. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Denton." Average of analyses: Total solids, 19.8-20.2 per cent; cane sugar, 14.7-15.1 per cent; coefficient of purity, 72.8-76.0.

2349. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Denton." Average of analyses: Total solids, 19.2-19.8 per cent; cane sugar, 14.0-14.9 per cent; coefficient of purity, 72.6-75.3.

2350. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Denton." Average of analyses: Total solids, 22.50 per cent; cane sugar, 16.85 per cent; coefficient of purity, 74.9.

2351. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Denton." Average of analyses: Total solids, 21.66 per cent; cane sugar, 16.30 per cent; coefficient of purity, 75.2.

2352. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Denton." Average of analyses: Total solids, 20.96 per cent; cane sugar, 15.65 per cent; coefficient of purity, 74.6.

2353. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Denton." Average of analyses: Total solids, 20.3 per cent; cane sugar, 14.75 per cent; coefficient of purity, 72.50.

2354. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Oomseeana" (Sumac or Red Top). Average of analyses: Total solids, 20.83 per cent; cane sugar, 14.7 per cent; coefficient of purity, 70.6; reducing sugars, 2.47.

2355. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Oomseeana" (Sumac or Red Top). Average of analyses: Total solids, 19.7-20.0 per cent; cane sugar, 13.6-13.9 per cent; coefficient of purity, 65.2-70.6; reducing sugars, 2.04-2.87.

2356. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Oomseeana" (Sumac or Red Top). Average of analyses: Total solids, 18.8-19.3 per cent; cane sugar, 12.6-13.3 per cent; coefficient of purity, 67.3-68.5; reducing sugars, 2.60-2.89.

2357. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Oomseeana" (Sumac or Red Top). Average of analyses: Total solids, 18.0-18.5 per cent; cane sugar, 11.7-12.0 per cent; coefficient of purity, 64.8-65.1; reducing sugars, 2.90-2.97.

2358. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Oomseeana" (Sumac or Red Top). Average of analyses: Total solids, 16.8-18.0 per cent; cane sugar, 10.5-11.4 per cent; coefficient of purity, 62.8-63.2; reducing sugars, 2.92-3.14.

2359. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Oomseeana" (Sumac or Red Top). Average of analyses: Total solids, 20.3-20.7 per cent; cane sugar, 14.2-14.3 per cent; coefficient of purity, 68.6-70.1.

2360. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Oomseeana" (Sumac or Red Top). Average of analyses: Total solids, 19.6-19.9 per cent; cane sugar, 13.3-13.4 per cent; coefficient of purity, 67.2-67.8.

2361. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Oomseeana" (Sumac or Red Top). Average of analyses: Total solids, 18.7-18.8 per cent; cane sugar, 12.5-12.6 per cent; coefficient of purity, 66.8-67.1.

2362. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Oomseeana" (Sumac or Red Top). Average of analyses: Total solids, 17.3-17.8 per cent; cane sugar, 10.7-11.3 per cent; coefficient of purity, 61.8-63.8.

2363. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "161." Average of analyses: Total solids, 21.27 per cent; cane sugar, 15.85 per cent; coefficient of purity, 74.5; reducing sugars, 0.73.

2364. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "161." Average of analyses: Total solids, 19.07 per cent; cane sugar, 14.1 per cent; coefficient of purity, 73.9; reducing sugars, 1.01.

2365. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "161." Average of analyses: Total solids, 18.73 per cent; cane sugar, 13.9 per cent; coefficient of purity, 74.2; reducing sugars, 1.10.

2366. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "161." Average of analyses: Total solids, 17.93 per cent; cane sugar, 12.7 per cent; coefficient of purity, 70.9.

2367. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Honeydew." Average of analyses: Total solids, 19.82 per cent; cane sugar, 13.45 per cent; coefficient of purity, 67.8; reducing sugars, 1.51.

2368. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Honeydew." Average of analyses: Total solids, 19.4 per cent; cane sugar, 12.85 per cent; coefficient of purity, 66.2; reducing sugars, 1.57.

2369. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Honeydew." Average of analyses: Total solids, 18.4 per cent; cane sugar, 11.9 per cent; coefficient of purity, 64.1; reducing sugars, 1.75.

2370. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Chinese." Average of analyses: Total solids, 17.2-17.6 per cent; cane sugar, 11.3-11.65 per cent; coefficient of purity, 65.6-66.3; reducing sugars, 3.78-4.31.

2371. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Chinese." Average of analyses: Total solids, 15.9-17.0 per cent.

2372. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Chinese." Average of analyses: Total solids, 17.0 per cent.

2373. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Edgar." Average of analyses: Total solids, 21.07 per cent; cane sugar, 15.70 per cent; coefficient of purity, 74.5; reducing sugars, 2.67.

2374. ANDROPOGON SORGHUM.**Sorghum.**

Grown at Medicine Lodge, Kans., 1898. Seed selected by the Division of Chemistry, United States Department of Agriculture, after analysis of the fresh cane juice.

Variety, "Edgar." Average of analyses: Total solids, 20.29 per cent; cane sugar, 14.70 per cent; coefficient of purity, 72.4.

Mr. Mann.
Mr. Harlan.

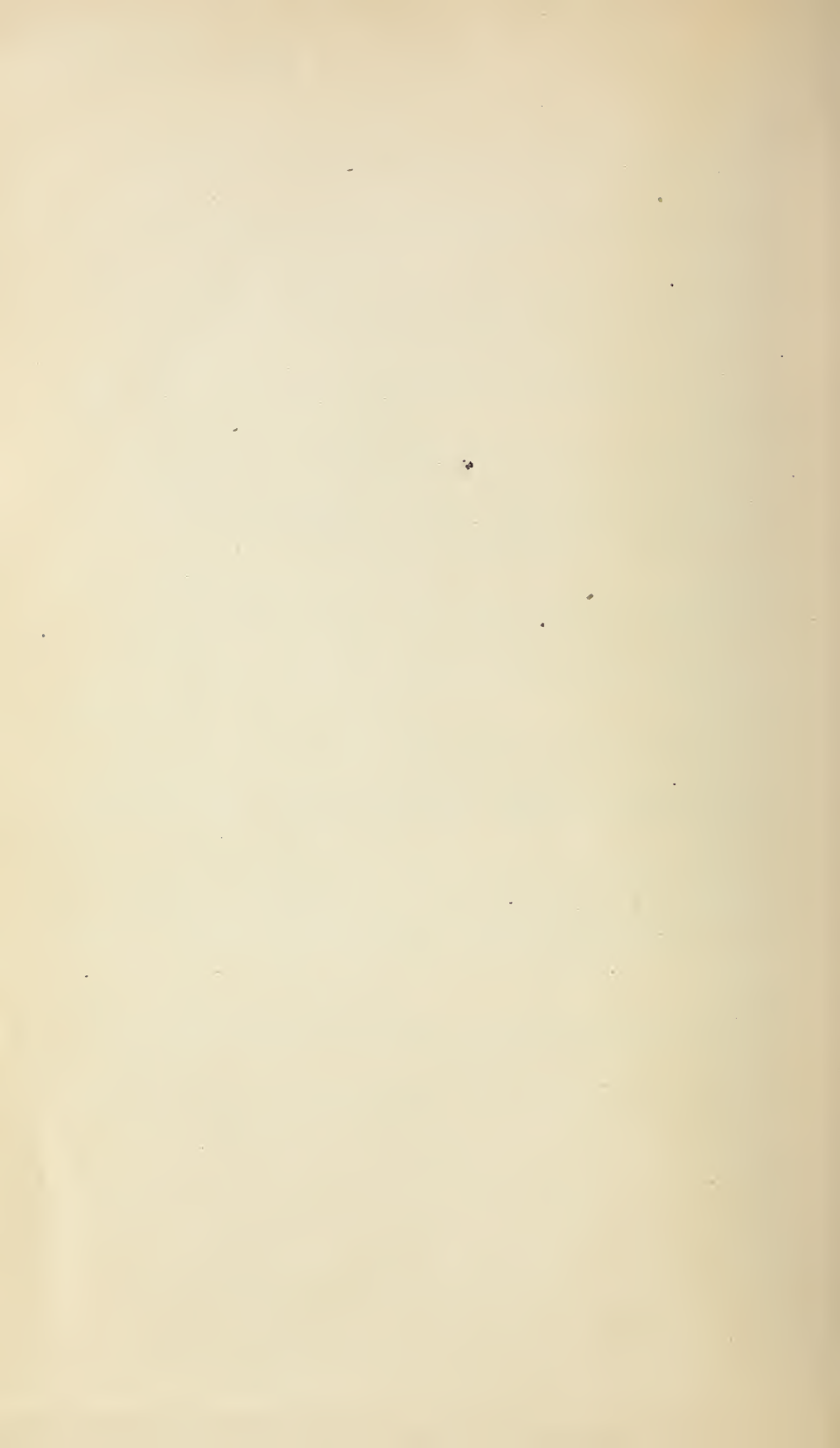
U. S. DEPARTMENT OF AGRICULTURE.

DIVISION OF BOTANY.

INVENTORY NO. 4.

CEREALS AND FORAGE PLANTS

COLLECTED IN RUSSIA BY MR. M. A. CARLETON FOR THE
SECTION OF SEED AND PLANT INTRODUCTION.



Mr. Hear

INVENTORY OF CEREALS AND FORAGE PLANTS COLLECTED IN RUSSIA.

The cereals and forage plants included in the following list were obtained by Mr. M. A. Carleton, of the Division of Vegetable Physiology and Pathology, who visited Russia in 1898 under detail as Agricultural Explorer of the Section of Seed and Plant Introduction. The primary purpose of this investigation was to secure superior varieties of cereals, especially such as might be adapted to the grain-producing Northwestern States. From the notes prepared by Mr. Carleton it appears that he has succeeded in securing several varieties of much promise, since they are adapted to cold climates, have a short growing season, and are resistant to fungous diseases. This is particularly the case with the wheats, in the special study of which Mr. Carleton has long been engaged. The other items, while of subsidiary importance, may also prove valuable. In addition to those enumerated in the present list, Mr. Carleton brought back a considerable number of samples of miscellaneous seeds of garden vegetables and other annuals. These will be catalogued in a later inventory.

Experimental quantities of these cereals and forage plants have been sent out to the Western agricultural stations and to a few private experimenters. In but few cases is the amount of seed sufficient to permit wider distribution at present, but in the event of conspicuous success with any of these importations larger quantities will be made available in future seasons.

O. F. Cook,

Special Agent in Charge of Seed and Plant Introduction.

WASHINGTON, D. C., April 15, 1899.

INVENTORY.

2788. AVENA SATIVA.

Oat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Swedish Select oat. From the government of St. Petersburg. Mean annual rainfall, 18½ inches; for the growing season (May to September, inclusive), 10½ inches. Mean annual temperature, 38.6°. Soil, a dark humus clay with considerable sand intermixed. Sown April 27. Period of growth, 106 to 108 days. A very large-grained white oat, much improved from the original seed, which was introduced from Sweden into Finland and the St. Petersburg government. Well suited for trial in western New York, Michigan, Wisconsin, Minnesota, Iowa, eastern North and South Dakota, and perhaps southern Alaska. Amount obtained, 20 bushels.

2789. TRITICUM DICOCCUM.**Emmer.**

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Yaroslaf Spring emmer. From the government of Yaroslaf. Mean annual rainfall, a little over 20 inches; for the growing season (May to September, inclusive), a little more than 12 inches. Soil, sandy, with considerable clay, but very little humus. Sown in Yaroslaf about May 1, but in this country should be sown earlier, depending, however, upon the latitude where tried. Period of growth, 108 to 112 days. Seed should always be drilled in, at the rate of $2\frac{1}{4}$ to $2\frac{1}{2}$ bushels per acre. A hardy cereal, little known in this country, but considered a very valuable one in parts of Russia. The hull remains on the seed similarly as in oats and barley. The seed is used both for stock feed and for human food; in the latter case in the form of gruel. It is a variety of *Triticum dicoccum*, called correctly "emmer," but known also as Russian spelt. The Russian name is "polba." Adapted for trial in all States from New York to the Dakotas and Kansas and in Washington and Oregon. Amount obtained, 18 bushels.

2790. SECALE CEREALE.**Rye.**

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Teshitin Winter rye. From the government of Tver. Annual rainfall, 18 to 21 inches; for the growing season (May to September, inclusive), 11 or 12 inches. Soil, a sandy clay and very poor. Harvested July 12 to 15. An excellent variety of rye, well adapted to all the States from New York to the Dakotas and southward to Kentucky and Kansas, and possibly to southern Alaska. Amount obtained, 18 bushels.

2791. TRITICUM VULGARE.**Wheat.**

From Russia. Received March, 1889, through Mr. M. A. Carleton.

Yaroslaf Winter wheat. From the government of Yaroslaf. Mean annual rainfall near 21 inches; for the growing season (May to September, inclusive), $11\frac{1}{2}$ to 12 inches. Soil, a strong clay, well manured and well drained. Sown September 9; harvested July 24. Yield, about 18 bushels per acre. A semihard red wheat, which ought to be rather resistant to severe winters. Should be tried in Iowa, eastern South Dakota, northern Nebraska, Michigan, southern Wisconsin and Minnesota, and northern New York, to replace spring wheat, if possible. Amount obtained, 9 bushels.

2792. TRITICUM VULGARE.**Wheat.**

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Yaroslaf Winter wheat. From the government of St. Petersburg. Mean annual rainfall, $18\frac{1}{2}$ inches; for the growing season (May to September, inclusive), $10\frac{1}{2}$ inches. Mean annual temperature, 38.6° . Soil, a clay loam, rich in humus. Sown in well-prepared ground September 4, and harvested July 24. Yield, 20 bushels per acre. A semihard red wheat, which should be very resistant to winter cold. Should be tried in northern New York, Wisconsin, Minnesota, Iowa, western North and South Dakota, and southern Alaska, to replace spring wheat, if possible. Amount obtained, 9 bushels.

2793. HORDEUM VULGARE.**Barley.**

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Kostroma Spring barley. From the government of Kostroma. Mean annual rainfall, about 20 inches; for the growing season (May to September, inclusive), 12 inches. Soil, sandy clay loam, well manured. Sown during the first week of May, about $1\frac{1}{2}$ bushels per acre. Ripens in 88 days. Yields about 26 bushels per acre. In Russia this sort is especially used for beer brewing. It is well suited to a rather cold climate, not very wet. Might well be tried in any of the Northwestern States from Michigan to the Dakotas. Amount obtained, $1\frac{1}{2}$ bushels.

2794. PANICUM MILIACEUM.**Millet.**

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Tambov Broom-corn millet. From the vicinity of Morzhansk, in northern Tambov government. Mean annual rainfall, about 20 inches; for the growing season (May to September, inclusive), about 10 inches. Soil, sandy black loam, rather rich

in humus. Sown at Morzhansk during the last week of May, but should probably be sown earlier in this country—near May 15, perhaps. Period of growth about 112 days. It is best drilled in, at the rate of 12 to 15 pounds of seed per acre. Yields anywhere from 18 to 50 bushels per acre, depending upon treatment and the nature of the season. A yellow-seeded, paniced millet (*Panicum miliaceum*), much different from the ordinary forage millets. This particular sort is a new variety, not well known yet even in Russia, but said to give excellent results. Grown chiefly for the seed, which, besides furnishing excellent stock feed, is extensively used in Russia for human food in the form of grits or gruel and with soups. Should be tried in the Dakotas, Nebraska, east Colorado, Minnesota, and Iowa, and perhaps in Wyoming, Montana, and Washington. Amount obtained, 9 bushels.

2795. PANICUM MILIACEUM.

Millet.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Black Voronezh Broom-corn millet. From the government of Voronezh. Mean annual rainfall, 20 to 21 inches; for the growing season (May to September, inclusive), 10 to 11 inches. Soil, sandy black loam, rather rich in humus. Sown in Voronezh during the last week of May, but should probably be sown a little earlier in this country—soon after May 15, or earlier. Period of growth about 112 days. It is best drilled in at the rate of 12 to 15 pounds per acre. Yields anywhere from 18 to 50 bushels per acre, depending upon the treatment and the kind of season. A black-seeded, paniced millet (*Panicum miliaceum nigrum*), quite different from the ordinary forage millets of the prairie States. Grown chiefly for the seed, which, besides being excellent stock feed, is also extensively used in Russia for human food in the form of grits or gruel and with soups. Well adapted for trial in almost all the prairie States, especially in the drier, colder districts. Amount obtained, 9 bushels.

2796. PANICUM MILIACEUM.

Millet.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Red Voronezh Broom-corn millet. From the government of Voronezh. Mean annual rainfall, 20 to 21 inches; for the growing season (May to September, inclusive), 10 to 11 inches. Mean annual temperature, 41.1°. Soil, sandy black loam, rather rich in humus. Sown in Voronezh during the last week of May, but probably should be sown a little earlier in this country—soon after May 15. Period of growth about 115 days. It is best drilled in at the rate of 12 to 15 pounds per acre. Yields anywhere from 18 to 50 bushels per acre, depending upon treatment and the season. A red-seeded, paniced millet (*Panicum miliaceum*), but having the compacted form of panicle. Grown chiefly for the seed, which, besides being good stock feed, is extensively used in Russia for human food in the form of grits or gruel and with soups. Well adapted for trial in almost all the prairie States, but especially the drier, colder districts. Amount obtained, 3 bushels.

2797. PANICUM MILIACEUM.

Millet.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Red Russian Broom-corn millet. From the government of Voronezh. Mean annual rainfall, 20 to 21 inches; for the growing season (May to September, inclusive), 10 to 11 inches. Mean annual temperature, 41.1°. Soil, sandy black loam, rather rich in humus. Sown in Voronezh during the last week of May, but probably should be sown a little earlier in this country—about May 15, or before. Period of growth about 115 days. It is best drilled in at the rate of 12 to 15 pounds of seed per acre. Yields anywhere from 18 to 50 bushels per acre, depending upon treatment and the season. A red-seeded, paniced millet (*Panicum miliaceum*), but varying greatly as to the form of panicle. Grown chiefly for the seed, which, besides being good stock feed, is extensively used in Russia for human food in the form of grits or gruel and with soups. Well adapted for trial in almost all the prairie States, but especially in the drier, colder districts. Amount obtained, 3 bushels.

2798. CHAETOCLOA ITALICA.

Millet.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Kursk millet. From the government of Kursk. Mean annual rainfall, about 21 inches; for the growing season (May to September, inclusive), about 11 inches. Soil, a sandy, black, clay loam, rather rich in humus. Sown at the usual time for sowing forage millets. Best drilled in at the rate of 25 to 30 pounds per acre. A very good sort of the ordinary German millet, until recently known as *Panicum germanicum* or

Setaria germanica, now regarded as one of the numerous varieties of *Chatochloa italica*. In Kursk, grown only for the forage it produces. Suitable for trial in the north Central States from Ohio to Kansas. Amount obtained, $1\frac{1}{2}$ bushels.

2799. ZEA MAYS.**Sugar Corn.**

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Malakhof Sugar corn. From the government of Tula. Mean annual rainfall, near 21 inches; for the growing season (May to September, inclusive), about 11 inches. Considered in that region excellent sugar corn, and especially one that ripens very early. Suitable for trial in Iowa, Nebraska, Kansas, and perhaps South Dakota, Michigan, and Illinois. Amount obtained, $\frac{2}{3}$ bushel.

2800. AVENA SATIVA.**Oat.**

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Tobolsk oats. From Tobolsk government. Mean annual rainfall, about 18 inches; for the growing season (May to September, inclusive), 12 inches. Mean annual temperature, 31.7° ; for the growing season, 56.5° . Seems an excellent sort of white oats for a cold climate. Should be tried in northern New York, Wisconsin, Minnesota, North Dakota, and southern Alaska. Amount obtained, 12 bushels.

2801. FAGOPYRUM FAGOPYRUM.**Buckwheat.**

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Orenburg buckwheat. From the government of Orenburg. Mean annual rainfall, 15.5 inches; for the growing season (May to September, inclusive), 8 inches. Mean annual temperature, 37.9° ; for January, 4.5° ; for July, 68.8° . Soil, black, sandy loam. Sown as soon as there are no longer night frosts of any importance, at the rate of $1\frac{1}{2}$ bushels per acre. Period of growth about 90 days. A very large-seeded buckwheat, of a deep brown color, wingless. Grown much in east Russia and west Siberia. A sort of gruel is often made of the hulled seed, or it is compacted into cake form and served with soups. Should be tried in the Great Plains from Oklahoma or Kansas northward, and in portions of the mountain States and perhaps in Iowa and Minnesota. Amount obtained, 15 bushels.

2802. LATHYRUS SYLVESTRIS WAGNERI.**Flat Pea.**

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Tambov Flat pea. From the government of Tambov. Mean annual rainfall, 20 inches; for the growing season (May to September, inclusive), 10 inches. Considered an excellent forage plant in the drier regions, though it is slow in obtaining a start. Suitable for the Plains States north of Oklahoma. Amount obtained, $\frac{2}{3}$ bushel.

2804. POLYGONUM WEYRICHII.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Originally from the island of Sachalin, and recently grown in the government of Kief. This perennial plant was discovered by a Russian physician, Dr. Weyrich, and first introduced from Sachalin by Prof. A. T. Batalin, and grown at the Imperial Botanical Gardens at St. Petersburg. It seems to have all the good qualities of sachalin (*Polygonum sachalinense*), and at the same time the leaves are tender and the branches not woody, as in the case of the other plant, which was its chief objection. Should be tried wherever the plant sachalin has been most successful. Amount obtained, 2 pounds.

2953. TRITICUM DURUM.**Wheat.**

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Kubanka Spring wheat. From the Turgai territory in the Kirghiz Steppes, 40 miles southeast of Orenburg. Grown by Mr. Gnyezdilof. Average rainfall for the year, about 15 inches or a little less; for the growing season (May to September, inclusive), about 8 inches. The last season was an unusually dry one. Summer short but very hot. Soil much grayer than the usual black earth, with a greater mixture of clay, and also considerable sand. The common custom is to plow the ground the preceding autumn, and then stir the surface again before sowing in the spring. Period of growth in this region about 100 days. Mean time of harvest,

August 10 to 12. The wheat is a *durum*, extremely hard, and of excellent quality. The best bread wheat in the Volga-Ural region, but may be received complainingly by our millers; 10 to 25 per cent of a softer red wheat, however, is mixed with it in grinding. It is very drought resistant, and considerably resistant to orange-leaf rust. Suitable for trial in this country in extreme western Nebraska, Kansas, the Dakotas, east Colorado, Texas Panhandle, and perhaps the Columbia plains and New Mexico. This variety might be transformed into a winter sort in warm latitudes. Amount obtained, 6 bushels.

2954. TRITICUM DURUM.

Wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Pererodka Spring wheat. From Orsk district, Orenburg government. Average annual rainfall of the region, about 15 inches; for the growing season (May to September, inclusive), about 8 inches. The last season was an unusually dry one. Mean annual temperature, 37.9°. Soil, the usual "black earth" of east Russia, though perhaps not so dark as in the Samara government; similar to west Nebraska or east Colorado soil. Should be sown early. Period of growth about 100 days. Harvest time, August 10 to 12. Sown in soil plowed the previous autumn. It is a wheat allied to the Kubanka, and said to be originally identical, but it is a little darker and perhaps softer, and has become changed by transference to darker, richer soils. A hard wheat, making good bread, but hardly so good as Kubanka. It is a very drought-resisting variety. In this country it may well be tried in the Dakotas, Minnesota, Nebraska, Kansas, and perhaps Oklahoma, east Colorado, Texas, and Columbia plains. Amount obtained, 6 bushels.

2955. TRITICUM VULGARE.

Wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Russian Spring wheat. From the Kirghiz Steppes, in the vicinity of Orenburg. Mean annual rainfall of the region, about 15 inches; for the growing season (May to September, inclusive), about 8 inches. Summers short but very hot. Soil, the rich "black earth" of the Russian plains, but probably not so dark as in Samara government; much like west Dakota soils. Wheat should be sown early. Period of growth about 100 days. Mean harvest time, August 10 to 12. Sown in soil that was plowed the previous autumn. Rather a small-grained, hard, or semihard red wheat. Makes a very good bread flour itself, but is also used to mix with Kubanka by millers of the Volga region. Suitable for trial in this country in the Dakotas and Minnesota particularly, but might also be transformed into a good winter wheat in districts farther south. Amount obtained, 6 bushels.

2956. TRITICUM VULGARE.

Wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Banatka Winter wheat. From Kublich, in eastern Podolia, but introduced there originally from the Banat district in Hungary. Mean annual rainfall of the region, about 18 inches; for the growing season (May to September, inclusive), about 10 inches. Mean annual temperature, near 44.6°. The locality is near the edge of the "black earth" belt, and therefore partakes also somewhat of the nature of the soils of the "gray forest lands." The wheat is probably adapted to almost any medium soil of our prairie region, or even of New York. Should be sown early (September 10 to 15). Mean harvest time, July 27. An excellent semihard red wheat, of medium-sized grains. Very popular in Hungary, but made perhaps all the better by acclimation in Russia. Suitable for trial in Michigan, Ohio, New York, Indiana, Illinois, Kansas, and perhaps Nebraska and Iowa. Amount obtained, 9 bushels.

2957. TRITICUM POLONICUM.

Wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Polish wheat. From Glinyanyaya, in northern part of Kherson government. Mean annual rainfall of the region, about 20 inches. Mean annual temperature, about 44.6°. Sown in this region about April 15, but the seed time varies exceedingly depending on the condition of the weather. Period of growth about 115 days. Mean harvest time about August 1. This variety belongs to the species *Triticum polonicum*, and must not be confused with the sort that is most commonly called Polish wheat in Russia, which latter is a variety of *Triticum vulgare* and entirely different. It is the largest-grained wheat known, is extremely hard, and contains a very large per cent of gluten comparatively. It is especially valuable for macaroni

production and for certain pastries. It is at first bearded, but loses its beards at harvest time. It seems adapted to a soil not too rich in humus, with considerable clay and some sand, and a rather warm, dry climate. Should be tried in this country in the western portions of Texas, Oklahoma, Kansas, and Nebraska, in east Colorado, Arizona, and California, and perhaps in some of the Southern States. It is considerably resistant to orange-leaf rust. Amount obtained, 6 bushels.

2958. TRITICUM VULGARE.

Wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Sandomir Winter wheat. From the government of Radom, in Poland. Mean annual rainfall, 27 inches; for the growing season (May to September, inclusive), 15.5 inches. Mean annual temperature, about 44.6°. Mean harvest time August 6. A rather soft, plump, white wheat, quite susceptible to changes of soil and climate. Best grades of the variety to be obtained only in Poland, near the town of Sandomir. Has already been tried in the United States with some success. Might be of especial value for cracker making and for certain breakfast foods. Should be tried on the Columbia plains, in northern California, and in New York. Amount obtained, 3 bushels.

2959. TRITICUM DICOCCUM.

Emmer.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Ufa Spring emmer. From the government of Ufa, about 8 miles from the city of the same name. Mean annual rainfall, 16.6 inches; for the growing season (May to September, inclusive), 10.9 inches. Mean annual temperature, 37.5°; for January, 9.5°; for July, 69.4°. Soil a very rich, deep, black loam, the famous "black earth" of Russia. Should be sown quite early in the spring, drilled in at the rate of 2 to 2½ bushels per acre. Period of growth about the same as for oats. This very hardy cereal is little known in this country, but is much valued in Russia and Germany. It is used both for stock feed, similarly to oats, and also as human food, in the form of gruel. Is very resistant to cold and often to drought also, but may suffer some from rust in warm wet seasons. It is a variety of *Triticum dicoccum*, correctly called emmer, but also known as Russian spelt. The Russian name is "polba." Is worthy of thorough trial. Admirably adapted for trial in all the extreme northern States from Minnesota to Washington, and in Alaska; also in arid districts. Amount obtained, 6 bushels.

2960. PANICUM MILIACEUM.

Millet.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Red Orenburg Broom-corn millet. From the Turgai territory of the Kirghiz Steppes, about 40 miles southwest of Orenburg. Mean annual rainfall, about 15 inches or less; for the growing season (May to September, inclusive), about 8 inches. Mean annual temperature, about 37.9°. Summers short but very hot. Soil differs from the usual "black earth" in being a rather stronger clay with a considerable mixture of sand, making it also grayer in color—the same sort of soil to which durum wheats are so well adapted. Should be sown probably about May 15 or soon after, though in Russia it is sown about the 25th or later. Period of growth 110 to 115 days. A red-seeded, panicked millet (*Panicum miliaceum sanguineum*), quite different from the ordinary forage millets of our prairie States. Grown chiefly for the seed, which is not only excellent for stock feeding, but in Russia is most widely used for human food in the form of grits or gruel and with soups. Well adapted for trial in the Dakotas, Nebraska, east Colorado, Kansas, and similar cold and arid districts. Amount obtained, 3 bushels.

2961. SECALE CEREALE.

Rye.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Sisolsk Winter rye. From Ust-Sisolsk, in Vologda government, about 61½° north latitude. Mean annual temperature, 31.7°; for the growing season (May to September, inclusive), 56.5°. Normal rainfall not known, but during one year it was 18 inches. Seed obtained from Mr. A. E. Sukhanof, free of charge. Rotation of crops where seed was grown as follows: (1) Fallow without manure; (2) winter rye; (3) spring barley and oats with manure. Variety grown in that region for many years and therefore thoroughly adapted to extreme cold, and rather drought-resistant. Should be tried in Alaska, and perhaps also in the very coldest districts of the United States proper. Amount obtained, $\frac{3}{8}$ bushel.

2962. HORDEUM VULGARE.**Barley.**

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Sisolsk Spring barley. From Ust-Sisolsk, in Vologda government, about $61\frac{1}{2}^{\circ}$ north latitude. Mean annual temperature, 31.7° ; for the growing season (May to September, inclusive), 56.5° . Normal rainfall unknown, but during a single year it was 18 inches. Seed obtained from Mr. M. I. Tur, free of charge. Rotation of crops where seed was grown as follows: (1) Fallow without manure; (2) winter rye; (3) spring barley and oats with manure. Should be tried principally in Alaska or other extremely cold districts. Amount obtained, $\frac{2}{3}$ bushel.

2963. AVENA SATIVA.**Oat.**

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Zhelannii oat. From Ust-Sisolsk, in Vologda government, about $61\frac{1}{2}^{\circ}$ north latitude. Mean annual temperature, 31.7° ; for the growing season (May to September, inclusive), 56.5° . Normal rainfall not known, but during a single year it was 18 inches. Variety grown in the region 12 years; originally obtained from Moscow. Thoroughly acclimated. The grower strongly recommends a two-days' soaking of the seed before sowing in order to hasten germination. Seed obtained from Mr. M. I. Tur, free of charge. Rotation of crops where seed was grown as follows: (1) Fallow without manure; (2) winter rye; (3) spring barley and oats with manure. Harvested season of 1898. Should be tried in Alaska and the very coldest regions of the United States. Amount obtained, $\frac{2}{3}$ bushel.

U. S. DEPARTMENT OF AGRICULTURE.
DIVISION OF BOTANY.

INVENTORY NO. 5

OF

FOREIGN SEEDS AND PLANTS

IMPORTED BY THE

DEPARTMENT OF AGRICULTURE AND FOR DISTRIBUTION THROUGH
THE SECTION OF SEED AND PLANT INTRODUCTION.

NUMBERS 1901-2700.

INVENTORY OF FOREIGN SEEDS AND PLANTS.

INTRODUCTORY STATEMENT.

The present inventory consists almost entirely of a continuation of the list of garden vegetables, fruits, forage plants, and ornamentals secured by Mr. Walter T. Swingle, Agricultural Explorer of this Department, in France, Italy, and Algeria. These represent a careful selection of the newer and more promising varieties and species recently introduced into cultivation, which seemed worthy of being tested in the United States. An extensive series of varieties of the European grape, which would come numerically in this inventory, is to be issued separately. Cuttings are not available for general distribution, having been imported in quantities sufficient only to permit tests which are being made in cooperation with the Division of Pomology at various points in the South Atlantic States, Louisiana, and Kansas. An importation of ten tons of seed rice, secured by Prof. S. A. Knapp from the island of Kiushu, Japan, appears under No. 1962, but the fruit trees and ornamentals obtained by him arrived much later, and an inventory of them will be published hereafter. There are also some varieties of interest, particularly for the subtropical parts of the country and the newer insular possessions, sent from the West Indies by the Hon. Barbour Lathrop and Mr. D. G. Fairchild, while on their way to South America.

It will, of course, be readily understood by all who examine these inventories that the values of the various importations are extremely unequal. Some may prove of technical interest merely, while others will have far-reaching commercial importance. For example, the Turkestan alfalfa distributed last year bids fair to extend materially the range of cultivation of this valuable crop, the recently imported sort having proved more resistant both to cold and to drought than the variety previously in cultivation in the West.

It is not to be expected that all the species or varieties secured by our agricultural explorers will prove to be entirely new to specialists or dealers. Many plants have been imported and tested heretofore without any permanent record as to results. We are intentionally securing small quantities of the seeds of many such species, either to permit tests by some improved methods of culture or for distribution to parts of the country where experiments have not been made. Furthermore, specialists in various crops often apply for imported seed of well-known plants, in order to ascertain by careful comparative tests the existence of differences in vigor or other qualities, some of which, though inconspicuous, are economically of great importance. It should

be remembered, for instance, that many plants cultivated only in an unimproved form in this country have been subjected in Europe to long and careful selection, by which improved strains have been developed. Thus, Mr. Swingle found that the American cottonwood has become one of the most important forest trees of France, where the selected varieties are always grown from cuttings.

Some applicants have sent in requests for long lists of seeds. While there is no desire to limit the number which properly equipped experimenters may receive, our correspondents are requested to bear in mind that the seeds and plants listed in these inventories are not a part of the Congressional seed distribution; they are imported for the State experiment stations and for such private experimenters as are known to be fully capable of growing them with the best possible results. As a rule they are not secured in amounts sufficient for general distribution, and many have already been distributed.

It is requested that in all cases our numbers be recorded by the experimenter for use in reporting the results and also for permanent reference. Our report blanks will bear numbers corresponding to those of the inventory, so that the reports will enable us to bring together for later transmission to our correspondents the results secured in all parts of the country.

O. F. COOK,

Special Agent in charge of Seed and Plant Introduction.

WASHINGTON, D. C., November 3, 1899.

INVENTORY.

1901. MUSA ROSACEA.

Banana.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

An ornamental banana, with medium-sized leaves, at first violet underneath, afterwards glaucous-green. The plants are from 3 to 12 feet high. It does not bear edible fruit. Introduced into Europe from Mauritius in 1805. As vigorous and hardy as *M. paradisiaca*; is called *M. discolor* by gardeners. Inflorescence straight, with beautiful rose-colored deciduous spathes; flowers orange-yellow.

1902. ASPARAGUS MEDEOLOIDES.

Asparagus.

From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)

An ornamental evergreen climber from the Cape, grown in cold house; 3 to 6 feet high. False leaves cordate ovate $\frac{3}{4}$ to $1\frac{1}{2}$ inches long, $\frac{1}{2}$ to $\frac{3}{4}$ inch wide; flowers fragrant; should be tried in the open in Florida and California.

1903. PASSIFLORA SICYOIDES (?).

Passion flower.

From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)

A very beautiful Mexican vine, with fine amethyst flowers produced in profusion; cold-house plant; should be tried in the South. (*P. acerifolia* Hort.)

The passion vines or granadillas are mostly perennial, ornamental climbers, having curiously formed flowers, often fragrant and very beautiful. About 120 species are known, of which some half dozen are commonly grown for ornament, either because of their flowers or to cover arbors, and some dozen bear edible fruits called granadillas. Our own *Passiflora incarnata*, which grows wild in all the southeastern States and ranges as far north as Virginia and Missouri, bears small oval fruits, which are called maypops, and are, when fully ripe, not bad eating. The best granadillas are *P. quadrangularis*, *P. edulis*, *P. macrocarpa*, and *P. laurifolia*. These fruits are much esteemed in the Tropics. They should be tried in all frost-free regions. Hybrids of the edible species should be produced if possible. (See Nos. 1978 and 2229.)

1904. PASSIFLORA ALATA. Passion flower.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

An ornamental vine, native of Peru; has ovate cordate leaves; should be cut down to the root each year after flowering. Flowers deep crimson, having coronal rays variegated with purple, crimson, and white. Fruit edible; one of the so-called granadillas. May be grafted on *P. coerulea*.

1905. PASSIFLORA ALBA. Passion flower.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

An ornamental Brazilian vine, bearing abundant pure white, somewhat malodorous flowers, 2 to 3 inches in diameter. A hothouse species; should succeed in south Florida, Hawaii, or Puerto Rico.

1906. PASSIFLORA EDULIS. Granadilla.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

Native of Brazil, with odorous white flowers tinged with purple. It produces violet edible fruits the size of a small egg, called granadillas, more acid than No. 1909. It is a perennial vine of rapid growth, having deeply cut leaves. Suitable for the South, for California, and for the tropical possessions. Commonly cultivated in Australia; there known as passion fruit.

1907. PASSIFLORA FOETIDA. Passion flower.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

A Brazilian ornamental climber, with white flowers having the coronal rays variegated with purple and blue.

1908. PASSIFLORA HERBERTIANA. Passion flower.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

An ornamental vine from Australia.

1909. PASSIFLORA QUADRANGULARIS. Granadilla.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

A perennial vine, native of Peru, with stems 30 to 60 feet long; very ornamental; flowers very odorous, 4 inches in diameter, with petals red inside, white without, coronal rays of white variegated with violet. Should be grown on a light soil and be well watered. Fruits (granadillas) size of a cocoanut; the pulp eaten with sugar or with sweetened white wine. It must be artificially pollinated, and may be grafted on *P. coerulea*. It is cultivated in many tropical countries, and in Jamaica grows up to 3,000 feet altitude. For Hawaii and Puerto Rico.

1910. PASSIFLORA. Passion flower.

From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)

An unidentified species from Costa Rica.

- 1911. PASSIFLORA SUBEROSA.** **Passion flower.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
 A vine, native of Florida, having greenish flowers and purple fruits.
- 1912. PHYTOLACCA DIOICA.** **Bella sombra.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 A tree, native of Japan, affording much shade, of very rapid growth, and half hardy. It is suitable for trial in the South. Called "bella sombra" or "belhambra."
- 1913. CAESALPINIA GILLIESII.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Native of Buenos Ayres; a leguminous shrub 3 to 6 feet high, bearing yellow flowers with beautiful tufts of violet stamens. It is propagated from both cuttings and seeds. Of value as an ornamental in the South.
- 1914. CAESALPINIA PULCHERRIMA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
 Native of India; a shrub 9 feet high; tender; bearing red flowers in beautiful terminal clusters. It is fit for trial in Florida and California.
- 1915. POINCIANA REGIA.** **Royal poinciana.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
 A most beautiful leguminous tree from Madagascar; well known in tropical Florida; very sensitive to frost.
- 1916. PROTEA MELLIFERA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
 Variety "alba." (See No. 1917.)
- 1917. PROTEA MELLIFERA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
 Variety "rubra." A South African bush, useful both as an ornamental and as a bee plant. For the South.
- 1918. TRACHELOSPERMUM.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
 An ornamental apocynaceous shrub received as "*Rhynchospermum japonicum*."
- 1919. CAMPOMANESIA AROMATICA.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
 A myrtaceous tree, native of the West Indies. Ornamental. For trial in the South.
- 1920. PSIDIUM.** **Guava.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
 Perhaps *Campomanesia guariroba*; received as "*Psidium guavirola*," a name we are unable to verify. A small myrtaceous fruit tree for the South.

- 1921. PSIDIUM.** **Guava.**
 From France. Received through Mr. W. T. Swingle, December, 1898, as "*Psidium sinense*." (2 packages.)
 A small fruit tree for the South.
- 1922. PSIDIUM GUAJAVA.** **Guava.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
 A shrub or small tree cultivated in Florida for its fruits, which are largely used for making jellies and preserves; easily injured by frost.
- 1923. SACCHARUM OFFICINARUM.** **Sugar cane.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (2 packages.)
 Should be planted to obtain new varieties.
- 1924. VANILLA AROMATICA.** **Vanilla.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (1 package.)
 A climbing orchid, native of Mexico, now widely cultivated in the Tropics for the aromatic seed pods from which the well-known flavoring extract is derived. It is never grown commercially from seed, but from cuttings, and these seeds are for specimens and for germination trials.
- 1925. COFFEA ARABICA.** **Coffee.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)
 The so-called "maragogipe" variety, originated in Brazil from the ordinary Arabian coffee, but is of larger size and of more vigorous growth. It resembles also the Liberian coffee tree in flourishing at low elevations and in resisting the Hemileia.
- 1926. MANIHOT GLAZIOVIL.** **Ceara rubber.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 The only rubber tree likely to succeed in Florida. Ceara rubber comes from a semi-arid district on the Brazilian coast. It grows very rapidly; is killed by frost. (See No. 1975.) Euphorbiaceous.
- 1927. ACANTHOPHOENIX CRINITA.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 An ornamental palm from the Seychelles; resembles *Areca* in habit. A beautiful species, with graceful pinnatisect leaves, whitish beneath. The petioles and stems are armed with long dark spines. It needs heat, humidity, and shade.
- 1928. DICTYOSPERMA ALBUM.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 An ornamental palm from Mauritius, 30 feet high, having pinnatisect leaves 4 to 8 feet long. The petioles are covered with a white tomentum. Requires a hot climate.
- 1929. DICTYOSPERMA RUBRUM.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 An ornamental palm from the Seychelles. The leaves and petioles are tinged with red when young.

- 1930. BACTRIS SETOSA.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 An ornamental palm from Brazil with pinnatisect leaves.
- 1931. CHAMAEROPS HUMILIS.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Variety "*macrocarpa*." A form of the half-hardy dwarf fan palm of the Mediterranean regions. (See No. 1932.)
- 1932. CHAMAEROPS HUMILIS.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Variety "*tomentosa*." Arborescent; leaves slightly tomentose. This is a form of the native dwarf palm of the Mediterranean region.
- 1933. COCOS BONNETI.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 An ornamental palm from South America; succeeds in the cold or temperate house. May prove half-hardy.
- 1934. COCOS CAMPESTRIS.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 An ornamental palm from Brazil.
- 1935. COCOS COMOSA.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 An ornamental palm from South America.
- 1936. COCOS CORONATA.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 An ornamental palm with rigid ascending leaves, suitable for greenhouses and conservatories. The leaves are arranged in a five-ranked spiral. For Florida and southern California.
- 1937. COCOS DATIL.** **Datil palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 A half-hardy palm from the Argentine Republic. The fruits are edible.
- 1938. COCOS YATAY.** **Sago palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 This is the South American sago palm. The kernels of the nuts are edible.
- 1939. CYCAS CIRCINALIS.** **Sago palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Native of India; grows 15 to 18 ft. high; more tender than *C. revoluta*. Sago palm of East Indies. The commercial sago is manufactured from the heart of this tree.

- 1940. CYCAS NORMANBYANA.** **Cycad.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 A palm-like ornamental plant from Australia.
- 1941. HOWEA BELMOREANA.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 Native of Lord Howe's Island. It is a standard ornamental fan palm for house culture.
- 1942. HEDYSCEPE CANTERBURYANA.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 A fan palm, native of Australia; one of the hardiest species.
- 1943. HOWEA FORSTERIANA.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 A standard house palm; very beautiful. From Lord Howe's Island.
- 1944. LATANIA COMMERSONII.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 "*Latania borbonica erecta*." An ornamental fan palm from the Seychelles.
- 1945. LATANIA COMMERSONII.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898.
 Form called *Latania rubra*. An ornamental fan palm from the Seychelles.
- 1946. LIVISTONA ALTISSIMA.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 An ornamental palm from the South Pacific.
- 1947. LIVISTONA JENKINSIANA.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 An ornamental hardy palm from the Himalayas.
- 1948. PANDANUS MACROCARPUS.** **Screw pine.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 An ornamental tree from New Caledonia.
- 1949. PHOENIX CANARIENSIS.** **Palm.**
 From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)
 A fine ornamental, more hardy and more vigorous than the date palm. The fruit is edible, but very insipid and dry. This palm, said to be the most beautiful and most majestic of the half-hardy species, is of very rapid growth. The trunk is often 3 to 4 feet in diameter, and has a great number of large, gracefully curved leaves of a clear deep green color. If planted alone in a lawn it gives a most striking effect. This species is common in California, but is still insufficiently known in the Southern States. It is propagated only by seeds.

1950. PHOENIX RECLINATA.**Palm.**

From France. Received through Mr. W. T. Swingle, December, 1898, as *Phoenix senegalensis*. (5 packages.)

An ornamental half-hardy palm for outdoor cultivation in Florida and southern California. It has a slender stem, often inclined, and handsome brilliant green leaves, spiny at the bases. If grown in masses it produces a superb effect. It is propagated by seeds and by suckers.

1951. PHOENIX.**Palm.**

From France. Received through Mr. W. T. Swingle, December, 1898. (5 packages.)

Sent under name of "*Phoenix tomentosa*." An ornamental palm for subtropical regions and for house cultivation.

1952. THRINAX.**Palm.**

From France. Received through Mr. W. T. Swingle, December, 1898. (3 packages.)

Received under name of "*Thrinax altissima*."

1953. SECHIUM EDULE.**Chayotte.**

From France. Received through Mr. W. T. Swingle, December, 1898.

"Chouchoute," or "chayotte," of Algeria. The plant is tender and must be protected from exposure to severe cold. It is a climbing cucurbit from Mexico, but extensively grown in the West Indies and also in Algeria. The fruit weighs from 1 to 3 pounds, and is eaten like the eggplant. It contains but one seed, and should be planted whole. This plant is a valuable novelty, which should be planted all through the South. (See No. 1401, inventory No. 2.)

1954. VITIS COIGNETIAE.**Grape.**

From France. Received through Mr. W. T. Swingle, December, 1898.

"Precoce Caplat." A sort originated from seed of *Vitis coignetiae* from Japan, planted in 1885 by Mr. Caplat in Brittany. The vine is said to be the finest ornamental grape known, having leaves often of extraordinary size, some being 19 inches long and 15 inches wide. The grapes are black, about 2/5 inch in diameter, and are said to produce a fair wine. It is extremely early and very hardy, and grows farther north than the ordinary European grape.

1955. VITIS PAGNUCCII.**Grape.**

From France. Received through Mr. W. T. Swingle, December, 1898.

Early and very productive; of Chinese origin. The leaves are deeply lobed or even palmately 3 to 5 foliate. It is the only true grape sometimes having compound leaves. The fruit is said to be acid, maturing in October in the province of Shen-si, where it is native.

1956. VITIS.**Grape.**

From France. Received through Mr. W. T. Swingle, December, 1898.

Of Chinese origin; very late; leaves silvery below; adapted to hot countries. Sent under the name of "*Vitis carrieri*."

1957. VITIS.**Grape.**

From France. Received through Mr. W. T. Swingle, December, 1898.

A new Chinese variety for the table, offered for the first time this year under the name "L'Alençonnaise." It is an entirely new strain of grapes. Originated by M. Caplat from seeds sent him by M. Romanet du Caillaud as *Vitis chensii* (Chinese "Ma nao pon tao"), from Shen-si. It is claimed to be an excellent table variety, having small bunches of large grapes, 1/2 to 3/4 inch in diameter. Resistance to *Phylloxera* unknown. (See No. 1954.)

1958. VITIS ROMANETI.**Grape.**

From France. Presented by M. Victor Caplat, of Damigny, France, through Mr. W. T. Swingle; received December, 1898.

A Chinese grape having curious red silky hairs ending in a gland scattered all over the canes, petioles, and leaves. The leaves are large and cordate. It is from Shen-si. The fruit is edible.

1959. VITIS.**Grape.**

From France. Presented by M. Victor Caplat, of Damigny, France. Received through Mr. W. T. Swingle, December, 1898, under the name "*Spinoritis davidi*."

It has spiny branches and heart-shaped leaves. A rapid-growing vine of some value for ornament.

1960. HEDYSARUM CORONARIUM.**Sulla.**

From Italy. Presented by Dammann & Co., San Giovanni a Teduccio, near Naples. (1 package.)

A perennial or biennial legume, native of southern Europe and northern Africa. It is quite extensively cultivated in Algiers, Tunis, Malta, and Sicily. Sulla withstands slight frosts, but dies when the ground is frozen. It resembles alfalfa in requiring well-drained, deep, and fertile soils, but is a slower grower and of shorter duration. Seed should be sown in autumn, at the rate of 15 to 20 pounds per acre. The plants grow 4 to 6 feet high, and are ready to cut for hay when in full bloom. The hay has about the same feeding value as that of beggar weed. Of possible value for forage in Florida and along the Gulf coast. Sulla is an excellent honey plant.

1961. CUCUMIS MELO.**Winter muskmelon.**

From Utah. Seeds of two specimens of the "Eden" variety presented by Mr. John F. Brown, Elgin, Utah. A winter variety. (See No. 2380.)

1962. ORYZA SATIVA.**Rice.**

From Japan. Secured by Prof. S. A. Knapp from the island of Kiushu. Received January, 1899.

In sending this importation Professor Knapp made the following brief report to the Secretary of Agriculture:

"In accordance with your instructions, I went to Japan in September last and commenced at once to investigate the rice product of that country, to secure the best variety for our purpose. After an inspection of the rice fields and methods of cultivation I spent several days at the Imperial College of Agriculture, examining their experiments in varieties and in fertilizing, and also their large collections of varieties from all portions of the Empire. I then consulted with the principal millers and exporters of rice at the treaty ports. By consensus of opinion it was decided to purchase rice in the island of Kiushu, as furnishing the purest in variety and best in quality. In making the selection the following points were observed: (1) Nutritive and milling qualities; (2) uniform size of kernel; (3) strength of straw."

The whole amount (10 tons) has been distributed in the South. Arrangements have been made to secure additional seed for next year, as the experiment seems to warrant a second distribution. (See Bul. 22, Division of Botany.)

1963. CORCHORUS CAPSULARIS.**Jute.**

Imported from Calcutta by Mr. Charles Richards Dodge, as special agent for fiber investigations. (200 packages.)

It is an annual shrub, 8 to 15 feet high, native of India, and largely grown there for the well-known and widely used jute fiber. It requires a rich, well-drained soil, with considerable moisture. Suitable for the rich bottom lands in Louisiana, Mississippi, and Texas. The seed should be sown broadcast, in March or April, at the rate of 12 to 15 pounds per acre, and harrowed in. The crop is ready to cut for fiber when the seed pods are formed, usually within about 4 months from the time of seeding. Jute has been successfully grown on rice and cotton lands from North Carolina to Texas. Yields of 1½ tons per acre have been obtained, about three times the average yield in India. The imports of jute into the United States in 1898 amounted to over 112,000 tons, valued at \$2,500,000.

1964. CORCHORUS OLITORIUS.**Jute.**

Imported from Calcutta by Mr. Charles Richards Dodge, as special agent for fiber investigations. (150 packages.)

An annual, native of tropical Australia and southern Asia. It is cultivated in India and supplies some of the jute fiber of commerce. It may be grown as a rotation crop with rice. The cultivation is similar to that of No. 1963.

1965. MELINIS MINUTIFLORA.**Molasses grass.**

From Brazil. Presented by Senhor I. Nery da Fonseca, of Pernambuco. (1 package.)

This is said to be the finest pasture grass in Brazil. Should be tried in Florida.

1966. IPOMOEA BATATAS.**Sweet potato.**

From Jamaica. Secured by Mr. D. G. Fairchild (No. 25) from the plantation of Mr. J. T. Palache, near Mandeville.

"A short turnip-shaped sweet potato, introduced very recently from Barbados by Mr. Palache and thought by him to be very promising—better than 'Jersey sweet' even, which is doubtful. Grown at 2,500 feet elevation." Set out rooted sprouts in ridges as soon as the ground is warm. Cultivate until the runners cover the space between the ridges.

1967. IPOMOEA BATATAS.**Sweet potato.**

From Jamaica. Secured by Mr. D. G. Fairchild (No. 27) from the plantation of Mr. J. T. Palache, near Mandeville.

"A Barbados variety said to produce more heavily and to be of better quality than the American varieties grown in Jamaica. Barbados sweet potatoes are famed for quality here." (See No. 1966.)

1968. IPOMOEA BATATAS.**Sweet potato.**

From Jamaica. Secured by Mr. D. G. Fairchild (No. 26) from the plantation of Mr. J. T. Palache, near Mandeville.

"A pink-skinned sweet potato, just introduced into Jamaica from Barbados, said to be better here than even 'Jersey sweet.' I judge that the roots are uniformly smaller. The Barbados sweet potatoes are noted in Jamaica." (See No. 1966.)

1969. BLIGHIA SAPIDA.**Akee.**

From Jamaica. Secured by Mr. D. G. Fairchild. (1 package.)

"Cooked as a vegetable with fish." A tree of the family *Sapindaceae*; about 30 feet high, originally from tropical Africa, now widely cultivated in the West Indies and South America. The fruit is fleshy, reddish yellow, 3-sided, about 3 inches long and 2 inches thick. When ripe it splits down the middle on each side, disclosing 3 shining black seeds borne on and partly surrounded by a white, spongy aril. This aril is the portion of the fruit which is eaten. It has a fine flavor and is highly esteemed. For Puerto Rico and Hawaii.

1970. ATTALEA COHUNE.**Coquito palm.**

From Jamaica. Secured by Mr. D. G. Fairchild (No. 23) from the Castleton Botanical Gardens.

"The *Coquito* or *palma de aceite*. Native in South Mexico and Guatemala. The leaves are over 30 feet long. It is one of the most beautiful palms in the Tropics."

1971. POSOQUERIA LONGIFLORA.

From Jamaica. Secured by Mr. D. G. Fairchild (No. 15) from the Castleton Botanical Gardens. (1 package.)

A beautiful ornamental tree; 25 to 30 feet high, covered with long, white, fragrant blossoms, followed by curious pods an inch in diameter. Foliage beautiful dark green. Belongs to the family *Rubiaceae*. Plant in rich soil and transplant. For subtropical regions.

1972. MICHELIA CHAMPACA.**Champac.**

From Jamaica. Secured by Mr. D. G. Fairchild (No. 24) from the Castleton Botanical Gardens. (3 packages.)

The "sampige" of the Hindoos. The perfume distilled from the flowers is a marketable article. The fragrant wood of this tropical magnoliaceous tree is used for cabinetwork. The odor of the flowers is said to be very powerful.

1973. IPOMOEA BONA-NOX.**Evening glory.**

From Jamaica. Secured by Mr. D. G. Fairchild (No. 22) at Port Antonio. (2 packages.)

An effective evening-blooming climber with very large white flowers and curious onion-shaped seed pods with papery persistent calyxes. Leaves 6 inches in diameter. Very vigorous; common about Port Antonio. Should be tried by planting first in greenhouse. This rapidly growing "moon vine" is now commonly used as an ornamental climber.

1974. AVERRHOA CARAMBOLA.**Carambola.**

From Jamaica. Secured by Mr. D. G. Fairchild at the Castleton Botanical Gardens. (1 package.)

This is the so-called carambola or caramba of the East Indies. The 5-parted acute-angled cucumber-shaped fruit is deliciously acid and refreshing, with a crispness quite characteristic. If introduced into American markets it would be sure to become popular as a table fruit. Seed taken from ripe flesh. A small tree from Ceylon, of the family *Oxalidaceae*; suitable for cultivation in Florida, Hawaii, and Puerto Rico.

1975. MANIHOT GLAZIOVIL.**Ceara rubber.**

From Jamaica. Secured by Mr. D. G. Fairchild (No. 20) from the Castleton Botanical Gardens. (1 package.)

This furnishes the Ceara rubber of commerce. A tree in the gardens at Castleton was growing finely. The seeds require often twelve months to germinate, and those showing discoloration are the oldest and will germinate first. Should be kept continually moist in seed bed. (See No. 1926.) Experiments with this rapidly growing tree should be started in Puerto Rico and the Hawaiian Islands. It is a native of the semi-arid coastal districts of Brazil.

1976. IXORA MACROTHYRSA.**Ixora.**

From Jamaica. Secured by Mr. D. G. Fairchild at the Castleton Botanical Gardens. (1 package.)

A showy, red-flowered rubiaceaceous shrub from Malaga. Flowers in large numbers. Berries red and decorative. Suited admirably for the greenhouse.

1977. CYPHOMANDRA BETACEA.**Tree tomato.**

From Jamaica. Secured by Mr. D. G. Fairchild from the grounds of Mr. W. W. Wynn, at "Brokenhurst," Mandeville. (1 package.)

Grows into a tree 10 to 15 feet high, bearing rather showy red or yellowish-red fruits, which are very much relished by Europeans in Jamaica. It is a comparatively recent introduction in Jamaica, I am told. The flesh is harder and firmer than ordinary tomatoes, and sweetish. Eaten here, after peeling off the thick rind, with sugar and cream or salt and pepper, or as an apple would be. The plant is a rapid grower and can be propagated by seed or cuttings with readiness. Botanically it is a close relative of the tomato.

1978. PASSIFLORA MALIFORMIS.**Sweet cup.**

From Jamaica. Secured by Mr. D. G. Fairchild from the grounds of Mr. W. W. Wynn, "Brokenhurst," near Mandeville. (1 package.)

A vigorous tree bearing abundance of fruits the size of a small hen's egg, lemon-yellow when ripe, with a rind so hard that it requires cracking with a hammer. The numerous black seeds are surrounded by a refreshing grape-flavored flesh similar to the 'passion fruit' of Australia. A highly esteemed dessert fruit seen occasionally on tables in Jamaica. Undoubtedly introduced. (See No. 1903.)

1979. HYDRIASTELE WENDLANDIANA. Palm.

From Jamaica. Secured by Mr. D. G. Fairchild (No. 18) from the Castleton Botanical Gardens. (3 packages.)

Showy palm for gardens of southern California and Florida. Should be planted immediately on arrival.

1980. CAPSICUM ANNUM. Bird pepper.

From Jamaica. Secured by Mr. D. G. Fairchild on the grounds of Mr. W. W. Wynn, "Brokenhurst," near Mandeville. (2 packages.)

Thought quite likely to be the same as the Louisiana bird pepper, though possibly of a slightly different strain, resulting from long culture in the mountains of Jamaica, where it is grown at 2,200 feet altitude.

1981. CAPSICUM ANNUM. Red pepper.

From Jamaica. Secured by Mr. D. G. Fairchild in the mountains, where it is used in sauces.

1982. CAPSICUM ANNUM. Red pepper.

From Jamaica. Secured by Mr. D. G. Fairchild in the mountains. (3 packages.)

1983. CAPSICUM ANNUM. Red pepper.

From Jamaica. Secured by Mr. D. G. Fairchild in the mountains. (2 packages.)

1984. GARCINIA MORELLA. Gamboge.

From Jamaica. Secured by Mr. D. G. Fairchild from the Botanical Gardens at Castleton. (1 package.)

Furnishes the gamboge of commerce. Related to the mangosteen family, *Guttiferae*. The fruit is acid, rather refreshing, and could be improved by breeding and selection. There is one seed in each fruit. A tree from Ceylon for cultivation in Hawaii and Puerto Rico.

1985. STEVENSONIA GRANDIFOLIA. Palm.

From Jamaica. Secured by Mr. D. G. Fairchild from the Castleton Botanical Gardens. (3 packages.)

A grand palm from the Seychelles Islands, worthy of introduction into gardens in southern Florida, California, and other subtropical regions. Must be kept moist and must be planted as soon as it arrives.

1986. COPERNICIA CERIFERA. Wax palm.

From Jamaica. Secured by Mr. D. G. Fairchild at the Castleton Botanical Gardens. (2 packages.)

Said to furnish food and valuable wax to the natives. The most wonderful palm of Brazil as regards uses to which the natives put it. A small ornamental fan palm suited only to tropical and subtropical regions. The "Carnauba" palm.

1987. SOLANUM DREDGEI. Natal thorn.

From South Africa. Secured through Messrs. W. and C. Gowie. (20 packages.)

These seeds were received as the result of a request for *Solanum aculeastrum*, which has been recommended as a hedge plant suitable for dry regions.

Information accompanying the seed seems to throw doubt on the value of the plant.

"We inclose herewith a packet of 1½ ounces seeds of a species of *Solanum* which we believe is the species you require and which you designate *S. aculeastrum*. We submitted the fruits from which we obtained the seeds sent you to Professor MacOwan, Government botanist for Cape Colony, and he named the plant *Solanum dredgeanum*. He remarked further with regard to the plant that it is known as 'Natal thorn,' capable of hedging, but wanting in close growth, and rambling, also tender.

Flesh of berry poisonous like *S. sodomeum*. Almost neglected here, being much inferior to the *Aberia caffra* or kei apple, and even to *Lycium horridum*, the Cape box thorn. *S. dredgeanum* is very little better as a hedge plant than *Buddleia madagascariensis*, and, like it, will trail all over the shop and occupy much more space than it is worth."

1988. PYRUS SALICIFOLIA. Pear.

From France. Secured by Mr. W. T. Swingle from the botanical garden at Dijon. (3 packages.)

This is a native of Siberia, having fruits resembling very small pears. It may possibly be of use as a hardy grafting stock or ornamental tree.

1989. PYRUS NEPALENSIS.

From France. Secured by Mr. W. T. Swingle from the botanical garden at Dijon. (3 packages.)

The tree is a native of Nepal in the Himalaya Mountains. The fruits are small red berries like those of *Cralaegus* and *Sorbus*.

1990. COTONEASTER MICROPHYLLA. Cotonaster.

From France. Secured by Mr. W. T. Swingle from the botanical garden at Dijon. (1 package.)

A shrub, native of Nepal.

1991. CARICA. Pawpaw.

From California. Presented to Mr. D. G. Fairchild by Dr. F. Francesci, director of the gardens of the Southern California Acclimatizing Association of Santa Barbara. Received under name of *Carica quercifolia*.

This species is a native of Paraguay and is said to contain more *papain* than any other species. It is very hardy, and endures light frost without injury. A tree with the base of the trunk swollen; leaves small but not oak-like as name would imply. The fruits are only 1 inch long.

1992. DIOSPYROS LOTUS (?).

From Asia Minor. Presented by Dr. M. P. Parmelee, of the American mission at Trebizond.

Dr. Parmelee states that there are early and late varieties of this small tree, seeds of both of which are included. At Trebizond the fruit bears the name "Hoormah." "Some of the date seeds were gathered in the summer (August) and I did not understand that they were not expected to ripen until December. It would seem that there are early and late varieties, the seed of which I should have kept separate. I regret that they are now mixed. The summer variety was superior in size and quality to the later ones, the larger fruit being about the size of the medlar. The smaller fruit is without seeds. The later fruit is all small, yellow in color before it is ripe, dark-brown or black and somewhat resembling raisins when ripe." This and the following (No. 1993) are doubtfully referred. Only a few pits of each were received and it was impossible to determine more accurately to what particular species each belongs.

1993. ZIZYPHUS (?).

From Asia Minor. Presented by Dr. M. P. Parmelee, of the American mission at Trebizond. This fruit is thought by Dr. Parmelee to be a sort of persimmon. It is borne on a small tree, and known as "Mooshmoolah."

Dr. Parmelee states in addition: "The mooshmoolah is a somewhat larger fruit than the hoormah (No. 1992), but inferior in quality to it. The seeds do not clear themselves from the pulp as do the seeds of the hoormah, and in spite of a good deal of effort to wash them out they are still covered with a sort of nap."

1994. ORYZA SATIVA. Rice.

From Liberia. Presented by Mr. Henry O. Stewart, of Mount Coffee; a native variety called "Jahlee" in the Golah language. (1 package.)

This rice will flourish under a variety of conditions. The natives plant it because it is protected from the birds by a long beard on one of the glumes.

This and the following five numbers are either red or black rices and can probably not be planted to advantage in this country on account of the danger of intermixture with the commercial white rices through cross-pollination. Some of them are of possible interest on account of the fact that they have been selected to secure extreme earliness of ripening to meet the demands of an improvident people.

1995. ORYZA SATIVA.**Rice.**

From Liberia. Presented by Mr. Henry O. Stewart, of Mount Coffee. (3 packages.)

A native variety called "Nahyah."

"This rice will do well on clay lowland, but it is liable to be blown down by the wind, sometimes before the rice is ripe. This is not an early rice, but it is of good quality and keeps well." (See No. 1994.)

1996. ORYZA SATIVA.**Rice.**

From Liberia. Presented by Mr. Henry O. Stewart, of Mount Coffee. (3 packages.)

A native variety called "Mahboh."

"This rice will do well in low clay land." An early variety, but not so early as "Pinne." (See No. 1994.)

1997. ORYZA SATIVA.**Rice.**

From Liberia. Presented by Mr. Henry O. Stewart, of Mount Coffee. (3 packages.)

A native variety called "Pinne."

"This is the rice that is planted first, in the last of March, to save the hungry people. This rice will turn black when it is ripe and will grow well on clay upland." (See No. 1994.)

1998. ORYZA SATIVA.**Rice.**

From Liberia. Presented by Mr. Henry O. Stewart, of Mount Coffee. (3 packages.)

A native variety called "Bongah."

"This rice grows best in swamp land where water stands." (See No. 1994.)

1999. ORYZA SATIVA.**Rice.**

From Liberia. Presented by Mr. Henry O. Stewart, of Mount Coffee. (1 package.)

A native variety called "Zopho."

"It grows just about the same on any kind of land. This and "Bongah" rice are the best growing and tasting and keeping. The other varieties are planted early, but these are reserved for the main crop." (See No. 1994.)

2000. COFFEA STENOPHYLLA.**Coffee.**

From Sierra Leone. Presented by Mr. Elliott, of the Botanic Station.

This is a highland species of coffee native to Sierra Leone, where it is being somewhat extensively cultivated.

2001. PHYSALIS PUBESCENS.**Strawberry-tomato.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

An edible winter ground cherry. Annual, grown in Southern France. Said to be inferior to *Physalis peruviana*.

"Native of South America. Perennial. A plant with a very branching, angular stem, from about 2½ to over 3 feet high. Leaves heart-shaped or oval, soft, hairy, and somewhat clammy; flowers solitary, small, yellowish, marked with a brown spot in the center; calyx bladder-shaped, very large, inclosing one juicy orange-yellow fruit about the size of a cherry; seeds small, lenticular, smooth, pale yellow. Their germinating power lasts for eight years. In the south of Europe the fruit is valued on account of its slightly acid taste. It is eaten raw." (*Vilmorin*.)

2002. PHYSALIS VIOLACEA.**Strawberry tomato.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Mexico tomato." Not very good to eat, but used in medicine. May be useful in hybridizing.

2003. ATRIPLEX HORTENSIS.**Orach.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Good Henry." This is an old garden vegetable; a perennial. "Stems 5 to 6½ feet high, angular, and furrowed; flowers small, leaves broad, arrow-shaped, slightly crimped, soft, and pliable. The seed is sown where the plants are to stand, in the open ground, usually in drills. When the seedlings have made three or four leaves they should be thinned out, after which they require no further attention, except occasional watering in very dry weather. The plants bear hot weather pretty well, but soon run to seed, on which account it is advisable to make successional sowings from month to month. The leaves are eaten boiled, like spinach." (*Vilmorin.*)

2004. SOLANUM MELONGENA.**Eggplant.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Very early violet De Barbentane." "This eggplant is one of the best. It comes from a region renowned for the production of vegetables, especially the finer varieties. Very productive, should be tried everywhere, especially in the regions where the summers are short and it is impossible to mature the ordinary varieties." (*Vilmorin.*)

2005. ARCTIUM LAPPA.**Japanese burdock.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Giant large-leaved." According to *Vilmorin* this merits the serious attention of the plant breeder. Biennial, 5 to 7 feet high; involucre smooth, without the hooked spines which characterize the ordinary burdock. It produces several fleshy roots 12 to 18 inches long within 4 months from the seed. The roots, when cooked, are said to taste like bur artichokes and asparagus. The seed should be sown in drills 8 to 12 inches apart, about the middle of June. The roots may be cooked like those of salsify or vegetable oyster.

2006. BASELLA RUBRA.**Basella.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"White basella." Highly recommended by M. Henry *Vilmorin* as a summer vegetable. The leaves and young shoots are cooked like spinach. It is a vine which serves beautifully to cover arbors and outbuildings. The flowers are very pretty.

2007. BASELLA CORDIFOLIA.**Heart-shaped basella.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

See No. 2006, to which this is closely related. Both vines are cultivated in India. The leaves are fleshy, and when cooked have a pear flavor.

2008. OCIMUM BASILICUM.**Sweet basil.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Large violet." A tender annual, native of India. The leaves, which have a clove flavor, are used for flavoring soups, sauces, etc. The plants are erect, much branched, and leafy. The seed may be sown in rows and the plants thinned to 15 or 18 inches apart, or in hotbeds, and transplanted when the ground is warm. The plants are cut off close to the ground when in bud, and after curing in a warm dry place the leaves are pressed into cakes. Treated in this way and kept dry the leaves retain their flavor several years.

2009. OCIMUM MINIMUM.**Dwarf basil.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Dwarf, compact, violet." A condiment; new variety, resembling No. 2008, but more dwarf and compact; the leaves are smaller.

2010. OCIMUM BASILICUM.**Sweet basil.**

From France. Received through Mr. W. T. Swingle, February 13, 1899. (See No. 2008.)

"Lettuce-leaved." "A variety with broad, crimped, undulating leaves, from 2 to 4 inches long, and of a low-growing, thickset habit. The flowers, which are closely set in clusters, make their appearance rather later in this variety. The leaves of this Basil, which are much larger than those of any other kind, are also much fewer in number." (*Vilmorin.*)

2011. OCIMUM GRATISSIMUM.**Tree basil.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Grown in hot countries. It is an annual with an upright stem, branching from the base and forming a pyramidal bush 20 to 25 inches high, and 12 to 16 inches through. Leaves oblong; flowers lilac. It requires a long season.

2012. BENINCASA CERIFERA.**Wax gourd.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Probably needs a hot climate; the fruits keep all winter. A cucumber-like vine with hairy, musk-scented leaves, and oblong, cylindrical, downy or waxy, fruits. The seeds are thickened at the margins. The unripe fruits are used everywhere in India in the preparation of curries. Cultivate like melons. Cook like summer squash.

2013. BETA VULGARIS.**Beet.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Red Cheltenham." "This beautiful variety of salad beet, which originally came from England, has an elongated, netted, and slightly enlarged root. Flesh of an intense blood-red color. Contrary to the rule regarding color in leaves of garden beets, the distinctive character of this strain is that the leaves are grayish with rose-colored veins. The excellent qualities of this table beet give it first rank." (*Vilmorin.*)

2014. BETA VULGARIS.**Beet.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Covent Garden red." "A very handsome kitchen-garden variety, with a long slender root entirely buried in the soil, smoother and cleaner than the Castleman-dary; leaves spreading, not very large, slightly crimped, of a deep black-red color; flesh deep red, compact, sugary." (*Vilmorin.*)

2015. BETA VULGARIS.**Beet.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Dell's dark crimson dwarf." "This variety is distinguished by the dark-red color of its leaves, which are broadly crimped, and have a shiny luster. The leaves grow curving toward the ground. Doubly valuable for the delicate flavor of the root and the ornamental character of the leaves." (*Vilmorin.*)

2016. BETA VULGARIS.**Beet.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Queen of the blacks." "Foliage compact and well proportioned to the root. The root is conical in shape, both at the top and base, but longer and more tapering below. The color of the flesh is deep red, or almost black. The leaves themselves present coloring no less intense; they are relatively broad, and are never, at any time during their growth, plain green, which is extremely rare, even among varieties of beets that have their foliage more highly colored in autumn. Sometimes used for bordering groups of dark-foliaged flowering plants." (*Vilmorin.*)

2017. BETA VULGARIS.**Beet.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Giant white half-sugar." "Among the varieties of beets rejected by the sugar industry the Giant White is remarkable for its regular form, its great productive-

ness, good quality, and long keeping. Its growth is rapid and vigorous, its roots long and of oval shape, with a green collar just above the ground, the flesh firm and sweet. Owing to the fact that it is easily pulled, together with its many other good qualities, it makes a valuable food for cattle during the latter part of the winter." (*Vilmorin.*)

2018. BETA VULGARIS.**Beet.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Giant rose, half sugar." "The number of semisugar beets discarded by the sugar industry and used for forage is becoming greater. This new variety has been produced from the old grayish rose-colored beets of northern France. It is large, of long oval form, a regular, well-formed root, easily pulled, and producing a good yield; it is also noted for its good quality and excellent keeping. This variety, with the giant white semisugar, is to be recommended, as the reports from growers place it above all other forage beets." (*Vilmorin.*)

2019. CYNARA CARDUNCULUS.**Cardoon.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Ivory white." A new variety; should be carefully tried in the South. This is a perennial vegetable, much esteemed in Europe. The parts of the plant eaten are the blanched stalks of the inner leaves, which are cooked or used in salads. The cardoon requires rich soil. It grows to the height of 3 to 5 feet. A very showy plant when allowed to blossom.

2020. CYNARA CARDUNCULUS.**Cardoon.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Puis." Cardoons are among the best of French vegetables, being almost equal to asparagus. (See No. 2019.)

2021. CYNARA CARDUNCULUS.**Cardoon.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"De Cours." Very spiny, but of best quality. (See No. 2019.)

2022. DAUCUS CAROTA.**Carrot.**

From France. Received through Mr. W. T. Swingle, February 15, 1899.

"Parisian red forcing." Earliest and shortest of carrots. "This variety has been selected from the short, red sorts as one especially adapted for forcing in frames. The root is always broader than long, very smooth and clean. The foliage is remarkably fine. This variety has been preferred for growing in the open air, and used exclusively for forcing under sash." (*Vilmorin.*)

2023. DAUCUS CAROTA.**Carrot.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Long blood-red." "Those who are seeking for carrots with intense coloration should not fail to adopt this new variety, which is without a rival in that respect. It has a long, slender root, with tender, sweet flesh, of a very deep orange-red. Its comparatively scant foliage is easily distinguished by the violet tint of the petioles. This is a rather late variety, and is easily kept during the winter." (*Vilmorin.*)

2024. APIUM GRAVEOLENS.**Celeriac.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Improved Paris." A new variety of turnip-rooted celery, very much favored by the kitchen gardeners of Paris, where they produce it upon prepared soil. It attains a large size." (*Vilmorin.*)

2025. CICHORIUM INTYBUS.**Chicory.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Large-rooted Brussels," the "Witloof" of the Belgians. This delicious winter vegetable, little known in America, is much grown about Brussels and Paris. The

seed should be sown in June or early July in rows 6 to 12 inches apart, and the rows thinned to leave about 20 to 30 plants to the square yard. If replanted from a seed bed space the plants about 6 inches each way. In October the roots are dug—they are then 1 to 2 inches in diameter—the leaves are cut off close to the collar and the roots shortened to a length of 5 to 6 inches, all the lateral roots being trimmed off. These roots are then placed upright, close together, in trenches about 15 to 18 inches deep and 4 to 6 feet wide, in well-drained garden soil. Each root must be separated from the others by a layer of soil. A layer of rather dry soil about 8 inches deep is then placed over the roots, and the trench filled heaping full of stable manure in fermentation. The trench may be of any desired length, and only a part forced at any one time. In 12 to 20 days after the manure is placed over the roots it may be removed and placed over another portion of the trench, adding fresh manure if needed to maintain its heating qualities. The soil remains warm for a few days after the manure is removed if the trench be kept covered, and after 20 to 30 days from the commencement of the forcing process the crop is ready to gather. The blanched leaves have grown rapidly and formed a compact head 4 to 8 inches long and 1 to 2 inches in diameter—"the witloof." It is necessary to bury the roots deeply and have a considerable weight of soil and manure above or else the head is not compact. It is useless to attempt to grow other sorts of chicory in this manner. The "Witloof" makes a delicious salad and is also eaten cooked.

2026. BRASSICA OLERACEA.**Cabbage.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"De Fumel." "This cabbage has a very short stem, the outside leaves, which are few in number, are curled and lie upon the ground, are rather dark green, and are covered with blisters. The head, on the contrary, is of light color, very little curled and much flattened, and will keep but a very short time." (*Vilmorin.*) Grown in southern France. Try in the South.

2027. BRASSICA OLERACEA.**Cabbage.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Winter Vaugirard." "Stem short; outer leaves numerous, stiff, grayish-green and often shaped like the bowl of a spoon. Head round, depressed or flattened; firm and solid; color about the same as that of the outer leaves. This variety is one of the most hardy and is good for winter use. It resists the cold even when the head is not fully grown at the time of the first heavy frosts. The gardeners around Paris do not plant it early and do not sow it until the month of June when it is to pass the winter in the open ground." (*Vilmorin.*)

2028. BRASSICA OLERACEA.**Cabbage.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"St. John's very early Savoy." "This handsome variety might almost be described as the Ox-heart Savoy. The stem is extremely short. The leaves are pale green and considerably crimped. The head forms more quickly than that of any other Savoy cabbage. It does not, however, keep its shape long, but bursts and grows out of form if it is not cut in time." (*Vilmorin.*)

2029. BRASSICA OLERACEA.**Cabbage.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Savoy early Aubervilliers." The best Savoy cabbage for late summer.

2030. BRASSICA OLERACEA.**Cabbage.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Norwegian Savoy."

2031. BRASSICA OLERACEA ACEPHALA.**Tree kale.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Very tall, cow, or tree, kale." "A very large, vigorous-growing plant, presenting, when fully grown, the appearance, one would almost say, of a young tree. Its French name of '*Chou cavalier*' is said to have been given to it because its height is sometimes equal to that of a man on horseback. The stem is straight, stiff and

strong, but comparatively slender, as it seldom attains a diameter of $1\frac{1}{4}$ inches. In the first year of its growth it does not usually exceed 3 or 4 feet in height. The plant produces a great number of leaves, which are green, large, cut at the base, but oval rounded at the end, slightly crimped or puffed on the upper surface, and often over $2\frac{1}{2}$ feet long. They grow at some distance from one another, and after they have fallen or have been plucked, a scar is left where the stalk was parted from the stem. The variety is a hardy one, and will bear the cold of ordinary winters at Paris. It does not always run to flower in the spring of its second year, but often continues producing leaves and growing taller, in which case it does not flower until the spring of its third year (including the year in which it was sown), when it reached its greatest height. The leaves are usually pulled to feed cattle, the stems being allowed to remain in the ground until the next spring, when the tops which are about to run to flower are cut off and applied to the same uses as the leaves. The stems, having become hard and woody, can not be utilized in this way, but they are sometimes dried and made into walking sticks." (*Vilmorin.*)

2032. BRASSICA OLERACEA ACEPTALA.

Kale.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Borecole, large-leaved, Jersey kale," rather tender. A forage plant. "This variety, which comes very near No. 2031, but is usually not so tall, is especially remarkable for the enormous size of its leaves, which often grow more than 3 feet long, and from 12 to 14 inches broad. The blade of the leaf is of an elongated-oval shape, with entire uncut margin and tolerably crimped surface. It is a very productive forage cabbage, succeeding best in rich soil in a temperate climate, as it is not perfectly hardy." (*Vilmorin.*)

2033. BRASSICA OLERACEA ACEPTALA.

Kale.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Flanders." Extremely hardy, but not so productive as Chou cavalier (No. 2031). "A forage plant of large size, but somewhat smaller than the tree cabbage, from which it is also distinguished by the violet-red color of its leaves and stems. It bears frost extremely well, even better than the tree cabbage, on which account it is preferred to any other kind for field culture in the north of France. The plant is sometimes branched, in which respect it differs from the tree cabbage, the stem of which is most usually unbranched. The leaves of the Flanders kale also are smaller and narrower in proportion to their length. They are often undulated and, as it were, puckered at the edges, giving them some slight resemblance to the leaves of the borecoles." (*Vilmorin.*)

2034. BRASSICA OLERACEA ACEPTALA.

Kale.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Thousand-headed or branching Borecole." Somewhat tender. "Another very large kind, distinguished from the tree cabbage by its stem being usually divided into a number of branches, each of which bears large leaves almost like those of the tree cabbage. Although it does not grow so tall as that variety it is generally considered more productive, but it is not so hardy and often suffers from the winters of middle and northern France. It originated in some part of the west of France, and is more suited to the climate of that region." (*Vilmorin.*)

2035. BRASSICA OLERACEA ACEPTALA.

Kale.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Mille têtes." This variety is used for forage and for greens during winter in western France. "A very distinct, tender variety. The stems are more branching than those of No. 2034, forming a sort of tuft or little head. It is not more than 3 feet high, very dense and with many leaves, which are entire and largest at the base. Color a peculiar yellowish green. It is important that this variety should not be confused with the English variety called 'Thousand Headed Cabbage,' which is called 'Chou branchu du Poitou' in France. (*Vilmorin.*)

2036. BRASSICA OLERACEA ACEPTALA.

Marrow kale.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"White marrow." A very important stock food. Its only drawback is in its being tender. "A large variety of forage cabbage with a very stout and thick unbranched

stem, which is swollen chiefly in the upper two-thirds of its length and filled with a sort of marrow or tender flesh, which forms excellent food for cattle. The leaves are very long and broad and constitute a considerable part of the crop. The stem grows 5 feet or more high, with a diameter of 3 to 4 inches in the thickest part. The marrow kale, like the thousand-headed cabbage, has the disadvantage of being sensitive to cold, and the crop must be gathered before severe cold sets in. At the end of summer and all through the autumn the leaves are cut and given to cattle. At the commencement of hard weather, when the leaves are all cut, the stems are taken up and stored in an outhouse or shed, where they will be free from frost, and in this way they will keep all through the winter." (*Vilmorin.*)

2037. BRASSICA OLERACEA ACEPTALA. Kale.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Red marrow." (See No. 2036.)

2038. BRASSICA OLERACEA. Cauliflower.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Extra selected earliest Erfurt dwarf," northern grown. (See No. 2039.)

2039. BRASSICA OLERACEA. Cauliflower.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Very early Erfurt." Very good; southern grown. "A very early, very distinct, and really valuable variety, but difficult to keep true to name. It is somewhat under middle height and has a rather short stem. Leaves oblong, entire, of rounded outline, scarcely undulated, and of a peculiar light grayish-green tint, which, added to their shape and rather erect position, gives the plant some resemblance to the sugar-loaf cabbage. The head, which is white, compact, and fine-grained, forms quickly and keeps firm for a long time. When exposed to the sun it soon acquires a violet tint." (*Vilmorin.*)

2040. BRASSICA OLERACEA. Cauliflower.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Alleaume dwarf, very early." "An exceedingly dwarf and very early variety. The stem is so short that the head appears almost to rest on the ground, like that of the early dwarf Erfurt cauliflower. From this variety, however, it differs entirely in the appearance of the leaves, which are broad, undulated at the margin, and generally twisted. The head forms very quickly, but soon grows out of shape if it is not cut in time." (*Vilmorin.*)

2041. BRASSICA OLERACEA. Cauliflower.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Imperial." Extra early sort grown about Paris. "This handsome variety very much resembles the dwarf Erfurt, but it is of a darker green color and larger in all its parts. It is an early kind, with a fine, white, broad, firm head, and remarkable for the regularity of its growth, and productiveness. When grown true to name it is certainly one of the best varieties of cauliflower." (*Vilmorin.*)

2042. BRASSICA OLERACEA. Cauliflower.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Maltese." A sort deserving of being more widely known than at present, according to *Vilmorin*. "It is characterized by its comparatively short stem, leaves with little scallops on the edges, dark green or almost slate color, hardy. It is cultivated so as to produce during the late summer and the autumn. It thrives perfectly both in the gardens and in the open field, provided, however, the land is properly irrigated. The head is large and fine, and appears more white in contrast with the deep green of the foliage." (*Vilmorin.*)

2043. BRASSICA OLERACEA. Cauliflower.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Chambourey mammoth." Half early.

2044. BRASSICA OLERACEA.**Cauliflower.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Geneva." Recommended for trial. A new sort.

2045. BRASSICA CAMPESTRIS.**Rutabaga.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Early white, strap-leaved." "Distinguished from the 'Early flat white' by its shorter oblong entire leaves, which are toothed on the margin, but not divided or lobed. The root is also thicker and more rounded in outline. An excellent kind for forcing." (*Vilmorin.*) New; recommended by Vilmorin.

2046. BRASSICA CAMPESTRIS.**Rutabaga.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Smooth, white, short-leaved." "A very distinct early variety, the root depressed, broader than long, smooth and regular. Leaves short, rather deep green. This variety is especially good for cooking. The flesh is white." (*Vilmorin.*) Useful for the table, replacing turnips in the winter.

2047. CLAYTONIA PERFOLIATA.**Claytonia.**

From France. Received through Mr. W. T. Swingle, February 13, 1889.

Said to be better than spinach. Does well in summer. A low annual with fleshy leaves. It is a native of the Pacific coast regions of North America, and has been long cultivated by European gardeners. It is related to the well-known "Spring Beauty" of the northern woods, differing in the cup-shaped leaves united by their bases around the stems. The seeds are sown in spring 2 feet apart. Fifty or sixty stems often arise from one root. The stems are 12 to 18 inches high.

2048. CUCUMIS SATIVUS.**Gherkin.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Early Russian." "A truly miniature cucumber with a slender stem 20 to 24 inches long, and small bright green leaves. Well adapted for frame culture, each plant producing from 6 to 8 short, egg-shaped, yellow, smooth fruits a little larger than a hen's egg. It ripens fully in less than 3 months. The flesh is not very thick and is slightly bitter, but its remarkable earliness compensates for these slight defects." (*Vilmorin.*) Extremely early. Mr. Swingle says he does not remember seeing this in America.

2049. CUCUMIS SATIVUS.**Gherkin.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Netted Russian." "A curious brown or nearly black cucumber, new, Mr. Swingle thinks, to America. Resembling No. 2048, but the rind becomes netted when the fruit ripens; also larger and later.

2050. CUCUMIS SATIVUS.**Cucumber.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Long green, fine early Fournier." Recommended by Vilmorin. Grown in cold frames about Paris. "A valuable variety, very vigorous and productive, succeeding well when cultivated in the open. The fruits are long, with very few spines. The flesh is very thick, keeping firm and tender for a long time. This renders it one of the best for selling on the markets." (*Vilmorin.*)

2051. CUCUMIS SATIVUS.**Cucumber.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Long green, kitchen garden. Grown in cold frames. Recommended by Vilmorin. "Very vigorous and productive, yielding a large number of perfect fruits; flesh deep and tender. This cucumber is noted among gardeners for its excellence and as being the first to come on the market." (*Vilmorin.*)

2052. CUCUMIS SATIVUS.**Gherkin.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Meaux, green pickling." "This variety of Gherkin is readily distinguished from Cucumber, especially by its fruits being almost twice the length, nearly cylindrical, of a beautiful bright green. Also without spines on the stem end for about one-third of its length. Vigorous and hardy, and can be grown in the open ground. Grows rapidly and yields well." (*Vilmorin.*)

2053. CUCUMIS SATIVUS.**Cucumber.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Prolific Bourbonne." "This is a true cucumber, fruit long and slender, flesh firm. When gathered while small it makes a pickle of a quality very seldom found. The surface is covered with spines which are very numerous but finer than those of the more common gherkins; these spines resemble short hairs. It is longer, more slender, and of a deeper color than 2052. The remarkable abundance of the fruits which continue through several weeks if gathered every day soon after their formation." (*Vilmorin.*)

2054. CUCUMIS SATIVUS.**Gherkin.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Toulouse." Recommended by Vilmorin. A sort for pickling.

2055. CORCHORUS OLITORIUS EDULIS.**Edible jute.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Useful in hot countries. The leaves are eaten like spinach, or in salads. "Annual, stem cylindrical, smooth, and more or less branched at the base, 20 inches high. Leaves alternate, lower ones rather broad afterward becoming longer, attenuated at the point and sharp-toothed; flowers yellow, axillary; capsules cylindrical, rather elongated, smooth; seeds very angular, pointed, green, and very small. Their power of germination will last about five years. This plant grows in a very warm climate. It is sown in the open ground during the month of May or better a little earlier in a hotbed. It is especially grown in tropical countries where the warmth of the atmosphere is sufficient to grow it in the open ground without any care. The more tender leaves are used as a salad." (*Vilmorin.*)

2056. CUCURBITA MAXIMA.**Squash.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Prolific early marrow." "A distinct and interesting variety, having the form of the Hubbard squash and the color of the marrow. The stem is a runner, but ordinarily does not exceed 7 or 8 feet in length and ceases to grow after having set three or four fruits which ripen before all other squashes. This, however, does not hinder its keeping in good condition until the early winter. It is not very large, rarely weighing more than 7 pounds. Good for planting in small gardens and where small squashes are desirable." (*Vilmorin.*)

2057. CUCURBITA MAXIMA.**Squash.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Portugal." Recommended by Vilmorin.

2058. RORIPA NASTURTIUM.**Water cress.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Improved broad-leaved." A new variety. Preferred to ordinary cress, especially for garnitures.

2059. SPILANTHES OLERACEA.**Para cress.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Good for hot countries, where it replaces water cress. "Originally from the West Indies. Creeping, annual; leaves entire, oval; stem terminated by the flowers,

which are without petals and of a pure yellow; seeds very small. Sow during April, where they are to remain. The flowering begins within two months and continues the whole summer. The leaves are used in salads to which they give a piquant taste. They also have an exciting action upon the salivary glands." (*Vilmorin.*) For trial in Florida and Hawaii. Very pungent.

2060. SPILANTHES OLERACEA RUBRA.

Brazilian cress.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Brown in color. Good for hot countries, where it replaces water cress. A variety of No. 2059.

2061. CUMINUM CYMINUM.

Cumin.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Maltese." Seeds used in cooking, for confectionery, and in the manufacture of liqueurs. "An annual, native of upper Egypt. Low-growing, 4 to 6 inches high, branching from the base. The seeds have a hot taste and strongly aromatic flavor. The seed is sown in the open ground about the middle of May. The plants grow rapidly, and the seeds commence to ripen about the end of July. Cultivation, an occasional hoeing." (*Vilmorin.*)

2062. ALLIUM ASCALONICUM.

Shallot.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Very much used in France. Keeps all the year. "Perennial. The shallot seldom produces seeds but has a profusion of leaves. Its bulbs, when planted in spring, speedily divide into a great number of cloves which remain attached to a common disk, and quickly grow as large as the original bulb. The cloves are planted very early in spring in rich, well-manured soil, not very deeply, about 4 inches apart. When the leaves commence to wither, about July, the tufts of plants are pulled up and left to dry for a few days, after which they are divided and the bulbs stored in a dry place. The bulbs, which keep for a whole year, are used for seasoning, and give a more delicate flavor than most onions. The leaves are also eaten, cut when they are green." (*Vilmorin.*)

2063. FOENICULUM DULCE.

Fennel.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Florence or sweet fennel." Very good; should be grown in the South; eaten raw as well as cooked. "A very distinct, low-growing and thick-set annual, with a very short stem which has the lower joints very close together. Leaves large, very finely cut, light green; leaf-stalks very broad, whitish green, overlapping one another at the base of the stem, the whole forming a kind of enlargement or head varying in size from as large as a hen's egg to the size of one's fist, firm, white, and sweet inside. The seed is sown in rows 16 to 20 inches apart. The plants should be thinned to 5 or 6 inches apart, and the beds should be frequently watered. When the bulb is as large as an egg it should be hilled so that it is half covered. The plant is ready to cut for use in about 10 days after being hilled. It is usually eaten boiled. The flavor somewhat resembles that of celery, but is sweeter and more delicate." (*Vilmorin.*)

2064. VICIA FABA.

Broad bean.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Perfection." The broad beans are largely grown as a table vegetable in England and on the Continent. The seeds are eaten both in the green state and when dry, boiled, or in soups.

2065. VICIA FABA.

Broad bean.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Seville long-pod." Has very long pods. Is early, but is less prolific than some others. "Stem quadrangular, erect, 2 to 2½ feet high, not very stout, sometimes quite green and sometimes slightly tinged with red. The foliage is of a lighter shade of green than the other varieties, with more elongated leaflets. Flowers, 2 to 4 in each cluster; the standard is greenish white, longer than broad, and remains folded in the center even when the flower is full blown. This gives them the appearance of

being longer than those of other varieties. Pods something more than $\frac{1}{2}$ inch broad, 8 inches to 1 foot long, single or in pairs, soon becoming pendent. Each pod contains 4 to 8 seeds. This is an early variety, but not very hardy." (*Vilmorin.*)

2066. VICIA FABA.**Broad bean.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Dwarf fan or cluster." Used for forcing under glass. "A plant growing 14 to 16 inches high. Stems quadrangular, tinged with coppery or reddish brown, rather slender; leaves stiff and strong, ashy green, with rather small pointed leaflets; flowers small, the standard marked with purple at the base; pods erect, in twos or threes, each containing from 2 to 4 square-sided, thickish beans."

2067. MESEMBRYANTHEMUM CRYSTALLINUM.**Ice plant.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Prepared like spinach. Said to be very good; often grown for ornament. Prof. Peter MacOwan, of Cape Colony, South Africa, recommends the cultivation of this plant for forage in arid regions. He compares a field of it to a pond of water. Sheep and cattle eat it readily. The leaves are fleshy and succulent. It grows naturally in arid and semi-arid regions and will be an excellent plant for trial in the Southwest on the ranges.

2068. PHASEOLUS VULGARIS.**Bean.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Soisson's white runners." The "Soissons" take the place of our lima beans in France and are preferred by the French. Recommended by Vilmorin. "A plant with a slender green stem $6\frac{1}{2}$ feet or more high. Leaves pretty large, at wide intervals; leaflets moderately crimped, dark green; flowers white, becoming yellowish; pods green, broad, curved, becoming yellow when ripe; seeds seldom more than four in each pod, white, kidney-shaped, nearly 1 inch long, $\frac{1}{2}$ inch wide, and $\frac{1}{4}$ inch thick. They are late in ripening. The ripe beans are highly esteemed for their delicate flavor and the thinness of the skin. Hardy." (*Vilmorin.*)

2069. PHASEOLUS VULGARIS.**Bean.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Flageolet; King of the greens." Excellent for string beans. "Medium early, distinguished by its height and great vigor. This is a variety of great productiveness which does admirably for culture in the open field." (*Vilmorin.*)

2070. PHASEOLUS VULGARIS.**Bean.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Flageolet dwarf; Triumph of the frames." Recommended as a very early string bean.

2071. PHASEOLUS VULGARIS.**Bean.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Flageolet dwarf, early, mottled." Very good for forcing. Extremely early.

2072. PHASEOLUS VULGARIS.**Bean.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Dwarf, extra early Black Prince." Said to be the earliest variety known. "An excellent, very early, and very productive dwarf bean. In comparative tests it has proved 10 to 15 days ahead of the varieties heretofore considered early. Its dwarf habit, together with other excellent qualities, make it very desirable for forcing. It is hardy and is equally useful for cultivation in the open field and in the amateur's garden." (*Vilmorin.*)

2073. PHASEOLUS VULGARIS.**Bean.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Belgian early black kidney." Used only for string beans because of color. "A very dwarf early bean, chiefly used for forcing in frames. It is seldom more than 10

or 12 inches high and forms a small, close, compact tuft or clump. The leaves are medium, pointed, not much crimped, pale green in color. The pods are straight, green when young, later streaked with violet. Seeds small, about $\frac{1}{2}$ inch long, black, with a white hilum. Used only as a snap bean.

2074. PHASEOLUS VULGARIS. Bean.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Shah of Persia." Said to be the best variety known for eating as green shelled beans, for succotash and like dishes. "Very tall for a dwarf bean, but supports itself well without the aid of a trellis. Pods very numerous, remarkably long, often 8 or more inches, cylindrical, and very straight. They will not fail to attract the attention of both dealer and buyer and yield a good profit to the grower. The foliage is very heavy and the beans are long and black." (*Vilmorin.*)

2075. PHASEOLUS LUNATUS. Lima bean.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Dwarf Soissons, white flat." A sort of lima bean. "Variety truly dwarf, valuable, but only moderately productive. Plant stocky, low; foliage plentiful, uniform, of a deep green and glossy. The bunches of curved, irregular pods are sometimes more easily seen than the foliage. Flowers white." (*Vilmorin.*)

2076. PHASEOLUS LUNATUS. Lima bean.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Dwarf green Soissons." A new variety recommended by Vilmorin. "This bean is strictly dwarf and a valuable variety, very productive, seeds large and of good quality. This adds to the list of dwarf beans a variety having a large green seed." (*Vilmorin.*)

2077. PHASEOLUS VULGARIS. Bean.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Dwarf white butter." Edible-podded beans. "Very good variety, but a little delicate, branching low, somewhat drooping upon the ground, where the leaves become much more pale and smaller than those situated at the top of the stems. Flowers white. Pods nearly transparent or about the color of beeswax, about 4 inches long, containing 5 or 6 short oval beans of a white, creamy color, but sometimes lightly wrinkled. The dry beans are excellent." (*Vilmorin.*)

2078. PHASEOLUS VULGARIS. Bean.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Dwarf Mont d'Or butter." "A very distinct kind, with pale-green stems tinged with red, smooth, light-green leaves, and blue flowers. Pods very numerous, straight, nearly 6 inches long, pale yellow, free from membrane, containing 5 or 6 egg-shaped violet seeds, spotted and marbled with brown. Early and prolific." (*Vilmorin.*)

2079. PHASEOLUS VULGARIS. Bean.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Dwarf white unique." Edible podded beans.

2080. DOLICHOS SESQUIPEDALIS. Asparagus bean.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Dolique asperge." "Grown in the south of France and eaten like string beans. Try in the South. Stems climbing, 6 to 9 feet or over; leaves dark green, rather larger, elongated, pointed; flowers large, greenish-yellow, with the standard bent back, borne either solitary or in pairs; pods pendent, cylindrical, very slender, remarkably long, light green; seeds few, from 7 to 10, kidney-shaped, reddish, with a black circle around the eye, about $\frac{1}{2}$ inch long. Cultivated like the tall kidney beans." (*Vilmorin.*)

2081. DOLICHOS. Bean.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Tonquin," an edible-podded bean, recommended by Vilmorin. (See No. 2080.)

2082. DOLICHOS UNGUICULATUS.**Bean.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Black-eyed bird's-foot." Much grown in Italy, where there are many varieties. "An annual, 20 to 24 inches high, with dark-green, smooth leaves. Flowers large, from white to rose or lilac, with a darker spot at the base of the petals, in twos or threes; pods pale green, straight or curved, 6 to 10 inches long, nearly cylindrical; seeds rather few, kidney-shaped, wrinkled, white, with a black blotch at the eye. It withstands dry hot weather and grows on almost any soils. Edible-podded." (*Filmorin.*)

2083. DOLICHOS LABLAB.**Lablab bean.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Stringless." Probably very important for warm climates to replace the common snap beans in summer. "A very productive and excellent sort for hot countries. Grown like pole beans or on espalier. Its large pods are eaten with the beans before they are full grown." (*Filmorin.*)

2084 to 2090. LACTUCA SATIVA.**Lettuce.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

These varieties of lettuce were imported for the use of the Division of Vegetable Physiology and Pathology, and no seeds will be distributed until the extensive tests made by that division have been concluded. If any of these forms are worthy of further and more extensive trial, additional quantities of seed may be imported. The varieties are as follows:

- 2084. Brown Batavian.
- 2085. Broccoli Roscoff (very early).
- 2086. Madrilene.
- 2087. Maltese.
- 2088. Tremont Winter.
- 2089. Large winter yellow.
- 2090. Green winter Cos. (See No. 2281.)

2091. LAVANDULA ANGUSTIFOLIA.**Lavender.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Important in the perfumery industry. This is a hardy shrub, 2 to 4 feet high, with ascending angled branches, narrow gray leaves, and compact spikes of light-blue flowers. The essential oil, used in perfumery, is distilled from the flowers. Lavender thrives best where there is a mild, moist climate and a calcareous soil. It should be planted in autumn. From 35 to 50 pounds of oil may be obtained from an acre. The plants are check-rowed 8 to 10 feet apart.

2092. LAVANDULA SPICA.**Spike lavender.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Grows on lowlands. Perfume much less valuable than that of *L. angustifolia* (No. 2091); oil used for mixing artists' paints and in veterinary practice.

2093. LENS ESCULENTA.**Lentil.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Extra large yellow." Much grown in central France. (See No. 2094.)

2094. LENS ESCULENTA.**Lentil.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Puy green." Used both for green forage and for food. Grown in France. An annual legume, native to and widely cultivated in Europe for both food and forage. Lentils may be grown in the South as a winter soil cover and green manure crop. The seed should be sown in August or September, broadcast, at the rate of from 100 to 150 pounds per acre. The crop may be cut for hay when in full bloom, or it may be grown for seed. There are perhaps twenty varieties in Europe, differing

in the color and size of the seeds and in the adaptability of the plant to varying soils and condition. The feeding value of lentil forage is about equal to that of red clover. It should be tried wherever crimson clover succeeds.

2095. CUCUMIS MELO.**Winter muskmelon.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Olive d'hiver." "These melons are kept all the winter, and are very common in Europe. Have not seen them in America." (*W. T. Swingle.*)

2096. CUCUMIS MELO.**Cantaloupe.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Algerian." Highly recommended. "A rather dense-growing plant with numerous short branches. Leaves dark green, slightly cut, and very much folded at the edges, which gives them the appearance of being five-lobed and almost funnel-shaped. Fruit slightly elongated, sometimes spherical, bearing roundish warts or scabs, which, together with the bottoms of the furrows, are of a very dark-green, almost black color, contrasting strongly with the light silvery hue of the other parts of the ribs. The dark-green parts finally change to an orange color, but this is not fully developed until the fruit is overripe, so that it should be gathered before the change takes place. The length of the fruit varies from 6 to 10 inches and the diameter from 5 to 8 inches. The flesh is thick, juicy, perfumed, and always sweet. It ripens half late; only one or two fruits on each plant. One of the most hardy summer melons, perhaps surpassing all others in uniformly good quality." (*Vilmorin.*)

2097. CUCUMIS MELO.**Cantaloupe.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Early black rock." Early; easily cultivated. "Fruit nearly spherical, but slightly flattened at the ends, with ribs clearly but not deeply marked; skin usually smooth and without warts, very deep green, almost black, turning orange when ripe. The flesh is orange colored, thick, sweet, perfumed, of excellent quality. The melons are 5 to 6 inches long and 6 to 7 inches through. A plant may carry two melons for the general crop. One of the best and most easily grown of the early melons." (*Vilmorin.*)

2098. CUCUMIS MELO.**Cantaloupe.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Prescott fond blanc de Paris or Large Paris white Prescott." The most generally cultivated variety about Paris; said to be very good; attains a large size. "A vigorous grower. Fruit large, very much flattened at the ends; ribs broad, much wrinkled, covered with knobs and protuberances of all shapes, and irregularly variegated with dark and pale green on a whitish ground. The ribs are separated by very deep, narrow furrows. Flesh orange, very thick, exceedingly fine-flavored, juicy, and melting. The fruit is only 5 or 6 inches long, but is 6 to 12 inches thick. A plant is generally allowed to carry only one melon, or rarely, two." (*Vilmorin.*) Very good quality. "I saw small plants of 'Prescott fond blanc melon' yesterday. They were growing in hotbeds, afterwards to be transplanted to cold frames, two to a square yard, each plant being allowed to bear only one melon. These will ripen at some time in May, and may sell as high as \$6 each in Paris, and I am told that the average price to the market gardener for forced melons is about \$2.50. I think we should seriously consider this industry of melon forcing, since the amount of manual labor required is very small and Americans are very fond of good melons. I believe there is a special variety of the 'Prescott' for forcing. The melons are about 4 to 6 inches in diameter. The slices are said to be sold in the restaurants for from 40 to 60 cents each."

2099. CUCUMIS MELO.**Cantaloupe.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Prescott early frame." Very early; good for forcing. "Fruit spherical or slightly flattened at the ends, with the ribs marked, faintly warty, marbled with dark green on a pale green ground, and with the bottom of the furrows a uniform olive green. Flesh orange, thick, juicy, melting. Melons 4 to 6 inches in diameter. A plant should carry only one fruit for the early crop, and two for the general crop.

This variety is a remarkably early one, and its quality is almost invariably excellent. This and the early black rock melon are the best two kinds for forcing under frames." (*Vilmorin.*)

2100. CUCUMIS MELO.**Cantaloupe.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Vauriac." An improved variety of "Prescott fond blanc." "A splendid variety, almost round in shape, very regularly ribbed, with a rough silvery gray skin. The flesh is a deep, rich orange color, of exquisite texture, deliciously flavored, thick, sweet, and melting. It is a vigorous grower and very prolific." (*Vilmorin.*)

2101. CUCUMIS MELO.**Cantaloupe.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Sugar cantaloupe." One of the best for field culture. "Fruit nearly spherical or flattened at the ends, with ribs not very strongly marked, of a uniform silver-gray color. Flesh orange, very thick, sweet, juicy, and perfumed; skin remarkably thin. Fruit 5 or 6 inches in diameter." (*Vilmorin.*)

2102. MENTHA.**Japanese mint.**

From France. Received through Mr. W. T. Swingle, February 13, 1899. \

A new variety for trial in Michigan.

2103. SOLANUM NIGRUM.**Nightshade.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Isle of France." An improved variety, said to be eaten in hot countries like spinach. "Native of Europe. Annual. A well-known wild plant, generally regarded as a weed, growing most usually near dwelling houses and in cultivated ground. It has an erect branching stem from 1½ to about 2½ feet long, with simple, broad, oval leaves, often wavy at the edges. Flowers white, star-shaped, growing in small axillary clusters and succeeded by round berries, about the size of a pea, of a black or, rarely, amber-yellow color, and filled with a greenish pulp mixed with very small lenticular seeds of a pale yellow color. The kind which is cultivated in the Isle of France under the name of *Bède* does not differ botanically from the common kind, but is more vigorous growing and larger in all its parts. The seed is sown where the plants are to stand, in April, in beds or, preferably, in drills 12 to 14 inches apart. After being thinned out the plants require no further attention, and are quite proof against dry weather. The leaves, however, are more tender and more plentifully produced if the plants are occasionally well watered when they appear to need it." (*Vilmorin.*) The green berries are usually considered to be poisonous.

2104. BRASSICA CAMPESTRIS.**Chinese mustard.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Chinese curled." Eaten like spinach; good for warm countries. This sort may be used for garnishing. An oil is extracted from the seeds in China and India. This is *Sinapis pekinensis* of the gardeners.

2105. BRASSICA NAPUS.**Turnip.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Freneuse." "Root entirely sunk in the ground, spindle-shaped, grayish white, wrinkled, with numerous rootlets, narrowing from the neck like a salsify root, 5 or 6 inches long, 1¼ inches in diameter at the neck. Flesh white, dry, sugary, and very firm. Leaves small, short, very much divided, dark green, forming a rosette which lies flat on the ground. It succeeds best in rather poor, gravelly soils. It is the most highly esteemed of the dry-fleshed turnips."

2106. BRASSICA NAPUS.**Turnip.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Half-long white forcing." Useful for forcing under glass.

2107. BRASSICA NAPUS.**Turnip.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Long white Vestus, or Jersey." The principal variety grown by market gardeners in France. "Root white, nearly cylindrical, but swollen at the lower end, 5 or 6 inches long and 2 inches in diameter in the thickest part. Flesh white, very tender, and sugary." (*Vilmorin.*)

2108. BRASSICA NAPUS.**Turnip.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Red-top Viarmes." White, with red collar; good flavor; good for field culture late in season.

2109. BRASSICA NAPUS.**Turnip.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Long red Tankard." Used for feeding cattle. The root grows 12 to 14 inches long and 3 inches in diameter, and projects one-third its length above the soil. The upper portion is violet red.

2110. BRASSICA NAPUS.**Turnip.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Large white globe, purple top." Used for feeding cattle.

2111. NIGELLA DAMASCENA.**Fennel flower.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Yellow-seeded." The peppery seeds are used for seasoning; much grown in Egypt. An annual garden herb. "Plant upright, red tinted, and branching. Leaves grayish green, divided into numerous linear segments. Flowers terminal, pale blue. Sow in spring in a warm exposure. The seed matures during the month of August and is used for seasoning. Will grow in warm countries only." (*Vilmorin.*)

2112. ALLIUM CEPA.**Onion.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Yellow Trebons." A Spanish onion, which should be tried in the South. Mild flavor. "Bulb more or less elongated, tapering at both ends. The inner coverings are yellow while the outside ones are copper color. Foliage abundant and fine, of a deep green color. Flesh tender, sweet, and of an agreeable flavor." (*Vilmorin.*)

2113. ALLIUM CEPA.**Onion.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Rose Bonnegarde." Remarkably good keeper.

2114. ALLIUM CEPA.**Onion.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Round red Toulouse." Recommended by *Vilmorin.*

2115. ALLIUM CEPA.**Onion.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Dark-red August." Sown in August and transplanted in October, it yields the following summer. Grown in southeastern France. Try in the South.

2116. ALLIUM CEPA.**Onion.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Egyptian Rocambole." "Top onion, producing sets on the tops of stems. The flesh is sweet but not well flavored. The onions themselves decay quickly, but the sets are easily kept over winter." (*Vilmorin.*)

- 2117. CRITHMUM MARITIMUM. Samphire.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
Grows naturally along rocky seacoasts. The leaves are pickled and cooked in Scotland and Ireland. They are succulent and have a spicy flavor.
- 2118. BRASSICA CAMPESTRIS. Chinese cabbage.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
"Petsai improved." Should be sown in autumn in the South for use during the winter. (See No. 2877.) This is the *Brassica chinensis* of gardeners. It is an annual, with the lower leaves oblong, entire, obtuse, glabrous; stem leaves lance-shaped, clasping. It has the habit of chard, which it somewhat resembles in appearance. The leaves are cooked and eaten like the ordinary cabbage. It is much grown about San Francisco by the Chinese.
- 2119. TARAXACUM DENS-LEONIS. Dandelion.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
"Improved giant." Said to be very different from other varieties; leaves upright. Used for greens. The seed should be sown in March or April in beds, and thinned or transplanted to 15 or 16 inches apart. They commence to yield in autumn and supply cuttings of leaves all winter. The plants may be blanched and the leaves used in salads.
- 2120. PISUM SATIVUM. Sugar peas.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
"Edible-podded." Very early; has large pods. The pods of this variety do not have the customary hard, tough, membranous lining of the ordinary sorts. They remain soft and tender, and may be eaten entire.
- 2121. PISUM SATIVUM. Sugar peas.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
"Dwarf Debarbieux." Said to be a valuable bush variety of good quality. An edible-podded pea.
- 2122. PORTULACA OLERACEA. Purslane.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
"Green." An improved variety of purslane for greens and salad. This is the wild plant developed and increased in size by continuous cultivation of selected large-leaved specimens. Its stems grow upright instead of sprawling on the ground.
- 2123. PORTULACA OLERACEA. Purslane.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
"Golden." An improved variety of purslane for salads. Easily recognized by its yellowish leaves. It is eaten cooked like spinach.
- 2124. PORTULACA OLERACEA. Purslane.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
"Large-leaved Golden." "This variety is easily distinguished by the size of the leaves, which are crowded on the stem and are at least twice as large as those of the green purslane or the ordinary golden. The growth is a little less rapid, but the yield is equally large, the plants being stocky and thick set." (*Filmorin*.) Care should be taken in distributing all these purslanes to warn cultivators that they may become bad weeds. (See No. 2123.)
- 2125. CYPERUS ESCULENTUS. Chufa.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
Mr. Swingle thinks this should be tested as a nut food. According to L. H. Dewey it is "the worst weed in the truck gardens from New Jersey to Virginia." The

tubers produced by this sedge are much used by the Spaniards for "Chufa," an orgeat made by soaking 28 hours, mashing, then adding four times as much water and half as much sugar to the paste, which is then passed through a sieve and served as a sirup, or used for ices. Old tubers are used for chufa and not those just harvested.

2126. DELPHINIUM STAPHYSAGRIA. Stavesacre.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A large larkspur with racemes of blue-violet flowers, native of the Mediterranean region. The very poisonous seeds are used in making ointments for destroying vermin on man and beast, and the tincture is used for neuralgia and rheumatism.

2127. LYCOPERSICUM RACEMIGERUM. Currant tomato.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Has numerous racemes of round fruits of a bright, scarlet-red color.

2128. SOLANUM SEAFORTHIANUM. Solanum.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

An annual, ornamental climber, with lilac or violet flowers, produced in great abundance during the whole summer. A plant of the highest merit for trellises and arbors, or for covering walls. Recommended for the South.

2129. NIGELLA AROMATICA. Fennel flower.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Black seeded. (See No. 2111.)

2130. LYCOPERSICUM ROSERIGERUM. Cherry tomato.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Tomate en chaplet." This and No. 2127 should be used in hybridizing to produce new races of currant tomatoes.

2131 to 2138. ORYZA SATIVA. Rice.

From Italy. Received through Mr. W. T. Swingle, February 13, 1899.

The Italian rices, especially those from Padua, command very good prices in the world's markets. They should be carefully tried in the South in comparison with the best American varieties. The varieties in the collection, all from Piedmont, Italy, are as follows:

- 2131. "Very early Bertone."
- 2132. "Francone."
- 2133. "Java."
- 2134. "Nostrano."
- 2135. "Novarese" or "d'Ostiglia."
- 2136. "Peruviano."
- 2137. "Pugliese."
- 2138. "Vilquarterio" or "Morozi."

2139. CICER ARIETINUM. Garbanzo.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

This plant, long known in English botanical literature as chickpea, a corruption of the French "*Pois chiche*," has recently been advertised in this country under the misleading name "Idaho Pea." In all Spanish countries it is a common table vegetable known as "*garbanzo*." As this name is prevalent in California and the Southwest, as well as in Puerto Rico, it seems best to adopt it for general use. In British India the name "gram" is also applied to the same plant.

A valuable plant for warm countries, resistant to drought; sow in early spring; not only useful for cattle food, but very good eating peas, tasting much like white beans, and also making excellent soup. Should be soaked at least 12 hours before being cooked, or the pea will be hard in the center.

This plant is a branching annual, with many upright stems from the same root. The leaves resemble those of the vetch, having 7 pairs of small leaflets. These are oblong, soft-hairy all over, $\frac{1}{2}$ inch long or less, and sharply toothed on the margins. The flowers are borne singly in the axils of the leaves on short stalks about $\frac{1}{2}$ inch long. The pods are bladderly, inflated, from $\frac{1}{2}$ to $\frac{3}{4}$ inch long, and finely pubescent with glandular hairs. Each pod contains one, or very rarely two, large seeds, which are wrinkled and bear a fanciful resemblance to a ram's head, whence the Latin name *arietinum*. The seeds are a little larger than those of the common garden pea, to which they are quite similar.

The "Idaho" pea was cultivated at the Colorado Experiment Station in 1895 and 1896. Professor Cooke states that "it has demonstrated its ability to make a large growth with plenty of water and a fair growth with a very limited supply. It belongs to the pea family, and is grown in rows 30 inches apart, the plants 6 to 12 inches apart in the rows. Its growth indicates that it can be raised for about 1 cent per pound."

About 30 to 50 pounds of seed are used per acre, depending upon whether it is sown in drills or broadcast. In India the largest acreage is in the northwest provinces, where the soils are similar to those in the States west of the one hundredth meridian, and the climate is much like that of New Mexico and Arizona. All authorities agree that it is better suited to arid and semiarid regions than to humid ones, the crop apparently requiring a great many sunny days during its season of growth. Better results are secured in growing it with irrigation than without, although it makes a fair yield on comparatively dry soils.

The seed should be sown not earlier than May 15, or at the higher altitudes about the 1st of June, and, if some of the short-season varieties are procured, there will be less danger of their being caught by early frosts. It might prove of some value in parts of the Southern States as a winter crop and soil cover on lands which are unsuited to the vetches and crimson clover.

The average analyses of the seeds show that they contain 20.5 per cent crude protein, 3.9 per cent fat, and 59.4 per cent carbohydrates, having approximately the composition of the seeds of the field pea commonly grown in the Northern States.

Digestion experiments have not been made with them, but their fattening qualities in use show them to be fully as valuable as the seeds of many of the other legumes.

The leaves of the gram are viscid with a secretion which contains oxalic, acetic, and malic acids, the first of these predominating. In India the secretion is collected by means of cloths spread over the plant at night and wrung out in the morning when wet with dew. The solution thus obtained is used in the preparation of cooling drinks, and also finds sale as a vinegar. The forage is said to be actually poisonous to horses on account of the excess of oxalic acid in the leaves. Cattle eat it, but it often proves injurious to them, although to a less extent than to horses. However, this crop is not ordinarily grown as a forage crop, but for the seeds, and the seeds alone are used in India for feeding purposes.

Reports of this pea grown in the Rocky Mountain regions mentioned yields estimated at the rate of 90 bushels to the acre, but this is very unusual. The average crop in India is about 10 bushels to the acre, and the highest yields do not exceed 25 bushels, the latter only when grown on the best soils under the most favorable conditions.

2140-2150. LINUM USITATISSIMUM.

Flax.

From France and Russia. Received through Mr. W. T. Swingle, February 13, 1899. The following varieties of flax were sent:

2140. "Common French flax."

2141. "Large-seeded flax." A race of flax having particularly large seeds, grown as a winter flax for oil in Southern France, Sicily, and Algeria.

2142. "White-flowered." A spring flax, said not to degenerate in France, vigorous, easily grown, yields abundantly a fiber of ordinary quality esteemed for machine spinning. Seed is ripe when fiber is mature. A large variety, should be sown thinner than other sorts.

2143. "True Riga flax." The standard Russian fiber flax; seed from Russia.

2144. "French one-year Riga." Riga flax is said to be improved by being grown one season in France; it degenerates later.

2145. "Pskoff." A superior form of Riga flax. Seed grown in France.

2146. "Improved Russian Pskoff." A spring flax. A variety of Riga flax, but higher, having finer fiber and not degenerating in France, as does the Riga. Vilmorin recommends this as the best variety for France. Seed from Russia.

2147. "French-grown Royal." See No. 2148.

2148. "Russian Improved Royal." A spring flax, like Riga flax, but maturing seed without noticeable deterioration of the fiber, which is fine and silky and is employed in Belgium for the finest fabrics. Rather late, white-flowered. Seed from Russia.

2149. "Yellow-seeded flax." A North American variety, grown also in Ireland. Yields more fiber and seed than No. 2140, and produces a paler oil.

2150. "Winter flax." "This variety is the best for seed, but its fiber is of inferior quality. It is rather tender in the north of France. It may be sown in spring also." (*Vilmorin*.)

2151. PINUS PINEA FRAGILIS.

Stone pine.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Thin-shelled piñons are produced by this variety.

2152. SYMPHYTUM ASPERRIMUM.

Prickly comfrey.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A coarse, rank-growing, perennial herb, with purple flowers in nodding, one-sided clusters, and large, rough leaves. It is a native of the Caucasus. It has been extensively tried in this country. Although it will produce a great bulk of forage on rich or swampy soils its cultivation is not recommended. Prickly comfrey does not compare with the clovers, alfalfa, or cowpeas in feeding value, and where the latter can be grown it is not advisable to plant it.

It is propagated from the roots. These are set out in rows $1\frac{1}{2}$ to 2 feet apart, the plants 16 to 20 inches apart in the row. At first of slow growth, prickly comfrey will in the course of two years yield from 3 to 6 tons of cured forage per acre. It has been recommended for waste, swampy lands in Florida.

2153. CYTISUS PROLIFERUS ALBUS.

Tagasaste.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A shrubby, perennial legume with silvery gray leaves. It is a native of the Canary Islands, and has been recommended as a forage plant for hot and dry regions. It has proved successful in Algeria and South Australia. The seeds should be soaked 24 hours in warm water to aid germination. They are then planted rather thickly in a seed bed, where they should remain a year to get well rooted. The 1-year-old trees are transplanted to the field where they are to remain, being set in rows 6 to 8 feet apart, and are cultivated until they are 2 or 3 feet high. At the end of 3 years cattle or sheep may be turned into the field, and the tagasaste will require no further treatment except to be topped 5 or 6 feet from the ground to prevent it growing too tall. The leaves and twigs are nutritious. Cattle and sheep are said to fatten rapidly upon it. When once firmly established tagasaste will withstand any amount of drought, and for that reason might be profitably introduced into the arid Southwest.

2154. TRIGONELLA FOENUM-GRÆCUM.

Fenugreek.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

An annual legume, highly esteemed in Algeria as forage for fattening cattle. It has a rank, characteristic odor, which prevents its use for milch cows because of the odor and flavor given to the milk. Under irrigation fenugreek grows 2 to 3 feet high. The seeds are used in condition powders. The seed is sown in autumn or early spring at the rate of 15 to 20 pounds per acre, and the crop is ready to cut when the flowers appear. For trial in the Southwest.

2155. LATHYRUS SATIVUS.

Bitter vetch.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A native of middle and southern Europe, which is adapted to cultivation in warm climates. The fodder is superior to that of vetches, but the yield is less. In India it is grown as a winter crop, often on heavy, clayey soils which will grow no other legume. Great caution must be used in feeding the seeds of this plant, as they are said to contain an alkaloid which is poisonous to domestic animals and to man. It is much cultivated in the Mediterranean regions.

2156. GLYCINE HISPIDA.**Soy bean.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Yellow Etampes." The soy bean requires about the same soils and climatic conditions as indian corn. It should be planted in late spring or early summer, after the ground is warm. In general the early varieties are best to grow for seed and the late ones for forage. Seed is sown broadcast or in drills at the rate of from 2 to 4 pecks per acre. The crop grows rapidly and does not require much cultivation except to keep down weeds. One hundred pounds of soy bean hay contain 88.7 pounds of dry matter. Of the 51 pounds digestible there are 10.8 pounds of crude protein. The ripe soy bean seeds contain 34 per cent of protein, 17 of fat, and 33.8 of carbohydrates. In 100 pounds of seeds there are 66.8 pounds of digestible food.

2157. SPERGULA MAXIMA.**Giant spurry.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Giant spurry." An annual forage plant producing a low, tangled mass of succulent stems with numerous narrow leaves. It is an excellent catch crop in short seasons. It has been recommended for sowing over the ranges in southern California, and as a first crop on the pine barrens of Michigan. Twenty to 30 pounds of seed is enough to sow per acre, as the seed is very small. It is considered fine feed for cattle and sheep, though the amount produced is not very large.

2158. SECALE CEREALE.**Rye.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"De Mars ordinaire." Three months' rye. A very distinct variety. The earliest of the spring sorts. Grain small.

2159. ROBINIA PSEUDACACIA.**Locust.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

2160. PYRUS ARIA.**Beam tree.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Known also as "Whitebeam." A small, deciduous tree, a native of Europe, bearing red fruits, edible when very ripe. "As an ornamental tree the whitebeam has some valuable properties. It is of moderate size, and of a definite shape; and in summer, when clothed with leaves, it forms a compact green mass, till it is ruffled by the wind, when it suddenly assumes a mealy whiteness. When the tree is covered with fruit it is exceedingly ornamental." (*Loudon.*)

2161. PYRUS ARIA LATIFOLIA.**Beam tree.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Allouchier de Fontainebleau." A variety of the beam tree with thick, rounded leaves, white beneath, and brick-red fruits.

2162. PYRUS TORMINALIS.**Wild service tree.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Of possible value for plant breeders. A tree 40 to 50 feet high, native of northern Europe and western Asia. It has simple, lobed leaves, and bears small fruits, sometimes eaten when in a state of incipient decay like medlars. "As an ornamental tree its large green buds strongly recommend it in winter time, as do its fine large-lobed leaves in summer and its large and numerous clusters of rich brown fruit in autumn." (*Loudon.*)

2163. AMELANCHIER VULGARIS.**Amelanchier.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A shrub or small tree, native of southern Europe. The fruits are edible.

2164. CAPPARIS SPINOSA.**Caper.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

The pickled flower buds are known as capers. The plant is a shrubby, trailing perennial, with handsome flowers. It is extremely drought resistant and withstands some frost. A profitable industry might be developed in sheltered valleys in southern New Mexico, Arizona, and California, where the conditions as to soil and climate approach those of the Mediterranean countries, where capers are grown commercially. The shrubs commence to bear in five years from seed or in two years from suckers. About 2,000 plants are set per acre. Full-grown bushes may be 6 feet high and bear 12 to 15 pounds of capers, which are worth, when pickled, from 10 to 15 cents per pound wholesale in France. The principal obstacle to the successful culture of capers in the Southwest is the high price of labor, it being necessary to pick the buds by hand. It has been suggested as a suitable shrub for planting on deforested semiarid mountain slopes.

2165. LONICERA CAPRIFOLIUM.**Honeysuckle.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

An ornamental, hardy vine, with sweet, glutinous berries, which might perhaps be improved by selection or crossing. The upper leaves are cup-shaped, being united around the stem.

2166. ZANTHOXYLUM AMERICANUM.**Prickly ash.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A small tree, native in northeastern United States. The bark is used in medicine.

2167. CORNUS MAS.**Cornelian cherry.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A small tree, 10 to 20 feet high, with edible fruits suitable for jellies and preserves; hardy. The wood is hard, flexible, tough, and exceedingly durable, and is much used in Germany for the handles of forks, hoes, and other agricultural implements.

2168. COTONEASTER INTEGERRIMA.**Cotoneaster.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

An ornamental shrub with bright-red berries; from Europe.

2169. ARALIA MANDSCHURICA.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A low shrub, native of northern China, valuable for ornamental landscape work; hardy.

2170. CRATAEGUS OXYACANTHA.**White thorn.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

The hawthorn is to be found on dry soils in Europe, northern Africa, and western Asia. It varies greatly with soil and climate. The flowers are generally white and fragrant, but vary in color, some being tinged with red, or, in cultivated varieties, a full pink or crimson. The fruit is edible. Most of the varieties blossom in the month of May.

2171. CRATAEGUS AZAROLUS.**Azarole.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A deciduous tree, 20 to 30 feet high, a native of the Mediterranean regions. It bears small fruits, ripening early in autumn, which are much prized in southern France, both for eating fresh because of their pleasant acidity, and for making preserves and jellies. For preserving they are picked before completely ripe. They appear in the Marseilles markets early in September and remain until into October. The improved varieties (see Nos. 2547 and 2548) are propagated by grafting on hawthorn, pear, or more rarely on seedling azaroles.

- 2172. JUNIPERUS OXYCEDRUS.** **Juniper.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
- 2173. ILEX INTEGR.** **Holly.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
A hardy Japanese ornamental shrub.
- 2174. LAGERSTROEMIA INDICA.** **Crape myrtle.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
Mixed varieties. A shrub 6 to 8 feet high, with beautiful pink flowers. It is hardy as far north as St. Louis, Mo. Very ornamental. Originally from China.
- 2175. LARIX SIBIRICA.** **Larch.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
A straighter and more rapidly growing species than the European larch. It also leaves out earlier and loses its leaves sooner in autumn. "Siberian larch."
- 2176. CELTIS AUSTRALIS.** **Nettle tree.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
A hardy European shade tree, growing from 25 to 40 feet high. The small fruits, resembling withered cherries, are edible after frost. Grown in southern France for whip and tool handles.
- 2177. VACCINIUM MYRTILLUS.** **Whortleberry.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
A low, erect shrub, with angular branches and deciduous, bright-green leaves. The globular, pink, waxy flowers are followed by blue-black berries. These are much used in Europe for preserves and for coloring wine.
- 2178. VACCINIUM VITIS-IDAEA.** **Cowberry.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
A low evergreen plant, with short, creeping stems and bright-red edible berries. These are often sold in England as cranberries. It grows in cold woods and bogs.
- 2179. RHAMNUS FRANGULA.** **Alder buckthorn.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
An European hardy tree or shrub. The wood is largely used for charcoal for the manufacture of gunpowder. A cathartic drug and a yellow dye are extracted from the bark.
- 2180. RHAMNUS INFECTORIA.** **Yellow berry.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
A small tree or shrub, native from Persia to Asia Minor. The unripe fruits form the Persian berries, or yellow berries of commerce. A yellow dye extracted from them is largely used in printing calicoes and cotton goods.
- 2181. RHAMNUS ALPINA.** **Buckthorn.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
"Alpine buckthorn." "Forests of the Alps. A shrub 10 feet high, remarkably beautiful, erect, much branched. Leaves alternate, oval, crenulate, glabrous, and wrinkled, of a brilliant deep-green color." (*Nouveau Jardinier.*)

2182. PALIURUS ACULEATUS.**Christ's thorn.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A half-hardy, thorny, deciduous rhamnaceous shrub or low tree, 15 to 30 feet high, bearing curious buckler-shaped fruits. "On both shores of the Mediterranean it grows to about the same height as the common hawthorn, on rocky sterile places. In many parts of Italy hedges are formed of this plant." (*Loudon.*)

2183. PHOTINIA GLABRA.**Chinese hawthorn.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A small tree with shining evergreen leaves and beautiful clusters of flowers appearing in spring. From China and Japan; closely related to the loquat or Japanese medlar.

2184. DIOSPYROS LOTUS.**Date plum.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

The best stocks for grafting Japanese persimmons. The roots are horizontal instead of vertical as in *Diospyros virginica*, thus facilitating the transplanting of the young trees.

2185. PISTACIA TEREBINTHUS.**Terebinth.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A small deciduous tree native to southwestern Asia. The fragrant Cyprian or Chios turpentine exudes from wounds in the bark. This resin is utilized in the manufacture of a chewing gum used by Turkish ladies.

2186. PLATANUS ORIENTALIS.**Plane tree.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

This is one of the best of the deciduous shade trees for city use, because of its beauty, longevity, and resistance to smoke, gas, etc. The trees often reach 90 or 100 feet in height. Hardy in St. Louis, Mo., and Washington, D. C.

2187. ABIES CEPHALONICA.**Fir.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A Grecian fir growing 40 to 60 feet high, much resembling the silver fir. "It is a fine ornamental species of rather rapid growth and of beautiful and regular habit. It sometimes suffers from spring frosts because of its precocious growth." (*Bon Jardinier.*)

2188. ABIES PINSAPO BABORIENSIS.**Fir.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A hardy new variety from the mountains of North Africa.

2189. RHUS SUCCEDANEA.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A small ornamental tree or shrub, furnishing "Japan wax."

2190. THUYA ORIENTALIS.**Arbor vitae.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Chinese arbor vitae." For hedges and arbors.

2191. LIGUSTRUM LUCIDUM.**Privet.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A Japanese hedge plant or ornamental shrub with leathery evergreen leaves, larger than those of the European privet.

2192. VIBURNUM TINUS.**Laurestine.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

An ornamental shrub; originally from Corsica, where it forms dense woods. The leaves are evergreen. The pretty pink flowers appear in winter, and are followed by dark blue berries. Very ornamental. For the South.

2193. XANTHOCERAS SORBIFOLIA.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A low-growing, deciduous tree from the mountains of northern China. For landscape gardening. Hardy. It has leaves like the mountain ash and terminal racemes of large white flowers with a yellow eye, changing to red brown.

2194. ZIZYPHUS SATIVA.**Jujube.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A small tree, native of Asia Minor, with edible fruits of a beautiful red color and of the size of a large olive. The pulp, which surrounds the single seed, is yellowish white, is sweet, and has a vinous flavor. It is mostly dried and used in making sirups, pastes, tablettes, etc., used as a pectoral. The tree, belonging to the family Rhamnaceae, is of rather slow growth and somewhat tender. It requires much light and heat, but resists drought. It should be tried in California and Arizona. There are several varieties propagated by suckers. (See No. 2554.)

2195. STACHYS SIEBOLDI.**Stachys.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

"Chinese artichoke." The most important of the new vegetables introduced by Paillieux from China. I find them very good and think they will find favor in America for much the same uses as new potatoes.

This is a perennial herb with simple or branched four-sided stems, 12 to 16 inches high. The leaves are opposite, lance-shaped, cordate at the base, crinkled, and rough; and the flowers are borne in whorls of 4 to 6 on the upper part of the stems. The tubers are borne on the roots in the same manner as potatoes. They resemble a string of coarse beads closely crowded together and flattened at their ends. When prepared according to French methods the tubers are cooked from 12 to 15 minutes. If boiled for a longer time they soften and become watery. They are served with sauces like broad beans, and are said to possess a delicious and delicate flavor. They may be fried or cooked in a variety of ways, or may be used in salads, alone or with other vegetables. They also make fine pickles with onions, peppers, and gherkins.

The plant is hardy, resisting severe cold. It is propagated from the tubers. These are set out in rows in a rich, loamy clay soil very early in spring, about potato-planting time. They are covered to the depth of 6 or 8 inches in hills 16 inches apart. The weeds are kept down during the summer, but the ground must not be stirred after the 1st of October, so as not to disturb the new tubers which are forming about that time. They will be ready to dig in November, and should be stored in dry soil at a uniform temperature and protected from the air to prevent discoloration. In France yields of 5 or 6 tons of Stachys tubers per acre are often obtained. The Stachys is a lover of moist, cool situations and does not thrive where exposed to great heat.

According to Professor Johnson, as quoted in Garden and Forest (10, p. 70), the tubers contain "eight times as much nitrogen as a potato of the same weight and a large quantity of a carbohydrate called galactin, which is more digestible than starch, being allied to dextrin, and therefore more easily converted into sugar. For this reason the tubers of this plant would be especially useful for invalids and persons of delicate digestion, since they bear the same relation to the substance of the potato that peptonized foods do to ordinary meats.

2196. TRAPA NATANS.**Water chestnut.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Should be tried in swamps. An annual aquatic floating on the surface of ponds. It produces large nuts with an edible kernel. Native to middle and southern Europe.

2197. AGARICUS CAMPESTRIS.**Mushroom spawn.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

2198. DIOSCOREA BATATAS.**Yam.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

The great objection to this plant is the difficulty of harvesting the roots, which are quite long and largest in diameter at the lower end. For trial in the South. Cultivate like sweet potatoes.

2199. DIOSCOREA BATATAS.**Yam.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

Bulbills. These are produced at the bases of the leaves and in two years produce large yams. (See No. 2198.)

2200. OXALIS CRENATA.**Oca.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

The white variety, said to have been derived from the yellow by selection, but scarcely equal to it in vigor, though considered more desirable by some on account of being less acid.

The oca of western South America, which is there much appreciated, but so far not liked in Europe. Try in the South.

"Perennial, but cultivated as an annual. Stem fleshy, reddish, prostrate, bearing very numerous leaves, composed of three roundish-triangular thickish leaflets; flowers axillary, with five yellow petals striped with purple at the base; tubers swollen, elongated ovoid, marked with hollows and protuberances (like some kinds of potatoes, especially the Vitelotte variety), and narrowed at the end which joins the stem; skin very smooth, and of a yellowish white or red color.

"*Culture*.—The oca plant is easily propagated from the tubers, which are planted in May, in light rich soil, in rows which should not be less than 3 feet apart, on account of the spreading growth of the stems of the plant. As it continues to grow for a long time and is very sensitive to cold, it is better, if possible, to start the tubers in a hotbed in March and plant them out in May, at which time they will be pretty forward. As the stems lengthen they should be covered with light soil or compost in order to promote the formation of new tubers, taking care to leave 6 or 8 inches of the end of the stem uncovered. The tubers do not commence to swell until rather late in the season, and are not gathered until the ends of the stems have been killed by frosty weather.

"*Uses*.—The tubers are highly esteemed in Peru and Bolivia, where they are used in great quantities. When they have been recently gathered they have a very acid and therefore not very agreeable taste. The people of South America get rid of this acidity by putting them into woolen bags and exposing them to the action of the sun, the effect of which is that in a few days they become floury and sweet. If they are kept thus exposed for several weeks, they dry up, become wrinkled, and acquire a flavor which somewhat resembles that of dried figs. In this condition they are known by the name '*Cauí*.' In addition to the tubers the leaves and young shoots may be eaten as salad or as sorrel." (*Vilmorin*.)

2201. OXALIS CRENATA.**Oca.**

Yellow variety.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

(See No. 2200.)

2202. OXALIS CRENATA.**Oca.**

Red variety.

From France. Received through Mr. W. T. Swingle, February 13, 1899.

(See No. 2200.)

2203. PRUNUS PADUS.**Bird cherry.**

From France. Received through Mr. W. T. Swingle, February 13, 1899.

A small hardy deciduous tree. The fruit is small and of little value. A native of northern Asia.

- 2204. PRUNUS LUSITANICA.** **Laurel cherry.**
 From France. Received through Mr. W. T. Swingle, February 13, 1899.
 A small tree from Spain and the Canary Islands. Said to be one of the best hardy evergreens for landscape gardening.
- 2205. CASTANEA SATIVA.** **Spanish chestnut.**
 From France. Received through Mr. W. T. Swingle, February 13, 1899.
 The European chestnut is larger than the American. The better varieties are propagated by grafting or budding.
- 2206. QUERCUS CERRIS.** **Bitter oak.**
 From France. Received through Mr. W. T. Swingle, February 13, 1899.
 A quick-growing hardy European oak. The wood is hard, takes a good polish, and is very strong and durable.
- 2207. LAURUS NOBILIS.** **Laurel.**
 From France. Received through Mr. W. T. Swingle, February 13, 1899.
 The fragrant leaves of this small tree are used in the manufacture of condiments and for packing figs. A native of Asia Minor.
- 2208. PERSEA INDICA.**
 From France. Received through Mr. W. T. Swingle, February 13, 1899.
 A laurel-like tree, native in the Canary Islands.
- 2209. CORYLUS AVELLANA MAXIMA.** **Filbert.**
 From France. Received through Mr. W. T. Swingle, February 13, 1899.
 "De Provence." This and the following two numbers were secured merely for samples.
- 2210. CORYLUS AVELLANA MAXIMA.** **Filbert.**
 From France. Received through Mr. W. T. Swingle, February 13, 1899.
 "De Sicile."
- 2211. CORYLUS AVELLANA MAXIMA.** **Filbert.**
 From France. Received through Mr. W. T. Swingle, February 13, 1899.
 "De Piedmont."
- 2212. CORYLUS COLURNA.** **Hazelnut.**
 From France. Received through Mr. W. T. Swingle, February 13, 1899.
 "A pyramidal tree, 40 to 60 feet high, with large shiny leaves, velvety beneath. It has small flattened fruits inclosed in large involucre, divided into long and contorted segments." (*Bon Jardinier.*) This large tree is grown in Europe for ornament; it should also be tried as a stock for filberts.
- 2213. JUGLANS REGIA.** **English walnut.**
 From France. Received through Mr. W. T. Swingle, February 13, 1899.
- 2214. JUGLANS REGIA.** **Walnut.**
 From France. Received through Mr. W. T. Swingle, February 13, 1899.
 "Praeparturiens."
- 2215. JUGLANS REGIA.** **Walnut.**
 From France. Received through Mr. W. T. Swingle, February 13, 1899.
 "Tardif de la Saint-Jean."

- 2216. CHAMAEROPS HUMILIS.** **Palm.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
(See No. 1932.)
- 2217. CHAMAEROPS HUMILIS ARGENTEA.** **Palm.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
(See No. 1932.)
- 2218. DIPLOTHEMIUM CAMPESTRE.** **Palm.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
A stemless Brazilian ornamental palm, with pinnate leaves, silvery beneath.
- 2219. DIPLOTHEMIUM MARITIMUM.** **Palm.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
A stemless Brazilian ornamental palm.
- 2220. PHOENIX.** **Palm.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
Listed as *P. paradenia*, an ornamental palm.
- 2221. PHOENIX DACTYLIFERA.** **Date.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
"Tozeur" dates from Nefta, Tunis; these are good dates, but seem to be inferior to the "Deglet noor" from Biskra, Algeria. The seed is certainly larger. (*W. T. Swingle.*)
- 2222. PHOENIX DACTYLIFERA.** **Date.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
- 2223. PHOENIX DACTYLIFERA.** **Date.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
"Deglet noor." Possibly more select than No. 2222. The seed of these dates is very small, which is a good character.
- 2224. PHOENIX DACTYLIFERA.** **Date.**
From France. Received through Mr. W. T. Swingle, February 13, 1899.
These dates were of exceptionally good quality when I tested them, but were sold without any indication of origin.
- 2225. CITRUS LIMETTA.** **Lime.**
From Botanic Gardens, Trinidad. Received through Messrs. Lathrop and Fairchild (No. 75), 1899.
"Trinidad" Lime, a chance seedling in the Trinidad Botanic Gardens, characterized by the unusually large size. Largest fruits seen $8\frac{3}{16}$ by $9\frac{1}{8}$ inches in circumference. Mr. Hart, the director, says they grow twice that size. The tree a vigorous grower and good producer. For Florida and California.
- 2226. COFFEA STENOPHYLLA.** **Coffee.**
From Trinidad. Received through Messrs. Lathrop and Fairchild (No. 76), 1899.
A free-growing species producing an abundance of small, deep-purple berries. Beans small and roundish, smaller than Arabian coffee. Flavor of very high order.

2227. ATRIPLEX SEMIBACCATUM.**Australian saltbush.**

From California. Received through Messrs. Lathrop and Fairchild, 1899.

The plant is a native of Australia, now very successfully grown in California as a forage and fodder plant for alkali soils. (*D. G. Fairchild.*) A much-branched perennial, which forms a thick mat over the ground to the depth of a foot. The branches extend from 6 to 8 or 10 feet, so that one plant will often cover an area of 20 feet in diameter. The leaves are about an inch long, broadest at the apex, and coarsely toothed along the margin. They are fleshy and somewhat mealy on the outside. The pulpy, flattened fruits are tinged with red at maturity, but dry out as soon as they fall from the plant. They are produced in enormous numbers and ripen continuously for 3 or 4 months, or in situations where growth is perennial throughout the year. At the California Experiment Station it was determined that the seeds germinate better when sown directly on the surface without any covering. When they were harrowed in to the depth of 2 or 3 inches most of them either rotted before germination or the young seedlings were unable to reach the surface. The plant may be propagated by cuttings as well as from seed, and this method is to be preferred wherever the land contains much alkali. The seeds will germinate in the presence of an amount of soda salts which would entirely prevent the growth of cereals. This is especially true in the case of Glauber's salt, though there is, of course, a limit to the amount of alkali the plant will tolerate, as in the case of wheat or alfalfa. This saltbush is perennial in California, Arizona, and New Mexico, but must be treated as an annual wherever the winters are at all severe. In South Dakota plants from seed sown in May had just commenced to blossom at the time of the first hard frost in autumn.

2228. GARDENIA JASMINOIDES.**Cape jasmine.**

From France. Received through Mr. W. T. Swingle, 1899.

An ornamental shrub from China. Much grown in the South. It bears numerous large white very fragrant flowers.

2229. PASSIFLORA COCCINEA.**Passion flower.**

From France. Received through Mr. W. T. Swingle, 1899.

An ornamental vine from South America with fruits which are eaten both raw and cooked. The flowers are scarlet with orange rays. (See No. 1903.)

2230. TUBER MELANOSPERMUM.**Truffle.**

From France. Received through Mr. W. T. Swingle, 1899.

Mr. Swingle writes as follows from Paris, under date of January 29, 1899, on the subject of trufficulture:

"The annual production of truffles in France amounts to over 2,165 tons, worth at wholesale nearly \$4,000,000. Trufficulture is practiced principally in Vaucluse and Dordogne, and to a smaller extent in many departments of southwestern central France. The results have been especially striking on the slopes of Mount Ventoux, in Vaucluse, particularly in the communes of Flassan and Bédouin. During the last 30 years trufficulture has led to the reforestation of large bodies of formerly waste lands. The rental of truffle-farming lands rose at Flassan from 2,700 francs to 8,510 francs in about 20 years. In Bédouin the rise was still more marked, being 11,090 francs in 1877, 23,350 francs in 1882, and 38,485 francs in 1887. During the period from 1862 to 1886, 4,500 acres of barren lands were reforested for the purpose of growing truffles.

"Oaks or hazelnuts are the trees most commonly used in preparing land for the growth of truffles. The oaks usually preferred are *Quercus pubescens*, *Q. pedunculata*, and *Q. ilex*. In Perigord it is the custom to select acorns from trees already bearing truffles. These are sown in nursery rows, and are finally transplanted to the place where they are to grow. The taproot is cut at the time of transplanting, in order that the spreading root system may be induced, as it is extremely desirable that the main roots of the oak shall be near the surface. Hazelnuts yield truffles sooner than oaks. They are adapted to cretaceous soils rather than oölitic. The black mountain oak (*Q. pubescens*) is best for jurassic soils. It is planted in mixed plantations with *Q. pedunculata*. For chalky, cretaceous, or sandy marl soils the evergreen oak (*Q. ilex*) is best. After the forest plantations are established the soil must be artificially infected with spores of the truffles. The most approved method is to make a compost of 25 pounds of truffles with 250 pounds of peat. At the time of sowing 1 pound of this compost is mixed with 2 pounds of earth, and sown broadcast under the trees,

at the extremities of the root systems. Other methods are used, but this gives uniformly good results.

“For the finest truffle, the Perigord (*Tuber melanospermum*), a mild climate is necessary. Its habitat is practically limited to the vine region of France, but it does not thrive as far north or as far south as the grape. Truffles are killed by severe cold, and are injured by excessive heat in summer. They are known to have been destroyed to the depth of 8 to 12 inches by a temperature of 2° F. Continual rains may injure them. They are said to do best where heavy rains in July or August are followed by a dry autumn. The soil must be calcareous. In fact, the soil is usually so decidedly calcareous that chestnuts will not thrive. The soil need not be rich. In fact, some claim that they do best on poor soils on mountain slopes. Good drainage is essential. But it is probable that they can be produced in a great variety of soils, provided these two conditions (lime and drainage) are fulfilled. The best truffles are said to be produced on jurassic lime soils, and especially on those rich in phosphates. I feel sure that trufficulture would pay in the United States could suitable soils and climates be found. They should be experimented with on lime soils in the cotton belt, and also in calcareous regions in California and Oregon. It is first necessary to introduce the oaks and hazelnuts, on the roots of which this plant is parasitic. The ground can be infected with the truffle spores when the forests have reached a sufficient stage of development. Truffles sell for \$2 to \$4 per pound in the Paris market, and are consumed in immense quantities. When fresh they possess a very delicate flavor, and are much in demand by epicures.”

2231. CYPERUS ESCULENTUS.

Chufa.

From France. Received through Mr. Walter T. Swingle, 1899.

A sedge which bears great quantities of small edible tubers on its roots. It is cultivated as pasturage for hogs in European countries. (See No. 2125.)

2232 to 2281. LACTUCA SATIVA.

Lettuce.

(See No. 2084.)

From England:

- 2232. Fulham.
- 2233. Paris white extra selected.
- 2234. St. Albany all heart (No. 3).
- 2235. Cabbage varieties.
- 2236. Tender and true (No. 4).
- 2237. Stanstead Park (No. 5).
- 2238. Buttercup (No. 7).
- 2239. White Chavigny (No. 8).

From Lyons, France:

- 2240. Gotte.
- 2241. Mignonette.
- 2242. Palatine (Le Rousse).
- 2243. German curled.
- 2244. Green Cos forcing.
- 2245. Pierre Benite.
- 2246. Tom Thumb.
- 2247. Red cordon.

From England:

- 2248. Perfect Gem.
- 2249. Golden Queen.
- 2250. Early Paris market.
- 2251. Commodore Nutt.
- 2252. Lonthois.
- 2253. Superb white.
- 2254. Paris green.

From France:

- 2255. Tom Thumb.
- 2256. de Milly.
- 2257. White tennis ball.
- 2258. Crisped small early.

From Erfurt, Germany:

- 2259. Bruine geel.
- 2260. Dreinbrunner.
- 2261. Emperor forcing.
- 2262. Princess head yellow.
- 2263. Wheeler's Tom Thumb.
- 2264. Stonehead yellow.

From Erfurt, Germany—Continued.

- 2265. Eggs.
- 2266. Rofs favorite.
- 2267. Bruine geel.
- 2268. Emperor.
- 2269. Wheeler's Tom Thumb.
- 2270. Jewel.
- 2271. Stonehead early white.
- 2272. Stonehead early green.
- 2273. Stonehead early golden yellow.
- 2274. Roquette.
- 2275. Bruine geel.
- 2276. Kaiser Treib.
- 2277. Rudolf's Liebling.
- 2278. Steinkopf.
- 2279. Verbessertes Treib.
- 2280. Wheeler's Tom Thumb.
- 2281. Kaiser Wilhelm II.

2282. COLOCASIA ANTIQUORUM ESCULENTUM.

Taro.

From Kingston, Jamaica. Received through Messrs. Lathrop and Fairchild (No. 28), 1899.

"The Colocasia is called *Coco* in Jamaica and is prized by Europeans and natives as a vegetable. It is the same as the Taro of Hawaii."

2283 to 2374.

Saccharine sorghums.

(Printed separately in Inventory No. 3.)

2375. VICIA FABA.

Broad bean.

From France. Received through Mr. W. T. Swingle, March, 1899.

Variety, "Windsor."

"*Culture.*—Beans are usually sown where they are to remain about the end of February or the beginning of March. They like a rich, slightly humid, and well-manured soil, but can be grown in any kind of ground.

"Beans may also be sown in a frame in January and planted out about a month afterwards. It is also not impossible, in the climate of Paris, to grow beans after the winter mode of culture which is universally practiced all through the south of Europe. According to this mode, a sowing is made at the end of October or the beginning of November in a position with a south aspect and well-drained soil, and the young plants are sheltered during the winter by placing frames over them. Instead of frames we have sometimes seen hoops of casks stuck into the ground across the beds, so as to form an arched support for straw mats, which were spread over them in very frosty weather. This mode of culture is particularly well suited for dwarf or half-dwarf varieties. The plants which have been pushed on in this way are in full bearing three weeks or a month earlier than those which were not sown until spring.

"The Broad Windsor, which forms the principal crop, is generally sown in March.

"*Uses.*—The seeds or beans, both in the green state and when dry, are eaten boiled. In the south of France the pods are sometimes boiled and eaten when young. Broad beans are not thought so much of in private gardens as kidney beans, but by the poorer classes they are much grown. Generally they are not considered a remunerative crop, inasmuch as they do not continue long in bearing. The green-seeded varieties are usually preferred to the white ones, because they retain their green appearance when cooked, while the white ones become dark brown. Beans are often gathered for table before they have attained half their size; but this is not advisable, as they sometimes taste bitter when so small. The best flavored beans are those that are full grown, but young." (*Vilmorin.*)

2376. CICER ARIETINUM.

Garbanzo.

From France. Received through Mr. W. T. Swingle, March, 1899.

(See No. 2139.)

2377. PHASEOLUS VULGARIS.

Bean.

From France. Received through Mr. W. T. Swingle, March, 1899.

Large common field bean.

2378. BETA VULGARIS.**Sugar beet.**

From France. Imported by the Division of Chemistry from Vilmorin-Andrieux & Co., Paris, France. Received February, 1899.

"Vilmorin's Improved White."

2379. BETA VULGARIS.**Sugar beet.**

From Germany. Imported by the Division of Chemistry from Adolf Strandes, of Zehringen, near Cöthen, Germany. Received February, 1899.

This variety is to be known as "Zehringen."

2380. CUCUMIS MELO.**Winter muskmelon.**

Grown in Utah. Presented by Mr. John F. Brown, of Elgin, Grand County, Utah, who developed the variety and who makes the following statement concerning it:

"Variety 'Eden,' a winter muskmelon. This melon is supposed to have originated in Japan. Some 10 years ago a few seeds were sent to Mr. W. C. Wheeler, of this township, by whom, he does not remember. This seed was divided with me and planted, but the crop failed to mature on the vines and was cast aside as worthless. A few of the melons were concealed by accident under some shocks of corn, and when these were husked in December the melons were found. They had turned yellow and were of fine quality and flavor. Experiments from that time have developed the present perfect 'Eden' melon. This melon does well on any soil that will raise ordinary melons. Plant and cultivate same as other melons. Use no more water than is absolutely necessary, as too much water takes from the quality of the melon, but adds to its size. The most perfect all-round melon will weigh about 9 pounds. Gather at the time of the first frost, keeping only mature melons. The fruits should be cut from the vine, leaving about 3 inches of vine on melon. Store in frost-proof and perfectly dry building above ground, place melons with flat end up, not piling on top of one another. The temperature should be kept just above frost point, but the melons can be forced to ripen, as with other fruits, by putting in a warm place. A hollow seed cavity shows forced growth by using too much water. These melons have been used in the eating houses along the R. G. W. Ry. and in the hotels and restaurants of Salt Lake, Denver, and Colorado Springs, and have always sold at \$3 per dozen and up, delivered at the express office here. Parties in different parts of the United States have tried to raise this melon from seed sent from here, but they failed to mature a crop, as they had no directions to go by, this being the first time that the results of my experience have been made public. I used the last of the 1898 crop February 20, 1899."

2381 to 2541. VITIS VINIFERA.**Grapes.**

The numbers between 2381 and 2541 were applied to a series of varieties of the European grape imported in cooperation with the Division of Pomology in order to permit a thorough and systematic test of the possibility of producing in the South Atlantic States the table grapes now imported from Europe. Such tests are now being conducted by the Division of Pomology at various points in the South, particularly in North Carolina and Florida. No cuttings are now available for distribution, but provision will probably be made later for the distribution of any varieties which may prove worthy of public attention. A full list of all the varieties imported will also be published as a special inventory.

2542. PRUNUS AMYGDALUS.**Almond.**

From Marseilles, France. Received through Mr. Walter T. Swingle, February, 1899.

"Princess." Large and sweet, with a thin shell.

2543. PRUNUS AMYGDALUS.**Almond.**

From Marseilles, France. Received through Mr. Walter T. Swingle, February, 1899.

Very large and sweet; shell moderately hard.

- 2544. PRUNUS AMYGDALUS.** **Almond.**
From Marseilles, France. Received through Mr. Walter T. Swingle, February, 1899.
Very large and sweet; shell hard.
- 2545. PRUNUS AMYGDALUS.** **Almond.**
From Marseilles, France. Received through Mr. Walter T. Swingle, February, 1899.
"Little Pistache."
- 2546. PRUNUS AMYGDALUS.** **Almond.**
From Marseilles, France. Received through Mr. Walter T. Swingle, February, 1899.
"Large Sultan."
- 2547. CRATAEGUS AZAROLUS.** **Azarole.**
From Marseilles, France. Received through Mr. W. T. Swingle, February, 1899.
"Large-fruited, red." An improved grafted variety, said to be of Neapolitan origin. The sour fruits make good preserves. (See No. 2171.)
- 2548. CRATAEGUS AZAROLUS.** **Azarole.**
From Marseilles, France. Received through Mr. W. T. Swingle, February, 1899.
"Large-fruited, white." An improved grafted variety. (See No. 2547.)
- 2549. SORBUS DOMESTICA.** **Sorb apple.**
From Marseilles, France. Received through Mr. W. T. Swingle, February, 1899.
"Ordinary red-fruited." A tree 15 to 40 feet high, grown along roadsides in France. The small fruits are good to eat when very ripe and soft like medlars, and are also used for making a kind of cider. The best sorts are grafted. In the vicinity of Naples, Italy, the fruits, there called "sorbi," are much prized, especially for alternating with figs and other laxative fruits.
- 2550. SORBUS DOMESTICA.** **Sorb apple.**
From Marseilles, France. Received through Mr. W. T. Swingle, February, 1899.
"Large-fruited, gray." (See No. 2549.)
- 2551. PUNICA GRANATUM.** **Pomegranate.**
From Marseilles, France. Received through Mr. W. T. Swingle, February, 1899.
"Common sweet." A shrub for cultivation in the South as a hedge plant and for the fruits, which are as large as an apple and contain numerous small seeds, each surrounded by deliciously flavored pulp. The rind is bitter and astringent. It may be propagated from seeds or cuttings. This and the succeeding two are exceptionally fine improved French varieties.
- 2552. PUNICA GRANATUM.** **Pomegranate.**
From Marseilles, France. Received through Mr. W. T. Swingle, February, 1899.
"Very large-fruited, red." Very beautiful and of very good quality. (See No. 2551.)
- 2553. PUNICA GRANATUM.** **Pomegranate.**
From Marseilles, France. Received through Mr. W. T. Swingle, February, 1899.
"Very large-fruited, violet." Of very good quality. (See No. 2551.)

2554. ZIZYPHUS SATIVA.**Jujube.**

From Marseilles, France. Received through Mr. W. T. Swingle, February, 1899.
 "Variety with large fruits." An improved sort, propagated by suckers. (See No. 2194.)

2555. PYRUS GERMANICA.**Medlar.**

From Marseilles, France. Received through Mr. W. T. Swingle, February, 1899.
 "Variety with large fruits." A hardy European tree with edible fruits.

2556. CAPPARIS SPINOSA.**Caper.**

From Marseilles, France. Received through Mr. W. T. Swingle, February, 1899.
 Cuttings of the cultivated form. (See No. 2164.)

2557. FICUS CARICA.**Caprifig.**

From Marseilles, France. Received through Mr. W. T. Swingle, February, 1899.

2558 to 2604. VITIS VINIFERA.**Grape.**

These grapes, imported from France through Mr. W. T. Swingle, have been turned over to the Division of Pomology. They are not for general distribution. (See also Nos. 2381 to 2541.)

2605. ASPARAGUS OFFICINALIS.**Asparagus.**

From Argenteuil, France. Received through Mr. W. T. Swingle, February, 1899.
 "Hatif Louis L'Herault." An early sort. This and the following are improved French varieties.

The field methods of cultivation of asparagus at Argenteuil are as follows: The plants are set in rows about 2 yards apart. A hole 18 inches in diameter is dug, deepest at its edges, leaving a little mound of solid earth in the center. The little plant is placed with its roots spread out over this central mound at the bottom of the hole, and the earth is filled in, leaving the crown about 2 or 3 inches below the general level of the ground. Each spring earth is heaped up about the plants, and finally mounds are made 20 inches wide and 8 to 12 inches high above the level of the soil. In autumn the canes are cut off 8 inches above the mound, and the mound is leveled to the general surface of the ground, to be again built up the following spring. In the fourth year one or two shoots can be pulled, but the first good yield is not attained until the fifth year. During the picking season the mounds are examined every day, and as soon as the tip of a shoot forces its way through the soil the earth is loosened around it. It is then grasped and broken off at the base by a twisting motion. The bearing season continues for 6 weeks on old plants, as many as 15 or 20 shoots being produced from one root. The canes are allowed to grow all summer. Asparagus shoots grown in this way are often 10 to 15 inches long, and 1 to 2 inches diameter. They sell in the Paris markets during April and May at from 15 to 80 cents per pound. The plants are well manured every alternate spring with well-rotted stable manure or night soil.

The best varieties of asparagus are, in the order of merit, (1) Early Louis L'Herault; (2) Late rose; (3) Medium Louis L'Herault; (4) Late violet.

In forcing asparagus, seedlings are cultivated during the first year much after the manner of onions, and are transplanted when 1 year old at intervals of 20 inches in each direction. Two years after transplanting, if the plants have been properly fertilized and cultivated, they are ready for forcing. They are dug with a very broad-shared plow, shaken free from earth, and brought to the greenhouses from time to time during the winter as required. Of course the tops have to be cut off in autumn to facilitate digging the roots. These asparagus plants consist of a tuft of stout roots about one-fourth inch in diameter, spread out horizontally about a central crown, which shows a number of buds ready to sprout. These plants are now forced as follows: In case a greenhouse is used, they are arranged directly on the floor of low benches having bottom heat, without any earth whatever between them and the bench. The plant is taken in hand, the roots brought to a parallel bundle, and the whole placed in upright position tightly pressed against the other plants. Instead of being 20 inches apart, as in the field, the plants are now scarcely more than 4 inches. When the entire bench is full fine earth is sifted over the tops of the plants until they are covered to the depth of half an inch. They are then watered

and are ready for forcing. In case a hotbed is used, a layer of sifted earth 1 inch deep is placed on top of the manure to prevent the roots from coming in contact with it. Within 10 days shoots of marketable size may be harvested, and thereafter shoots may be gathered every day, since they often grow 2 to 5 inches in a day. They are very easily broken off, since the crown of the root is practically exposed. The roots continue to produce for 6 weeks or 2 months; they are then exhausted and are thrown away. M. Compoint, one of the leading growers, fertilizes his asparagus fields almost exclusively with garbage collected in Paris. He has a contract with the city of Paris to collect garbage in a certain quarter, and applies it directly to his fields. A high percentage of phosphoric acid is very desirable, and a fertilizer containing too large a proportion of nitrogen does not produce plants suitable for forcing. This culture is of immense extent, and in the season M. Compoint employs as many as 30 hands to pack the asparagus, which he ships principally to England and Russia. He also forces blanched asparagus, which is done by leaving the mature plants in position in the garden, digging trenches between the rows, and filling them with fresh manure. The plants are then covered with a layer of earth 8 inches deep inclosed in cold frames. These blanched asparagus shoots are stouter than the green asparagus described above, and of course sell at much higher prices. In general this culture is very much like that of Argenteuil, except that the plants are forced into growth out of season.

2606. ASPARAGUS OFFICINALIS. Asparagus.

From Argenteuil, France. Received through Mr. W. T. Swingle, February, 1899.
 "Medium Louis L'Herault." A medium sort. (See No. 2605.)

2607. ASPARAGUS OFFICINALIS. Asparagus.

From Argenteuil, France. Received through Mr. W. T. Swingle, February, 1899.
 "Late violet." A late variety. (See No. 2605.)

2608. ASPARAGUS OFFICINALIS. Asparagus.

From Argenteuil, France. Received through Mr. W. T. Swingle, February, 1899.
 "Late rose." (See No. 2605.)

2609. ASPARAGUS OFFICINALIS. Asparagus.

From Argenteuil, France. Received through Mr. W. T. Swingle, February, 1899.
 "Verte dite aux petits pois." A very tender and delicately flavored variety. (See No. 2605.)

2610. ASPARAGUS OFFICINALIS. Asparagus.

From Argenteuil, France. Received through Mr. W. T. Swingle, February, 1899.
 "White rose." (See No. 2605.)

2611. FICUS CARICA. Fig.

From Argenteuil, France. Received through Mr. W. T. Swingle, February, 1899.

"Blanc d'Argenteuil." The following methods of growing figs are in use by the best growers at Argenteuil. Figs are trained horizontally, the trunks close to the ground, the top pointing toward the south. In winter the canes are buried under 6 inches of soil. They are covered in October and are dug up again in March. Care is taken to remove all the leaves before covering them. Pruning consists in cutting off all the branches which have borne fruit, leaving only new wood for the next year's crop. This is usually done immediately after the crop has been harvested, in August. As the stems get old they are cut away and replaced by new shoots. The variety chiefly grown is "Blanc d'Argenteuil." Two others are also recommended. Rooted layers, called "Marcottes," may be obtained in any amount from nurserymen at a cost of from 30 to 60 cents per dozen, or cheaper in larger amounts. Fig culture can be carried on in America south of the latitude of Washington, D. C. The fresh figs sell for from 4 to 5 cents each, wholesale, in the Paris markets. They are wrapped in paper and packed in mandarin cases.

The best varieties of figs are, in the order of merit: (1) Blanc d'Argenteuil, (2) Barbillonne, (3) Dauphine d'Argenteuil, (4) Dorée.

- 2612. FICUS CARICA.** **Fig.**
 From Argenteuil, France. Received through Mr. Walter T. Swingle, February, 1899.
 "Barbillonne." (See No. 2611.)
- 2613. FICUS CARICA.** **Fig.**
 From Argenteuil, France. Received through Mr. Walter T. Swingle, February, 1899.
 "Dauphine d'Argenteuil." (See No. 2611.)
- 2614. FICUS CARICA.** **Fig.**
 From Argenteuil, France. Received through Mr. Walter T. Swingle, February, 1899.
 "Dorée." (See No. 2611.)
- 2615 to 2652. VITIS VINIFERA.** **Grapes.**
 These table grapes, imported from France through Mr. Walter T. Swingle, are not for general distribution. They are being tested by the Division of Pomology. (See also No. 2381.)
- 2653. POPULUS DELTOIDES.** **Cottonwood.**
 From Ussy, France. Received through Mr. Walter T. Swingle.
 "Canada poplar." This is the most important forest tree grown in France. Although originally from America, there are many improved strains which might well be again transplanted to the Western prairies. This and the following are improved selected strains which are propagated only by cuttings.
- 2654. POPULUS DELTOIDES.** **Cottonwood.**
 From Ussy, France. Received through Mr. Walter T. Swingle, 1899.
 "Peuplier regeneré." A valuable improved cottonwood for the prairie States. (See No. 2653.)
- 2655. ACER MONSPESSULANUM.** **Maple.**
 From Ussy, France. Received through Mr. Walter T. Swingle, 1899.
 "Erable de Montpellier." A south European shade tree, nearly evergreen in mild climates. The tree is much branched, and becomes very large without attaining a very great height.
- 2656. CORYLUS AVELLANA.** **Filbert.**
 From Ussy, France. Received through Mr. Walter T. Swingle, 1899.
 "Noisetier des bois." Mr. Felix Gillet, of Nevada City, Cal., one of the most successful filbert growers of that State, writes as follows concerning the cultivation of this nut:
 "The most rational way of propagating filberts is by layering. Filberts do not come true to name from seed. In nine cases out of ten filberts produced from seed are of an inferior quality. After the layers are made the plant should be cut back every fall in order to induce the throwing out of new shoots to make layers the ensuing fall, and so on every year. A good many of the plants grown from layers bear the same year they are planted, while seedlings do not bear in less than 5 years. The secret of success in their cultivation is to train the plants as low-standard trees branching at 18 to 30 inches. Set out the trees in rows far apart, with something else in the space between the rows. The trees must be irrigated, for filberts require a constantly moist soil to do well."
- 2657. ARBUTUS UNEDO.** **Strawberry tree.**
 From Ussy, France. Received through Mr. Walter T. Swingle, 1899.
 "Arbousier des Pyrenées." A small, half-hardy tree. Its fruits look something like strawberries. They are said to have a narcotic effect when eaten in large quantities. The fruits do not ripen until the second year, and the plant, covered at the

same time with fruits and flowers, has a very ornamental effect. It flowers in October and November.

2658. CORNUS MAS.

Cornelian cherry.

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

"Cornouiller à gros fruits." A European deciduous shrub or small tree with edible berries. This is an improved variety, propagated by grafting. See No. 2167.

2659. CORNUS TARTARICA.

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

"Cornouiller à bois de Corail." This Siberian dogwood is a small tree. "It has shoots of a fine orange red, covered with a delicate bloom. It makes a splendid appearance in the winter season." (*Loudon.*)

2660. EUONYMUS EUROPAEUS.

Spindle tree.

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

"Fusain à petites feuilles." The flowers, fruits, and leaves are poisonous. The wood is light, strong, compact, and easily worked; much used for shoe pegs, tooth-picks, etc. The tree is very ornamental. Hardy.

2661. HIPPOPHAEË RHAMNOIDES.

Sea buckthorn.

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

"Argousier." An excellent sand binder for the dunes along the seacoast. It is a native of the coasts of northern Europe.

2662. PRUNUS LUSITANICA.

Laurel cherry.

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

"Laurier Portugal." (See No. 2204.)

2663. LAURUS NOBILIS.

Laurel.

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

"Laurier à feuilles rondes." The laurel or bay trees, used in German beer gardens, are grown from cuttings. They are placed in larger pots every 5 years, and pruned to shape, either spherical or pyramidal, in late summer, either August or September. Trees 10 to 15 years old, from 5 to 20 feet high, sell for from \$2 to \$20 each, according to size. Large numbers are shipped to market and purchased by proprietors of German resorts.

2664. LIGUSTRUM OVALIFOLIUM.

Japanese privet.

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

"Troène d'Italie." An evergreen shrub used for hedges. Will grow from cuttings, and in alkaline or saline soils.

2665. QUERCUS SUBER.

Cork oak.

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

"Chêne liege." The cork oak is a native of southern Europe, where it grows on sandy land near the sea. It should be tried along the coast in the Southern States and in California. The trees commence to bear in about 20 years and yield about 10 pounds of cork every 6 or 7 years thereafter.

2666. RIBES ALPINUM.

Alpine currant.

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

A sterile variety of the Alpine currant, a low spreading bush.

2667. ROSMARINUS OFFICINALIS.**Rosemary.**

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

A shrub native of southern Europe and north Africa. An essential oil used in perfumery is distilled from the leaves. It is readily propagated from seed or cuttings. This is famed in Europe as a bee plant and is eaten greedily by sheep. It grows on arid calcareous hills, and should be widely distributed in the warmer portions of this country.

2668. SAMBUCUS PYRAMIDATA.**Elder.**

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

"Sureau pyramidal." An ornamental European shrub.

2669. SORBUS DOMESTICA.**Sorb-apple.**

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

"Cormier." (See No. 2549.)

2670. ELAEAGNUS MULTIFLORA.**Goumi.**

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

A Japanese hardy evergreen bush bearing almost continuously an immense number of edible fruits. In Europe these are used in making preserves. The bush may be propagated from cuttings. The flowers are fragrant. It is quite ornamental, and is recommended for game preserves as food for birds.

2671-2677. PYRUS MALUS.**Apple.**

From Ussy, France. Received through Mr. Walter T. Swingle, 1899.

A collection of French cider apples.

One of the most important cultures in Europe for introduction into America is that of the cider apples. It is very much more important in France than the culture of table apples. No less than 10,000,000 barrels of cider are produced annually. Of late the production of cider has become an exceedingly important industry in some parts of Germany, and I am perfectly certain that it has a great future in America. Professor Goethe, of the Pomological School at Geisenheim, states that the displacement of beer by cider is a great triumph for pomology in two ways: First, because cider, which can be produced by the small farmer, drives out beer, which only those with large capital can hope to brew; second, that cider drinking does not interfere with fruit eating, while beer drinking is universally considered to do so in Germany, and in consequence one almost never sees people eating fruit after beer in a German restaurant. Only those who drink wine or cider eat fruit liberally.

There are hundreds of varieties of cider apples in cultivation. Almost every village in Normandy has its own special sorts. The cider-apple trees are grafted twice. In the first place, any one of a half dozen vigorous growing sorts is grafted at the surface of the ground on the root of a seedling apple. Then the special variety of cider apple is grafted at 6 feet from the ground upon this vigorous stock. This is the almost universal practice in the culture of cider apples, and is claimed to add greatly to the vigor of the trees, besides insuring a straight and strong stem, growing high enough to prevent cattle from browsing on the branches.

The cider apple is seldom planted in orchards, but the trees are generally set out in pastures, as it is held that their growth does not interfere with that of grasses in meadows, nor with the cultivation of small crops. It is because of the fact that they are grown in meadows that they are grafted 6 feet or more from the ground.

It should be noted that in France the cultivation of cider apples is complicated by the fact that at least three varieties of a totally different character must ripen at the same time. According to Baltet, there are practically three seasons of ripening—early, medium, and late. At each season there must be at least three varieties—one acid, one sweet, and one bitter. For example, for those ripening in the second season, "Camoise," "Rouge-Bruyere," and "Amèr-doux" may be grown. Cider made from acid sorts is said to be poor, and to turn brown on exposure; that from sweet sorts is pale and keeps poorly; that made from the bitter sorts is small in quantity and too thick. In general, the acid sorts are used to give quantity, the sweet to give quality, and the bitter to give keeping qualities.

The following varieties are comprised in this collection:

2671. "Amère de Bertecourt." A cider apple of the third season, having erect branches. Tree healthy, very prolific, and hardy. Fruit is bitter, rich in sugar and tannin, ripening in December. Juice has density of 1.078, containing 217 grams of sugar and 3.5 grams of tannin.
2672. "Barberie." "A very vigorous tree, very high, very fertile. Fruit bitter-sweet, rich in sugar, tannin, and mucilage, elements necessary for the production of a good cider; of excellent quality, ripening second season, during second half of November." (*Baltet.*) Juice has density of 1.080 and contains 5 grams of tannin per liter.
2673. "Bramtot." A variety grown from seed by M. Legrand. The tree is vigorous, of upright growth, hardy, and very prolific. The fruit is sweet, slightly bitter, and produces first-rate cider; it ripens late in December (third season). Juice, density 1.077, sugar 170, tannin 2.87 per liter. "The Bramtot is one of the choice sorts, the diffusion of which can not be too strongly counseled." (*Truelle.*)
2674. "Blanc Mollet." A very old variety, much grown in France. The tree is round-topped, vigorous, and prolific; it flowers early and often suffers from spring frosts in consequence. Fruit ripens early (end of September), bitter-sweet, perfumed. Juice has density of 1.060 and contains 228 grams of sugar and 3 grams of tannin per liter. It makes good cider, but is principally used to freshen old ciders of the previous year.
2675. "Frequin rouge." A vigorous tree, of great productiveness. "Fruit bitter, containing the elements necessary for a rich, savory, and healthy cider; of excellent quality. Maturing during the first half of November (second season)." (*Baltet.*) Juice having density of 1.080 to 1.087 and containing 177 grams of sugar and 2 of tannin per liter.
2676. "Grise Dieppoise." A variety of much merit, originated from seed by M. Dieppoise; much grown in Normandy. A vigorous, prolific tree, of pyramidal shape. Fruit very sweet, very good, very late, usually not ripening until after being picked. Juice has density of 1.094, containing 201 grams of sugar and 2.25 of tannin per liter; remarkable for its richness in cane sugar. It should be mixed with juice of lower density if used for making apple brandy.
2677. "Martin Fessard." A very vigorous sort, of great productiveness; hardy. Fruit bitter, very rich in tannin, making a cider which keeps two years. Juice bitter, but agreeable; density, 1.075 to 1.082.

2678. PYRUS COMMUNIS.

Pear.

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

"Professor Bazin." A new variety, tree vigorous, very prolific, fruit large, ripen-late (December), green or pale melon yellow. Flesh juicy, aromatic, very good flavored.

2679. PRUNUS PERSICA.

Nectarine.

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

"Lily Baltet." Very prolific. Fruit large, highly colored, very good, ripening at end of July. A new variety, said to be one of the best of the early nectarines.

2680. PYRUS COMMUNIS.

Pear.

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

"Eva Baltet." This is a large pear, about the size of the Kiefer, but with the coloring of the California Bartlett. It is of first-rate quality.

2681. PRUNUS DOMESTICA.

Plum.

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

"Reine Claude Sagot." A large greenish yellow plum of very good quality, ripening midseason.

2682. PRUNUS CERASUS.

Cherry.

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

"Jaune d'Ollans." Very prolific; fruit yellow, sweet, producing by distillation a kirsch of the very best quality.

2683. PRUNUS DOMESTICA.**Plum.**

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

"Reine claud tardive de Chambourey." A late form of Reine Claude ripens in September in east central France.

2684. CRATAEGUS.

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

Two species of *Crataegus* were comprised in this shipment. They received the following numbers in the Division of Pomology:

"Splendens" (17075). A spineless hawthorn, having pretty carmine fruits which are very striking in winter.

"Azarole de Carrière" (17076). An ornamental form of the azarole (see No. 2211), having rose-colored flowers and red fruits the size of a cherry.

2685. CORNUS MAS.**Cornelian cherry.**

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

"Cornouiller à gros fruit rouge." Cornel with large red fruits; an improved variety propagated by grafting. (See Nos. 2167, 2658, and 2686.)

2686. CORNUS MAS.**Cornelian cherry.**

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

"Cornouiller à fruit jaune." A small tree, with pleasant acid fruits, used for preserves. This is a yellow-fruited variety which has smaller fruits than No. 2685.

2687. RUBUS IDAEUS.**Raspberry.**

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

In this shipment were included seven varieties of ever-bearing raspberries. These should prove of much value for small home gardens. Raspberries of the ordinary varieties should be planted for the early crop, since the ever-bearing sorts do not commence to produce fruit until late summer, though they continue to bear until frost. The varieties received the following numbers in the Division of Pomology:

"Belle de Fontenay" (17077). Fruit rather large, almost round, dark purple.

"Merveille rouge" (17098). Fruit carmine red.

"Perpetuelle de Billard" (17079). Fruits rather large, round, deep red. Fruit clusters long. Plants multiply rapidly.

"Surpasse Falstoff" (17080). Fruit large, conical, red, of good flavor. Fruit clusters abundant. Probably the best ever-bearing sort.

"Surpasse Merveille" (17081). Fruit medium-sized, round, cream-yellow, of fairly good flavor.

"Surprise d'automne" (17082). Fruit rather large, oval, sulphur-yellow.

"4-Saisons" (17083). Fruit yellow.

2688. PYRUS COMMUNIS.**Pear.**

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

Cider pears are used much as are cider apples in France (see No. 2671), and often preferred for planting along roads because of their more upright growth. Three varieties were included in this shipment, which received numbers in the Division of Pomology as follows:

"Carisi" (17066). An upright grower, often used for stems in double-worked standard trees. Fruit medium-sized, ripening late in autumn; very good for pear cider. Density of juice 1.060, sugar 149, tannin 3 grams per liter.

"De Navet" (17067). A tall vigorous tree, used for planting along roadsides. Fruits small, rich in sugar; good for manufacture of alcohol, yielding 13 to 14 per cent; ripening about the middle of October. Density of juice 1.090, sugar 221, tannin 2 grams per liter. Makes pear cider of first quality if mixed with juice of "de Souris."

"De Souris" (17068). "A vigorous tree with vertical branches, for planting along roadsides; very prolific. Fruit small, excellent for pear cider, maturing about end of October. The juice, rich in tannin (3½ grams in 1 kilo), may be mixed with that of other sorts sweeter or aromatic, such as 'de Navet,' 'de Croixmare,' 'de Cerciaux,' 'Masuret,' 'Sabot,' etc. The juice is amber-colored and perfumed, and has a density of 1.075." (*Baltet*.) Some authorities give the tannin content of the juice as high as 10.7 grams per liter, and sugar 142 grams.

- 2689. PYRUS MALUS.** **Apple.**
 From Troyes, France. Received through Mr. Walter T. Swingle, 1899.
 "Gros Loçard." A large winter apple of excellent keeping qualities, good for the table as well as for cider. Extensively grown in Pays d'Othe, Department of Aube, east central France.
- 2690. PYRUS MALUS.** **Apple.**
 From Troyes, France. Received through Mr. Walter T. Swingle, 1899.
 "D'Avrolles" or "Pommate d'Avrolles." A cider apple suited to slightly clayey soils. Produces cider of good quality, which keeps well. It is grown also in Pays d'Athe and is always grafted there on a high stem. (See No. 2671.)
- 2691. PYRUS BACCATA.** **Apple.**
 From Troyes, France. Received through Mr. Walter T. Swingle, 1899.
 Hardy Siberian crab apples, many forms, very ornamental, some edible. Should be tested in the Northwest as an ornamental, for stocks, and used in hybridizing. This shipment was found to contain representatives of ten varieties, which received separate numbers in the Division of Pomology as follows: Cerise (17089), Ampla (17090), Atropurpurea (17091), Coerulescens (17092), Fastigiata (17093), Flava (17094), Flavescens (17095), Intermedia (17096), Kaido (17097), Serotina (17098).
- 2692. SORBUS AUCUPARIA.** **Mountain ash.**
 From Troyes, France. Received through Mr. Walter T. Swingle, 1899.
 "Sorber majestieux." A grafted variety of vigorous growth.
- 2693. TILIA TOMENTOSA.** **Silver linden.**
 From Troyes, France. Received through Mr. Walter T. Swingle, 1899.
 "Argente remarquable." An ornamental tree from southern Europe. A grafted variety of great vigor and unusual beauty for street planting.
- 2694. QUERCUS CERRIS.** **Bitter oak.**
 From Troyes, France. Received through Mr. Walter T. Swingle, 1899.
 "Chêne hybride d'Autriche." An evergreen species remaining bright green even in cold climates. (See No. 2206.)
- 2695. SALIX PURPUREA.** **Osier.**
 From Troyes, France. Received through Mr. Walter T. Swingle, 1899.
 "Osier rouge." This is the osier willow of northern Europe, used for basket work. It requires a deep moist soil, matures in 3 years, and may be cut annually for 8 or 10 years without replanting. An acre yields from 6 to 8 tons of canes, worth \$10 or more per ton. These willows are grown in France along roadsides, and especially along the railway, the right of way being farmed out to large contractors for that purpose. The two principal varieties are Osier Gravanche and Osier Luisette de Bordeaux, the first named being a long strong-growing sort; the latter fine and solid. Several other species, such as *Salix lutea* and *S. coerulea*, are also grown on a small scale.
- 2696. SALIX ALBA.** **Osier.**
 From Troyes, France. Received through Mr. Walter T. Swingle, 1899.
 "Osier jaune." (See No. 2695.)
- 2697. PYRUS MALUS.** **Apple.**
 From Troyes, France. Received through Mr. Walter T. Swingle, 1899.
 "Cider apple." (See No. 2671.)
 This shipment includes three varieties, numbered as follows in the Division of Pomology:
 "Rouge de Trèves" (17086). A vigorous upright grower, much used for planting along roadsides in eastern France and southwestern Germany. A late variety,

ripening from the middle of November to January, and claimed to be exceedingly fruitful even in bad years. It is a bitter-sweet apple of medium size. The juice has a density of 1.085, and contains 212 grams of sugar and 1.5 of tannin to the liter. It makes good cider without admixture.

“Médaille d’Or” (17087). A variety recently obtained by M. Godard, and said to be one of the best cider apples in France. It flowers late enough to escape all frosts and ripens in the second season, or during October and November, in northern France. It is extremely fruitful, and has bitter fruit of medium size, which contains both sugar and tannin in sufficient amount to make good cider. Density of juice 1.082, sugar 255, tannin 5 grams per liter. Useful also for apple brandy.

“Pomme à tannin” (17088). A late variety, containing nearly 1 per cent of tannin in the juice, more than in any other cider apple. Useful only for mixing with other sorts to improve keeping qualities of cider.

2698. FRAXINUS.

Ash.

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

“Frêne crêpu nain d’un vert sombre.” An ornamental ash with very dark green curled leaves, propagated by grafting.

2699. ULMUS.

Elm.

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

“Orme vegeta.” An ornamental elm of extremely rapid growth, for street planting.

2700. POPULUS DELTOIDES?

Cottonwood.

From Troyes, France. Received through Mr. Walter T. Swingle, 1899.

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Physalis pubescens, 2001.
 violacea, 2002.
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Pinus pinea fragilis, 2151.
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Pisum sativum, 2120, 2121.
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Poinciana regia, 1915.
Populus deltoides, 2653, 2654, 2700.
Portulacca oleracea, 2122, 2124.
Posoqueria longiflora, 1971.
Protea mellifera, 1916, 1917.
Prunus amygdalus, 2542-2546.
 azarolus, 2684.
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Mr. Harlan.

S. P. I. 16.

U. S. DEPARTMENT OF AGRICULTURE,
DIVISION OF BOTANY.

INVENTORY NO. 6.

FOREIGN SEEDS AND PLANTS

COLLECTED IN

AUSTRIA, ITALY, AND EGYPT BY THE HONORABLE
BARBOUR LATHROP AND MR. DAVID G. FAIR-
CHILD FOR THE SECTION OF SEED AND
PLANT INTRODUCTION.

INVENTORY OF FOREIGN SEEDS AND PLANTS.

INTRODUCTORY STATEMENT.

This Section has recently received, through the generosity of the Honorable Barbour Lathrop, of Chicago, an interesting series of seeds of economic plants secured by himself and Mr. David G. Fairchild in Austria, Italy, and Egypt. As shown in the notes furnished by Mr. Fairchild, several varieties are likely to prove of importance in the South and Southwest, and it accordingly seems desirable, in order to avoid delay in distribution, to make this material the subject of a special inventory.

It is from the warm and generally more or less arid Mediterranean region that economic plants suitable to the South and Southwest are to be expected, rather than from northern Europe, where the climate approximates that of New England and Canada. The value of such importations as the present can not, therefore, be inferred from the usual variety tests alone; they should also be tried under conditions similar to those indicated in the accompanying information. Some may be found to thrive where the domestic varieties will not, and thus permit the range of a crop to be extended.

From the neighborhood of Padua, Italy, comes a seedless raisin, No. 3921, which has aroused such lively interest among the California vineyardists to whom cuttings were sent that an additional order has been placed with the parties from whom the original lot was received.

The Jannovitch cotton, No. 3991, is a new long-staple variety suitable for upland cultivation. It has only recently become known in Egypt, but is there considered extremely promising, so that seed sells at a high price.

The Egyptian clover, No. 4254, a plant of the greatest importance in Egypt, has been repeatedly tried in the United States, but thus far without marked success. The information sent by Mr. Fairchild with the present importation shows, however, that its uses have thus far been entirely misunderstood in this country. Instead of being suited to a hot climate and a dry soil, it is adapted only for winter growth in warm regions, on wet, overflowed or irrigated lands. The Egyptian clover may thus find a use in the rice and sugar growing districts. It should also be tried in localities subject to inundation, such as the lower valley of the Colorado, about Yuma.

The difficulty of securing and maintaining a green turf has long been felt as a serious obstacle in the work of beautifying public grounds or domestic surroundings in the Southern States. Under No. 4263 Mr. Fairchild describes what appears to be an admirable substitute for a grass lawn, and one that will endure several years where no grass has been found at all successful.

It will, of course, be readily understood by all who examine these inventories that the values of the various importations are extremely unequal. Some may prove of technical interest merely, while others will have far-reaching commercial importance.

It is not to be expected that all the species or varieties secured by our agricultural explorers will prove to be entirely new to specialists or dealers. Many plants have been imported and tested heretofore without any permanent record as to results. We are intentionally securing small quantities of the seeds of many such species, either to permit tests by some improved methods of culture, or for distribution to parts of the country where experiments have not been made. Furthermore, specialists in various crops often apply for imported seed of well-known plants, in order to ascertain by careful comparative tests the existence of differences in vigor or other qualities, some of which, though inconspicuous, are economically of great importance. It should be remembered, for instance, that many plants cultivated only in an unimproved form in this country have been subjected in Europe to long and careful selection, by which improved strains have been developed.

Some applicants have sent in requests for long lists of seeds. While there is no desire to limit the number which properly equipped experimenters may receive, correspondents are requested to bear in mind that the seeds and plants listed in these inventories are not a part of the Congressional seed distribution. As a rule they are not secured in amounts sufficient for general distribution, the intention being to place them in the hands of the State experiment stations and of private experimenters known to be fully capable of growing them with the best possible results.

It is requested that in all cases our numbers be recorded by the experimenter for use in reporting the results, and also for permanent reference. The report blanks will bear numbers corresponding to those of the inventory, so that the reports will enable us to bring together for later transmission to our correspondents the results secured in all parts of the country.

O. F. COOK,
Special Agent in Charge of Seed and Plant Introduction.

WASHINGTON, D. C., *January 30, 1900.*

INVENTORY.

3774. CUCUMIS SATIVUS.

Cucumber.

From Vienna, Austria. Received through Messrs. Lathrop and Fairchild (No. 256), September 18, 1899.

"Moravian cucumber," a variety used extensively in Vienna for the manufacture of the "Salz Gurken" or salt cucumbers which are a specialty of Vienna, being made to perfection there. The fruits when full size, but before ripening, are picked and packed in kegs. The skin is left intact and the cucumbers are laid in layers with salt and wild cherry or some other aromatic leaves. A heavy weight is placed on the cucumbers and they are left to ferment 14 days, after which they are ready for the table. After peeling they are served as a side dish. They are consumed in great quantities in Germany and Austria. These salt cucumbers are also made and used in America, and growers will find this variety valuable for this purpose.

3776. CUCUMIS SATIVUS.

Cucumber.

From Tetschen, Bohemia. Received through Messrs. Lathrop and Fairchild (No. 242), September, 1899.

"Langer Walzen" is considered the best cucumber of Bohemia. Many thousand pounds are shipped into Berlin and Dresden from this region, where the cucumbers are used for salads and fermented to make "Sauer Gurken."

3777. SOLANUM TUBEROSUM.

Potato.

From Tetschen, Bohemia. Received through Messrs. Lathrop and Fairchild (No. 241), September, 1899.

"The black salad potato" said by the owner to have been imported seven years ago from some place in Africa by Mr. Joseph Wenzel, the gardener of the agricultural college at Tetschen, a breeder of potatoes, who imported six tubers. He has been reproducing it and finds it very productive. The potato is dark purple both inside and out, somewhat marbled but very showy as a salad potato. The quality is said to be very good and it is considered valuable as a novelty. (*Distributed.*)

3778. COCHLEARIA ARMORACEA.

Horse-radish.

From Tetschen, Bohemia. Received through Messrs. Lathrop and Fairchild (No. 250), September, 1899.

The variety of horse-radish known in Germany and Austria as the "Maliner" or "Maliner Kren" is considered superior to any other. It is grown to perfection in Kutteneberg, a small village southeast of Kolin in Bohemia, whence large quantities are exported. It is distinguished by its unusually sharp penetrating taste, uniform shape, and excellent keeping qualities.

A deep, loose, strong soil with plenty of moisture is best suited to the culture of horse-radish. In autumn the soil is forked over to a depth of 2 or 2½ feet and well-rotted barnyard manure is thoroughly worked in to the depth of a foot or more. A narrow bed, 3 feet wide, is prepared, and in late March or early April the horse-radish cuttings are planted along both edges, alternating so that they are not opposite each other across the bed. The cuttings are 12 inches long and are set out 18 inches apart. Instead of being placed vertically in the ground they are planted in an obliquely horizontal position, with the upper, larger end covered by only three-quarters to 1 inch of earth, while the lower lies 3 to 4 inches deep. As a consequence of this slanting position, the new roots thrown out from the lower side of the cutting, striking vertically downward, make almost a right angle with the main stem, and it is these slender roots from which the new cuttings for the next season's planting are made.

During the summer the ground is kept free from weeds and the surface of the soil lightly stirred. Toward the end of June the bed is gone over carefully and each cutting uncovered separately and slightly raised out of the soil by hand. Care is taken not to injure the perpendicular roots which have formed at its lower end. All small rootlets are rubbed off from the body of the root with a woolen cloth; those that are too large to be removed in this manner being cut close with a sharp knife. A small quantity of powdered charcoal is scattered over the cut surfaces to prevent decay. The cutting is again covered with earth as before.

The roots are allowed to continue growth until the end of September, at which time the harvest begins. The cuttings which have been two seasons in the ground, the first year as vertical roots and the second in an oblique position, are by this time large enough for market. In digging the horse-radish a long-bladed mattock or spade is used which enables the digger to remove not only the obliquely planted cutting, which is the marketable product, but also the new roots from its lower side, of which the cuttings for the next year are to be made.

A more extended account of this culture has been published in Circular No. 20 of the Division of Botany. (*Distributed.*)

3862. CUCUMIS SATIVUS. Cucumber.

From Saaz, Bohemia. Received through Messrs. Lathrop and Fairchild (No. 229), September, 1899.

“Sauer Gurken or salt pickle cucumber, a native, medium long, very tough-rinded sort, suited especially for shipping purposes. Hundreds of tons are shipped from Saaz to points in Germany every year. It requires a clay loam and a mild climate.”

3899. GOSSYPIUM BARBADENSE. Cotton.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 278), November 13, 1899. Seeds submitted to Mr. H. J. Webber for experiments in crossing cotton varieties.

Stamm's No. 1. “Variety of Egyptian white cotton, selected by Christian Stamm; prized very highly by originator and predicted as a great success. Not yet in the market and only a few hundred seed existing.” (*Distributed.*)

3900. GOSSYPIUM BARBADENSE. Cotton.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 279), November 13, 1899. Seeds submitted to Mr. H. J. Webber for experiments in crossing cotton varieties.

Stamm's No. 2. “Variety of Egyptian white cotton, selected by Christian Stamm; prized very highly by the originator and predicted as a great success. Not yet in the market and only a few hundred seed existing.” (*Distributed.*)

3901. GOSSYPIUM BARBADENSE. Cotton.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 280), November 13, 1899. Seeds submitted to Mr. H. J. Webber for experiments in crossing cotton varieties.

Stamm's No. 3. “Variety of Egyptian white cotton, selected by Christian Stamm; prized very highly by the originator and predicted as a great success. Not yet in the market and only a few hundred seed existing.” (*Distributed.*)

3902. CUCURBITA PEPO. Squash.

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 258), November 14, 1899.

“Barrucca.” “The so-called ‘Zucca,’ a kind of squash grown to perfection in Venice and forming a favorite dish of the people. It is baked like the Hubbard squash in America and eaten without even salt or pepper.”

3903. CUCURBITA PEPO (?). Squash.

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 259), November 14, 1899.

“Sample seeds of a variety of squash or Zucca called ‘Santa.’ A long, slender, very large variety, shaped much like a sausage, and sometimes 5 feet long. This is considered best for making puddings and preserves. It is sweeter than the variety Barrucca. Both of these varieties are said to deteriorate rapidly when grown outside of Venice.” (*Distributed.*)

- 3904. CAPSICUM ANNUM.** **Sweet pepper.**
 From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 260), November 14, 1899.
 "Peperone dolce quadrato." "Italian sweet pepper from the Lagoon island of Lido in Venice. A medium-sized red pepper of truncated pyramidal shape, $1\frac{1}{2}$ inches in diameter." (*Distributed.*)
- 3905. CAPSICUM ANNUM.** **Sweet pepper.**
 From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 261), November 14, 1899.
 "Italian sweet pepper from the Lagoon island of Lido in Venice. Large, 2 inches in diameter, orange-yellow, persimmon-shaped, sweet pepper. No varietal name." (*Distributed.*)
- 3906. HIBISCUS ESCULENTUS.** **Okra.**
 From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 262), November 14, 1899.
 Grown from seed imported from Constantinople into Venice; from the Monastery San Lazare. To test in comparison with ordinary okra in Louisiana." (*Distributed.*)
- 3907. CAPSICUM ANNUM.** **Red pepper.**
 From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 263), November 14, 1899.
 "Long dark red variety, the common one in Venice, from the Monastery of San Lazare." (*Distributed.*)
- 3908. BRASSICA OLERACEA.** **Cauliflower.**
 From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 264), November 14, 1899.
 "Seed of a noted cauliflower grown on the Giudecca, an island in Venice; bought from a peasant." (*Distributed.*)
- 3909. BRASSICA OLERACEA.** **Cabbage.**
 From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 265), November 14, 1899.
 "Seed of a famous cabbage grown on the Island of Giudecca in Venice. Bought from a peasant." (*Distributed.*)
- 3910. ALLIUM CEPA.** **Onion.**
 From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 266), November 14, 1899.
 "Seed of an excellent variety of onion 3 inches in diameter. Similar to the 'Tripoli' onion of Vilmorin's Vegetable Garden."
- 3911. CUCURBITA PEPO.** **Vegetable marrow.**
 From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 267), November 14, 1899.
 "Zucchini." "Seed of a variety of gourd or vegetable marrow, grown to especial perfection in Venice. The fruits are picked when only 2 inches long and cooked in various ways: fried in oil and tomatoes, fried with eggs, etc., much as egg-plants are treated. Said to be of very delicate flavor. The culture is the same as for cucumbers. The young fruit alone being removed, the plant flowers for a long time."
- 3912. PRUNUS PERSICA.** **Peach.**
 From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 268), November 14, 1899.
 "From the noted Venetian peaches which are shipped to Vienna in large numbers every year. From trees grown on the Island of Giudecca. The fruits are of very good form, color, and taste; are free-stones with white flesh. The trees grow well on the rich shallow soil of the island. May be useful for crossing."

3921. VITIS VINIFERA.

Grape.

From Italy. Received through Messrs. Lathrop and Fairchild (No. 269), November 18, 1899.

The Sultanina rosea Seedless Raisin Grape was procured at Saonara, near Padua.

"This grape, though a fairly good table sort, and worthy of cultivation for this purpose, is primarily for raisin production, and will meet with the keenest appreciation from raisin growers. The story of the mother plant from which these were taken is that a certain Signor Santonetti, a wealthy Roman gentleman, formerly Major Domo of the Pope, gave a friend several plants ten years ago, taken from specimens in the gardens of the Vatican. The truth of this story I do not vouch for, and think it more probable that the grape was introduced from Smyrna by the Armenian monks, who have a large monastery near Saonara, and are constantly going and coming between Asia Minor and Italy. My attention was called to the grape by Father Giacomo Issanerdeus, an Arneian monk of San Lazare. The grape is a vigorous grower, and a moderately heavy producer, I am told. Like certain Riessling varieties, it often flowers two or three times a year. On the old mother plant I saw at Saonara there were blossoms, young grapes, and matured bunches. The bunches are twelve to sixteen inches long, loose, with ovate or elliptical, rose-colored berries, which are seedless so far as my observation goes, only occasional rudimentary seeds being met with. Regarding the flavor, I can report from hearsay that it is excellent, very sweet and juicy. From personal experience with *unripe* bunches, it does not appear to be superior to many other sorts. The fruit ripens here in September, and by the 20th all the ripe bunches had been picked, and only a few green ones in the deep shade were obtainable. The young plants sent are grafted on resistant American stocks, and when seen in the nursery were not in a rapidly growing condition, too large grafting wood having been taken. This grape should be given the most serious attention, both by raisin growers and breeders of new varieties, as it has remarkable possibilities. That it has not become more generally known in Italy may be explained by the fact that no raisins to speak of are made in this part of the country and the Italian vine grower is bound by tradition and will plant no new sorts. The Sultanina vines thrive in rich, sandy soil, receive only stable manure, resist drought very well, and are pruned and trimmed in the ordinary ways. An abundance of sunlight is required." (*Distributed.*)

3971. LACTUCA.

Lettuce.

From Edfu, Egypt. Received through Messrs. Lathrop and Fairchild (No. 290), December 28, 1899.

Arabic "Khass." "A sample of seed of a lettuce used for the preparation of oil. The culture is extensive in Egypt and the method of making the oil is quite similar to that for the sesame oil. (See description under No. 3972.) The oil is considered by the natives as inferior to sesame, whether in quality or yield I was unable to make out. Mr. George Bonaparte of the Agricultural College of Cairo says it is an excellent table oil."

3972. SESAMUM INDICUM.

Sesame.

From Edfu, Egypt. Received through Messrs. Lathrop and Fairchild (No. 291), December 28, 1899.

"Simsim." "The seed is sown in rotation with sorghum, often while the sorghum is ripening, between the rows. The land is irrigated once, immediately after sowing, and a second time when two inches high. No more water is then applied to the crop. The plants thrive on poor land. Planted here in November, the crop ripens in four months. The plants are cut green and exposed to the sun until dry. The seed is threshed with flails, ground fine, and put in collapsable baskets of matting, 1 foot in diameter. These baskets, full of sesame meal, are piled up one on the other under a screw press, and vertical pressure is applied until the oil flows out and is collected in a small pit below the press. The oil sells in Egypt for about \$8.50 per 100 pounds. It is used as a table oil, but is considered inferior to olive oil."

3973. CICER ARIETINUM.**Garbanzos.**

From Edfu, Egypt. Received through Messrs. Lathrop and Fairchild (No. 292), December 28, 1899.

"This is a red variety. The seeds are roasted and eaten like peanuts by the native farming class. They taste not unlike pop corn. The roasted peas are also used in soups. Roasted in the green state they are said to be the most delicate. The vines as dried and fed to cattle; said also to be an excellent fodder crop; grown extensively in Upper Egypt. Seed planted 5 or 6 inches apart, drilled, or sown broadcast. In places overflowed by the Nile it needs no watering but is sown after the subsidence of the water and left to take care of itself. On irrigable land it is watered when sown, again when in flower, and a third time when the seeds are being formed. One 'fedan' (about 1.1 acres) yields a profit of \$20, according to the statement of a large land owner of Edfu. About 27 bushels of seed are produced per 'fedan.'"

3974. CUCURBITA PEPO.**Vegetable marrow.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 293), December 28, 1899.

"A green variety. In Egypt the seeds are planted $2\frac{1}{2}$ inches deep, 2 seeds in a hill on the sides of an irrigated embankment, the hills 3 by 5 feet apart. A small quantity of pigeon manure is first buried in the hill and the seeds are planted above it. This process is used for winter culture as the pigeon manure is heating. Plants yield fruits beginning with the fortieth to fiftieth day for three and one-half months. The fruits are stuffed with chopped meat and served."

3975. CUCURBITA PEPO.**Vegetable marrow.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 294), December 28, 1899.

"An excellent white variety. For culture see No. 3974."

3976. CAPSICUM ANNUUM.**Sweet pepper.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 295), December 28, 1899.

"Thin-skinned, indigenous variety of sweet pepper, $2\frac{1}{2}$ inches in diameter, and of excellent flavor. Shape, flattened oblong. Plants 3 feet high, perennial in a warm country; will stand slight frosts." (*Distributed.*)

3977. CAPSICUM ANNUUM.**Red pepper.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 296), December 28, 1899.

"A very hot red pepper, oblong in shape, 3 inches long, and bright red in color. It is perennial, many seeded, and thin skinned." (*Distributed.*)

3978. CORCHORUS OLITORIUS.**Edible jute.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 297), December 28, 1899.

"Seeds sown and cultivated just like those of jute, broadcasted thick together in beds. It is ready to cut in 40 to 50 days and may be cut twice. The dried leaves are powdered and used for thickening soups, or chopped green, exposed to the sun for a few hours, and then cooked, forming a very thick mucilaginous soup. It forms a favorite dish of the Egyptian peasants, probably because of its cheapness."

3979. HIBISCUS ESCULENTUS.**Okra.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 298), December 28, 1899.

"A long-fruited, native Egyptian variety. According to Mr. G. Bonaparte, of the Agricultural College of Gizeh, this is a more succulent sort than No. 3980."

3980. HIBISCUS ESCULENTUS.

Okra.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 299), December 28, 1899.

"Short-fruited variety." Reported to be a heavier cropper than No. 3979. A French seedsman has just ordered 200 tons of seed of this variety. Preferred by the natives for drying purposes when young; very hardy. The young fruits, one-half to three-quarters of an inch long, are strung on strings and dried. In this state they are kept indefinitely. This variety is reported the best for this purpose. Sow 4 or 5 seeds in hills 1 foot apart, on ridges $2\frac{1}{2}$ to 3 feet apart. Okra is often planted as a mixed crop with cotton.

3981. ERUCA SATIVA.

Rocket salad.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 300), December 28, 1899.

"Seed broadcasted. Forty days until harvest. Said to be an excellent Egyptian variety."

"A low-growing plant with leaves like those of the radish. Stem erect, smooth, and branching; flowers rather large, white or yellow, veined with violet; seed vessels cylindrical, with three not very prominent ribs on each side; seeds brown, smooth, and somewhat flattened. The seed is sown in the open ground from April to the end of summer, and the leaves may be cut in about six weeks or two months. In spring or autumn fresh leaves are abundantly produced after cutting, but in midsummer the plants run to seed rapidly. Frequent waterings are useful in keeping the leaves tender, and in modifying the flavor, which is very strong and somewhat like that of horse-radish. The young leaves are eaten as salad." (*Vilmorin.*)

3982. LUFFA CYLINDRICA (?).

Sponge gourd.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 301), December 28, 1899.

"This is a very pretty perennial creeper for trees or trellises. It requires little care and forms a luxuriant foliage. The blossoms are much sought by honey bees. When sown in March in France it yielded fruits in July. When young the fruits are pickled like cucumbers, or fried. The mature fruits contain a tough skeleton of the greatest convenience, when dried and split open, as a scrubbing brush for bath or kitchen. Although a perennial, it is grown as an annual preferably, as the fruits which are grown the first year are larger. It is very profitable as a small crop in Egypt. The plant requires plenty of water and is easily propagated by layering. Most native houses are provided with the skeletons of this gourd for domestic purposes. Hats and various other articles of apparel are manufactured from Luffa fiber."

3983. LACTUCA SATIVA.

Lettuce.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 302), December 28, 1899.

"Grown in Upper Egypt exclusively for oil production. Sown broadcast in beds and left to seed. Oil is pressed from the ground seed precisely as from cotton seed. The yield of oil is 200 kilos per 4,200 square meters, or from 9 to 11 pounds per bushel of seed. The oil is an excellent substitute for olive oil."

3984. BRASSICA RAPA (?).

Strawberry spinach.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 303), December 28, 1899.

"Leaves of the 'Strawberry spinach' are used as a salad, especially on account of the green coloring matter, which is easily extracted and gives a brilliant color to vegetable dishes. The seed is sown broadcast. Five to ten cuttings of leaves may be made. The scientific name is doubtful. This is reported as an Egyptian variety."

3985. CUCURBITA MAXIMA.**Pumpkin.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 304), December 28, 1899.

A yellow, oblong variety, 1½ feet long. Both this variety and No. 4265 were compared with 15 European sorts grown in Egypt and found superior, both in amount of flesh and in sweetness. The trials were made by Mr. George Bonaparte, Gizeh, near Cairo.

3986. CITRULLUS COLOCYNTHIS.**Colocynth.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 305), December 28, 1899.

"Cultivated like other gourds. It has medicinal properties, but the reason for introducing it at the present time is as a moth preventative. In Egypt the dried fruits are crushed to powder, mixed in the proportion of 2 to 1 with black pepper, and spread over clothing to prevent moths from eating it. As it has no odor, this preventative is worthy of consideration. The seeds and fruits are extremely bitter and poisonous."

3987. VICIA FABA.**Broad bean.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild, (No. 306), December 28, 1899.

"A red-seeded variety of Egyptian origin. Planted here two seeds in a hill, 12 inches apart, in November. It fruits in five months. The young pods and seeds are cooked and eaten. The beans mature dry and are cooked. This variety does better here than the imported European sorts."

3988. ALBIZZIA LEBBEK.**Lebbek.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 307), December 28, 1899.

"The Lebbek" is altogether the most beautiful shade tree that is extensively planted in Egypt. It was introduced from the East Indies previous to 1807, and hundreds of thousands are now planted along the roadways. As an avenue tree it is not excelled for shade and grace. The seeds are planted in seed beds and when the young plants are one year old they are transplanted to nursery rows where they are allowed to remain three years. They are then "topped" to the desired height and transplanted. The first year after transplanting they need water, later they stand drought exceedingly well. If left in the nursery rows until the trunks are 3 inches through, the three or four new branches formed make a graceful crown. The tree has endured 28 degrees Fahrenheit or possibly lower. The blossoms are sought by bees. The wood is of good quality. It grows in poor limestone or rocky soils. This one tree has transformed the roadways about Cairo into most beautiful shady avenues. For Southern California and Florida. A more extended account will appear in Circular No. 33 of the Division of Botany.

3989. CYPERUS LAEVIGATUS.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 308), December 28, 1899.

"Sedge from which Egyptian mats are made. The plant is used in reclaiming salt marshes and the leaves are utilized for mat manufacture. The seeds are broadcasted in beds, well watered, and after 50 days transplanted 1 foot apart each way. The plants must have their roots always covered with water. It is perennial, 9 to 13 feet high, with stems ½-inch in diameter. There are many cultivated varieties."

3990. CUCUMIS CHATE.**Salad cucumber.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 309), December 28, 1899.

"Salad cucumber, grown very extensively in Egypt, as it ripens fruit for the table 20 days earlier than the ordinary cucumber and is a heavier producer. The fruits are long, horned-shaped, and of delicate flavor. They are more succulent than ordinary cucumbers, according to Mr. Geo. Bonaparte, of the Gizeh Agricultural College near Cairo. The young fruits are pickled."

3991. *GOSSYPIUM BARBADENSE*.

"Jannovitch" cotton.

From Alexandria, Egypt. Received through Messrs. Lathrop and Fairchild (No. 310), December 28, 1899.

"This new variety of Egyptian cotton, the 'Jannovitch,' was originated as a sport from the 'Abbasi' variety and was first brought to notice in 1897. Seed sold last year for \$20 a bushel, later for \$12. It is asserted to be by all means the finest cotton of the white, long-staple class ever produced in Egypt. The fiber is scarcely any shorter than the Sea Island staple and has the characteristic twist. It is snow white and of a remarkably fine, silky texture. This season is the first one in which this variety has been cultivated in commercial quantities. The lint from this variety brought in Egypt, where a very small quantity was sold last year, over 50 cents a pound. A rough guess was made by Mr. George Foaden, secretary of the Khedivial Agricultural Society, that not more than 1,000 bales of this cotton will be sold this year in Egypt. For methods of culture in Egypt see Bulletin No. 33 of the Department of Agriculture, Office of Experiment Stations. For breeding purposes this cotton should be of decided value as its origin can be traced with probability, according to Mr. Foaden, to crosses between the Egyptian cottons and the introduced Sea Island varieties. The Egyptian brown cottons may possibly have sprung from Peruvian varieties which are reported to have been introduced into Egypt early in this century. This 'Jannovitch' variety has hence quite possibly strains of both Sea Island and Peruvian stock. The *average* length of the Egypt cotton, ordinary varieties, is given in Bulletin No. 33 as 35.79 millimeters in comparison with 40.87 for Sea Island. If the fiber of the 'Jannovitch,' as claimed, is longer than the ordinary varieties, it will approach very closely that of the Sea Island. It is worthy serious tests in all the cotton-growing districts of America. Its successful culture in the uplands of the United States would increase the profits of cotton growing materially, as the Egyptian cotton brings prices only inferior to those of the Sea Island."

3992. *GOSSYPIUM BARBADENSE*.

Cotton.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 311), December 28, 1899.

"'Mitaffi,' the most commonly known and grown variety of Egyptian cotton, until the discovery of the 'Jannovitch,' (No. 2991). Discovered in 1883. This yields the heaviest of all Egyptian cottons. It is a *brown* fibered variety. For experimental purposes only. It was introduced by the Department 3 or 4 years ago."

3993. *GOSSYPIUM BARBADENSE*.

Cotton.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 312), December 28, 1899.

"A variety resembling No. 3992, from which it was derived. It has been cultivated only 6 or 7 years. Succeeds better on loamy soils than on clays. It is more susceptible to unfavorable climatic conditions and slightly earlier. It has a fine, silky, very long, *white* staple. Gins with more difficulty than No. 3992. For breeding purposes."

3994. *CUCUMIS MELO*.

Cantaloupe.

From Bassousa, island in the Nile. Received through Messrs. Lathrop and Fairchild (No. 313), December 28, 1899.

"Cantaloupes from Bassousa, where the most noted melons of Egypt are grown. The fruits are oblong, 8 to 10 inches long, many seeded, yellow to pale green in color, and thin skinned. The flesh is pale yellow. For experiments in the South."

3995. *CUCUMIS MELO*.

Cantaloupe.

From Abou-el-rate, Egypt. Received through Messrs. Lathrop and Fairchild (No. 314), December 28, 1899.

"Seed from excellent cantaloupes from the most noted melon-growing region in Egypt, except Bassousa. Similar to fruits of No. 3994. A typical Egyptian strain."

3996. ALLIUM CEPA.**Onion.**

From islands of Upper Nile, Egypt. Received through Messrs. Lathrop and Fairchild (No. 315), December 28, 1899.

"The onions from the islands of the Upper Nile are exported in very large quantities to England. They are said to be an unusually sweet variety, of medium size, and irregular form. They are yellowish pink. For trial in warm, dry regions of the South. Plant in the usual way. Recommended for irrigated western lands."

3997. VICIA FABA.**Horse bean.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 316), December 28, 1899.

"Selected seed of the Egyptian fodder bean from 'Saidi' or upper Egypt. *'This plant produces the principal cattle and horse food of Egypt,'* according to Mr. George Foaden, Secretary of the Khedivial Agricultural Society. The seed is sown in November at the rate of 3 bushels per acre, and if on soil which has been overflowed by the Nile, receives no water during the season. If sown on irrigated land, it is watered when sown and once when the crop is half grown. Matures in from 5 to 6 months. Harvested with scythe or knife. Stalks dried in field and beans threshed out; yields 50 bushels per acre. Fed to cattle ground and mixed with chopped straw. A ration is 8 to 10 pounds of beans to 26 pounds of straw per day.

3998. ZEA MAYS.**Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 317), December 28, 1899.

"A variety which yields heavy crops, and from comparison with introduced varieties is a heavier bearer and much preferred by cultivators. According to Mr. Geo. P. Foaden, Secretary of the Khedivial Agricultural Society, the yield is often 40 or 50 bushels per acre. Receives 5 waterings during the season. This is a field variety, said to be superior to any variety grown in Egypt from European seed."

3999. ZEA MAYS.**Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 318), December 28, 1899.

"Used by Europeans and natives for roasting ears. Matures in 60 days from planting. Doubtful if superior to our varieties of sweet corn but should be tested. Sown in April here as a catch crop."

4000. ZEA MAYS.**Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 319), December 18, 1899.

"A variety of Egyptian corn used for roasting by the natives. Matures in 70 days. Recommended for the drier regions of the South."

4251. ZEA MAYS.**Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 320), December 28, 1899.

"A corn for roasting. Matures in 90 days. Like Nos. 3999 and 4000. Said to be superior to any variety grown in Egypt from European seed."

4252. LINUM USITATISSIMUM.**Flax.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 321), December 28, 1899.

"The Egyptian flax is of inferior quality but grows in regions which are dry. It receives only two irrigations and may be of use in crossing with northern flaxes for drier lands."

4253. ARACHIS HYPOGAEA.**Peanut.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 322), December 28, 1899.

"Seed peanuts from the cultivator who took the first prize at last year's exposition of the Khedivial Agricultural Society of Cairo. Reported especially rich in oil and extensively grown for oil production. Deserve testing in irrigated dry regions of the South especially."

4254. TRIFOLIUM ALEXANDRINUM.**Egyptian clover.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 323), December 28, 1899.

"Berseem Muscovi." "The great fodder crop of Egypt. As a catch crop, considered in lower Egypt as unequaled by any other plant. Winter culture is necessary for its success as the hot summers kill or seriously injure the plants. The variety 'Muscovi' has been grown successfully in England, according to Mr. George P. Foaden, secretary of the Khedivial Agricultural Society. It would be advisable to sow this variety as follows: In regions which can be irrigated, sow broadcast at the rate of not less than 40 pounds per acre. In Egypt as high as 50 and 60 pounds per acre are sown upon the mud left after subsidence of the Nile, or upon soil previously thoroughly overflowed by means of the irrigation ditches. Seed should be sown immediately after the subsidence of the water, directly on the mud. As the plants are very sensitive to cold the seed should not be sown until all danger of frost is over. In Egypt the seed is sown toward the end of October and the first cutting can be made after 45 to 50 days, while if sown 20 days later when cooler weather has set in, 70 days are required by the crop to reach a stage fit for cutting. If planted here in October, it is often left in the soil until the following June and five cuttings taken. This 'Muscovi' variety is suited only for well-irrigated land as it requires much water. For seed, the last cutting is omitted in June and the plants allowed to go to seed. This variety is not sown with wheat or barley and in this respect differs from the two following varieties, 'Saida' and 'Fache.' A thorough trial should be made to utilize this most important crop in America."

4255. TRIFOLIUM ALEXANDRINUM.**Egyptian clover.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 324), December 28, 1899.

"Saida." "This variety is the dry land sort, requiring comparatively little water but giving fewer cuttings than the 'Muscovi' variety. It should be sown after irrigation as in case of the latter variety, but requires much less water subsequently. Any attempts to grow it as a summer crop in very warm regions will fail, for it is distinctly a cool-season crop in Egypt. The three varieties mentioned have perfectly distinct uses, which should not be disregarded in any attempted culture. The tendency of the 'Saida' variety is to trail or creep along the ground. Large quantities of seed, 40 to 50 pounds per acre, are considered profitable for sowing." (For general statement see No. 4254.)

4256. TRIFOLIUM ALEXANDRINUM.**Egyptian clover.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 325), December 28, 1899.

"Fache." "This is a strong, upright growing variety of 'Berseem' which is especially adapted to precede cotton or sugar cane. It is cut only once. It requires less water than the 'Muscovi' (No. 4254). It is sown on the overflowed land which is not irrigated. It is often sown with wheat or barley, the wheat or barley being sown first, the Fache added broadcast."

4257. ZEA MAYS.**Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 326), December 28, 1899.

"The variety 'Nabarawi' field corn, a variety especially suited for irrigated land in hot climates like Florida or Arizona. Said to be superior to any variety grown in Egypt from European seed. This is a field variety."

4258. CAPSICUM ANNUUM.**Pepper.**

From Capri, Italy. Received through Messrs. Lathrop and Fairchild (No. 327), December 28, 1899.

"A sample of seed of a native variety of red pepper; very uniform in size and shape; dark red. Bought in market at Capri; many-seeded; very showy color."

4259. CAPSICUM ANNUUM.**Pepper.**

From Luxor, Egypt. Received through Messrs. Lathrop and Fairchild (No. 328), December 28, 1899.

"A variety of very hot peppers introduced into upper Egypt from the Soudan. Found growing in garden of Hadji Hammed Mohammed at Luxor. Fruits bright red, very small when ripe, and full of flavor. The plant is a perennial in hot countries but bears in one year from seed; highly prized by the natives."

4260. CAPSICUM ANNUUM.**Pepper.**

From Assuan, Egypt. Received through Messrs. Lathrop and Fairchild (No. 329), December 28, 1899.

"Soudanese red pepper bought in the market in Assuan, in dried state; a small form resembling 'bird pepper' in shape and color."

4261. CAPSICUM ANNUUM.**Pepper.**

From Luxor, Egypt. Received through Messrs. Lathrop and Fairchild (No. 330), December 28, 1899.

"Dark red, few-seeded, vigorous grower, reported of Italian origin, from garden of Hadji Mohammed." (*Distributed.*)

4262. LAWSONIA INERMIS.**Henna.**

From Edfu, Egypt. Received through Messrs. Lathrop and Fairchild (No. 331), December 28, 1899.

"Seeds of the Henna are ground and used for dyeing cloth a dull red; also used by the Arabs for dyeing the palms of the hands and the finger nails. A desert shrub 9 or 10 feet high that deserves trial, as it lives without water from irrigation. Should be tried as hedge plant in southern California. Grows easily from cuttings. Blossoms white, fragrant."

4263. LIPPIA NODIFLORA.**Lippia.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 332), December 28, 1899.

"According to Ascherson and Schweinfurth the Lippia is a native of Egypt. It has probably been used for lawn purposes for a great many years.

"It is a low, creeping plant of the Verbena family, with broad, flat, obovate leaves of a deep green color. The creeping stems throw out roots wherever they come in contact with the earth, and form thick mats of herbage. It is well known that in regions with climatic conditions similar to those of Egypt, grass lawns are generally very difficult to maintain. Although there are several substitutes for lawn grasses, none that I have seen are as good as Lippia. Owing to its rapid growth, the plant can be mown closely and to a layman the lawn effects resemble closely those produced by English lawn grasses.

"In order to plant a lawn with Lippia the ground is prepared as it would be for the reception of grass seed. A mass of old Lippia is dug from some neighboring lawn or field. The native gardener cuts off or breaks off two or three long cuttings of the plant, makes a hole with a pointed stick in the soft earth, thrusts the cuttings, doubled up, into the hole and packs the earth securely about them. These cuttings are placed about 4 to 6 inches apart, quite irregularly over the field. They are given plenty of water, being sprinkled every day until well started. In winter in Egypt the lawns made of this Lippia are watered every 4 to 5 days, while in summer they are kept green by daily waterings. Every 20 days the lawns are gone over with a scythe and in this way kept quite closely mown. There is no evident reason why a lawn mower would not answer the purpose better than a scythe.

“Lawns of Lippia will last 5 to 6 years without renewing. Whenever a patch gets old or is injured by the shade of some tree, it is very easily repaired by setting new cuttings.

“While, according to the statement of Mr. Colombo of the Gizeh Gardens, no grasses form in Cairo a real sod, this plant produces a permanent sod lasting five to six years.

“The Lippia deserves a thorough trial as a lawn plant in southern California, Arizona, Texas, and Florida. Just what degree of hardiness it will show remains to be seen. It is not exposed to a temperature below freezing here in Cairo, except at extremely long intervals. Whether it is injured then or not I have been unable to ascertain. Although, during the hottest part of the summer, the lawns of Lippia wear a much less vigorous look than they do in winter, yet, from the fact that they are able to withstand the extreme heat and dryness of the Egyptian summer, it is evident that the plant is well suited for hot dry climates. It is to be hoped this will prove a valuable new lawn plant for the parks and gardens of the South.”

It is well to note that this plant is already quite commonly introduced, especially in the Southern States. It occurs in low, moist situations from North Carolina to Florida, Texas, and Missouri, and is also present in California. So far as known it has not been utilized as a lawn plant in this country, although it is recognized as having some value as a sand-binder on the South Atlantic and Gulf Coasts. (*Distributed.*)

4265. CUCURBITA MAXIMA.

Squash.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 304a), December 28, 1899.

A small, round variety. Both this variety and No. 3985 were compared with 15 European sorts grown in Egypt and found superior to them, both in amount of flesh and in sweetness. The trials were made by Mr. George Bonaparte, of Gizeh, near Cairo.

Mr. Hartman
Moann.

S. P. I. 19.

U. S. DEPARTMENT OF AGRICULTURE.
DIVISION OF BOTANY.

INVENTORY NO. 7.

FOREIGN SEEDS AND PLANTS

IMPORTED BY THE

DEPARTMENT OF AGRICULTURE, THROUGH THE SECTION OF SEED AND
PLANT INTRODUCTION, FOR DISTRIBUTION IN COOPERA-
TION WITH THE STATE AGRICULTURAL
EXPERIMENT STATIONS.

NUMBERS 2701-3400.

Mr. Harlan

INVENTORY OF FOREIGN SEEDS AND PLANTS.

INTRODUCTORY STATEMENT.

The present inventory or catalogue of seeds and plants includes the collections of the agricultural explorers of the Section of Seed and Plant Introduction, as well as a large number of donations from miscellaneous sources. There are a series of new and interesting vegetables, field crops, ornamentals, and forage plants secured by Mr. Walter T. Swingle in France, Algeria, and Asia Minor. Another important exploration was that conducted by Mr. Mark A. Carleton, an assistant in the Division of Vegetable Physiology and Pathology. The wheats and other cereals were published in Inventory No. 4, but notices of many of Mr. Carleton's miscellaneous importations are printed here for the first time. The fruits and ornamentals collected by Dr. Seaton A. Knapp in Japan are here listed, together with a number of Chinese seeds from the Yangtze Valley, presented by Mr. G. D. Brill, of Wuchang. Perhaps the most important items are the series of tropical and subtropical seeds and plants secured through the indefatigable efforts of Hon. Barbour Lathrop, of Chicago. Mr. Lathrop, accompanied by Mr. David G. Fairchild, formerly in charge of the Section of Seed and Plant Introduction, conducted at his own expense an extended exploration through the West Indies, Venezuela, Colombia, Peru, Chile, Brazil, and Argentina, and procured many extremely valuable seeds and plants, some of which had never been previously introduced into this country.

The publication of this list has been considerably belated, and many of the numbers are now entirely exhausted. Nevertheless the notes in regard to such will undoubtedly prove an assistance to agricultural experimenters in many lines. Records are kept of the source and origin of each item listed. It will therefore be possible, in most instances, to obtain an additional quantity, at least for the use of workers at the agricultural experiment stations, provided there is sufficient and justifiable demand for another importation.

Many of the forms and varieties are not, strictly speaking, new introductions. However, these are often desirable for special purposes; for example, for the use of plant breeders in creating new strains by crossing and selection, or for students of particular groups, who require a large number of species, varieties, and forms in their work on the improvement of cultivated plants. Wherever possible, the first choice will be extended to the coworkers in the various Divisions of the Department of Agriculture and in the State experiment stations. The quantities of seeds and plants secured are usually small and are entirely insufficient for indiscriminate distribution. In cases where an importation proves of value after trial, a larger quantity may be secured for more general distribution in the region in which the plant has shown marked improvement over existing varieties. But where a new crop is once established and has become so well known that it is amply handled by the trade, no further importations for free distribution, at least in that region, will be made.

The rice growers of Louisiana and Texas have made extensive importations, amounting to perhaps 250,000 pounds, of Kiushu or Japanese rice (No. 1962) for seed purposes during the past season, an apt illustration of the point in question. If a new crop imported by this Department turns out to be really better than forms previously cultivated it is bound to be adopted by the progressive seed merchants and farmers. The original Kiushu rice importation increased the value of the annual output of rice in Louisiana and Texas nearly a million dollars. It is no longer an experiment, and the Department of Agriculture will discontinue the distribution of this seed in the region in which it has become established. One pronounced commercial success of this character repays the cost of many unsuccessful ones.

On the other hand, the expenses of exploration in foreign countries in search of varieties of cultivated crops better than those already established in the United States properly devolves upon the Department. It may also sometimes prove profitable to reintroduce forms which have been tried without success in one portion of the land provided new facts as to the method of cultivation and adaptability to soils and climate are determined pointing to the possible success of the crop in special regions possessing the requisite natural environment. In such cases the endeavor to reestablish a decadent farming industry may best be undertaken with the assistance of the trained workers of the State experiment stations. If these experimenters report favorably in regard to new or little known vegetables, grains, and field crops, a larger distribution can be made to again bring the crop to the attention of the farmer.

Because of the increasing scope of the work of the Section, due to the numerous seeds and plants procured, it is especially important that correspondents retain the original number under which the seed

is distributed. The report blanks will bear numbers corresponding to those of the inventory. The information supplied by experimenters will, by following this system, become easily accessible.

JARED G. SMITH,

Assistant in Charge of Seed and Plant Introduction.

WASHINGTON, D. C., August 18, 1900.

INVENTORY.

2701. POPULUS DELTOIDEA. Cottonwood.

From Troyes, France. Received through Mr. W. T. Swingle, 1899.

This is an improved form of the American cottonwood. (See No. 2700 in Inventory No. 5.)

2702. POPULUS NIGRA, PYRAMIDALIS. Lombardy poplar.

From Troyes, France. Received through Mr. W. T. Swingle, 1899.

*Peuplier d'Italie pyramidal.*¹ (See No. 2701.)

2703 to 2719.

The following 17 numbers comprise a collection of cereals grown in the northwest territories of Canada and presented by Dr. William Saunders, of the Central Experiment Farm, Ottawa, for experiments being conducted in Alaska by the Office of Experiment Stations:

2703.	AVENA SATIVA.	Oat.
	<i>Welcome.</i>	
2704.	AVENA SATIVA.	Oat.
	<i>Flying Scotchman.</i>	
2705.	AVENA SATIVA.	Oat.
	<i>Improved Ligowo.</i>	
2706.	AVENA SATIVA.	Oat.
	<i>Bonanza.</i>	
2707.	HORDEUM VULGARE.	Barley.
	<i>Royal.</i>	
2708.	HORDEUM VULGARE.	Barley.
	<i>Mensury.</i>	
2709.	HORDEUM VULGARE.	Barley.
	<i>Petschora.</i>	
2710.	HORDEUM VULGARE.	Barley.
	<i>Canadian Thorpe.</i>	
2711.	SECALE CEREALE.	Rye.
	A fall variety.	
2712.	SECALE CEREALE	Rye.
	A spring variety.	

¹The varietal name where known is *italicized*.

2713. LINUM USITATISSIMUM. Flax.
 2714. TRITICUM VULGARE. Wheat.
Preston. Spring wheat.
 2715. TRITICUM VULGARE. Wheat.
Percy. A spring wheat.
 2716. TRITICUM VULGARE. Wheat.
Ladoga. A spring wheat.
 2717. TRITICUM VULGARE. Wheat.
Black Sea. Spring variety.
 2718. TRITICUM VULGARE. Wheat.
Dawson's Golden Chaff. A fall wheat.
 2719. TRITICUM VULGARE. Wheat.
Surprise. A fall wheat.

2720. DIOSCOREA. Yam.

From Jamaica. Received through Messrs. Lathrop and Fairchild, March, 1899.

Yampie. "This is a vine somewhat resembling our American species of smilax, with clusters of large, fleshy roots like sweet potatoes. The plants are propagated by means of the so-called 'heads.' These are the enlarged extremities of the roots, bearing a large number of adventitious buds, which under suitable conditions develop into new vines. These heads are planted in hills 6 or 8 feet apart each way, three heads being placed 6 to 8 inches apart in each hill. As soon as the vines are up, a stout stake or pole 7 to 8 feet long is driven into the hill near one of the heads. The vines are trained up this stake. Several vines spring from each single head. As soon as the vines are established on their own roots they commence to form, underneath the heads, the fleshy roots which form the crop. The roots, which are large enough to harvest five or six months after planting, are gathered without destroying the vines, and sometimes three or more crops are taken from one planting. After gathering the crop the upper roots are allowed to grow and make heads, which are again used to start a new plantation. The 'Yampie' variety is a poor keeper, and as a rule a poor yielder. The slightest bruises injure the roots, and decay follows very quickly. However, it is the best-flavored yam grown in Jamaica, and sells for the highest price in the markets there." (*D. G. Fairchild.*)

2721. DIOSCOREA. Yam.

From Jamaica. Received through Messrs. Lathrop and Fairchild, March, 1899.

Negro. "This is the earliest of the Jamaica yams." (*D. G. Fairchild.*)

2722. DIOSCOREA. Yam.

From Jamaica. Received through Messrs. Lathrop and Fairchild, March, 1899.

White. "A late yam, which keeps better than the Negro." (*D. G. Fairchild.*)

2723. PANICUM BARBINODE. Para grass.

From Jamaica. Received through Messrs. Lathrop and Fairchild, March, 1899.

"A tropical hay and pasture grass adapted to cultivation on rich muck or swampy soils. Propagated mostly by root division." (*D. G. Fairchild.*)

2724. PITHECOLOBIUM SAMAN. Rain tree.

From Jamaica. Presented by Mr. W. W. Wynne, Brokenhurst, near Mandeville. Received March, 1899, through Messrs. Lathrop and Fairchild.

"Like the *Cuji*, the pods are a fattening fodder eagerly eaten by cattle and horses. A large spreading tree, often 6 feet in diameter, suitable for distribution in southern California and Florida. Seeds should also be sent to Hawaii." (*D. G. Fairchild.*) The pods resemble those of the mesquite bean. It is called "Rain tree" because, after having lost its leaves during the dry season, it bursts forth into flower and leaf at the commencement of the rains.

2725. PSIDIUM GUAJAVA!**Guava.**

From Jamaica. Received, through Messrs. Lathrop and Fairchild, March, 1899.

"The Mountain *Guava*, for experiments in plant breeding. This is said to furnish the best preserves of any species growing on the island." (*D. G. Fairchild.*) ($\frac{1}{4}$ pound of seed.)

2726 to 2730. DIOSPYROS KAKI.**Japanese persimmon.**

From Japan. Received through Prof. S. A. Knapp, 1899.

The following statement published by the Agricultural Society of Japan is worthy of the careful consideration of the American producers of fruit:

Kaki. "The Japan persimmon is our most valuable native fruit, and has been abundantly grown from the earliest period in all of our provinces except those where the climate is extremely cold or hot. All these fruits are remarkable for being harsh and astringent before maturity, but some of them become luscious and highly nutritious when ripe, more especially after exposure to frost; others are difficult to free from their original asperity and never become luscious, even when quite ripe. The former are edible in the raw state when ripe and are esteemed among the most delicious fruits; the latter are made into very delicious sweetmeats and dried fruit, in various ways. This tree is also distinguished for the excessive hardness of its wood and for the black color it sometimes acquires when old, like ebony. In our country the *Kaki* has long been subject to improvement by culture and selection of the best varieties, which are then propagated by grafting. We are now in possession of many fine varieties, differing greatly in size, shape, and quality, some being oblong, like a long worm, others flat, resembling, both in shape and color, a large, red, smooth tomato. The soil most adapted to the planting of the *Kaki* is a gravelly clay loam, neither too dry nor too damp. A free, open space is necessary. The plants require manuring in the middle of the winter. Night soil is preferable and is applied in a circular furrow dug in the ground around each tree. The trees must be pruned each alternate year in early spring or after the autumn harvest season. This may be done by breaking the branches with the hand without using a knife, because this tree should not be touched with iron. The varieties of the *Kaki* are only propagated by grafting because seedlings are very slow in bearing fruit, and the fruit is always astringent. The preparation for use of such varieties of persimmons as retain slight acidity when ripe is an important consideration. As soon as the change of color indicates maturity the fruit should be picked and prepared for use, as follows: Immerse in warm water and allow to remain over night, then dip in alcohol or whisky and water, and pack in a half barrel or smaller vessel, according to quantity, and allow to stand, closely covered, for ten days in a room as nearly 75 to 80 degrees as possible, being careful to keep the cover tight continuously. At the end of that time many of them will be ready for use. In some cases it may require a longer time than ten days to mature the fruit. The fruit when mature can be peeled and eaten like ripe apples." (See also Nos. 2889-2891.)

This shipment comprised the following varieties, the descriptions of which were published by the Agricultural Society of Japan:

- 2726.** *Tane-nashi.* Fruit very large, oblong, pointed. Skin bright yellowish color; often nearly or quite without seeds. It is used as a dried fruit, called in Japanese "Korogaki." As soon as the fruit indicates ripening, pick, peel, and dry whole. When dried press flat and pack in a close wooden box and cover. Each box should contain only one or two layers. A white saccharine deposit will soon appear on the surface.
- 2727.** *Yemon.* "Fruit large, round, flattened; skin orange; flesh pale yellow, with few seeds. Prepared for market as follows: As soon as the fruit indicates ripening, pick, dip in warm water with 50 per cent of whisky, then pack in a close cask and cover for ten days." (See above.)
- 2728.** *Hachiya.* "Fruit very large, oblong, pointed, a little flattened at the stem; rich red, black at the end when quite ripe."
- 2729.** *Tsuronoko.* "Fruit medium, oblong, pointed. Skin bright red, with a black mark on the end when quite ripe. Flesh rusty color, spotted with purplish-black dots; sweet, rich in flavor."
- 2730.** *Kuro-Kuma.* "Somewhat smaller than 'Hiya Krune' and flattened at the ends. Juicy and very sweet when ripe."

- 2731. RAPHANUS SATIVUS. Radish.**
 From the Moscow government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Long Black Radish. (1 pound.)
- 2732. RAPHANUS SATIVUS. Radish.**
 From the Moscow government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Tavranka. (5 ounces.)
- 2733. ZEA MAYS. Corn.**
 From the Don territory, Russia. Received through Mr. M. A. Carleton, March, 1899.
Nanerotolo. Adapted to northern regions. (1 pound.)
- 2734. BRASSICA OLERACEA. Cabbage.**
 From the Moscow government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Saburovka. Late, coarse, white heads. (4 ounces.)
- 2735. PAPAVER SOMNIFERUM. Poppy.**
 From the Moscow government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Light-blue Poppy. Sown early in the spring, in rows, 5 to 15 pounds per acre. A very popular oil plant in Russia. The seeds are often used in various dishes.
- 2736. BRASSICA OLERACEA. Cabbage.**
 From the Moscow government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Red cabbage.
- 2737. BRASSICA OLERACEA. Cabbage.**
 From Revel, government of Esthonia, Russia. Received through Mr. M. A. Carleton, March, 1899.
Revel Winter. A superior Russian sort.
- 2738. CITRULLUS VULGARIS. Watermelon.**
 From the Don territory, Russia. Received through Mr. M. A. Carleton, March, 1899.
Shalis Favorite. Bright orange-red flesh. Valuable table sort.
- 2739. CITRULLUS VULGARIS. Watermelon.**
 From the government of Astrakhan, Russia. Received through Mr. M. A. Carleton, March, 1899.
Astrakhan. Imported sort.
- 2740. CITRULLUS VULGARIS. Watermelon.**
 From Kamishin, in government of Saratov, Russia. Received through Mr. M. A. Carleton, March, 1899.
Kemishin. Red flesh.

- 2741. CUCUMIS MELO.** **Cantaloupe.**
From the Don territory, Russia. Received through Mr. M. A. Carleton, March, 1899.
Ukrain Banana. New sort, with orange-colored flesh.
- 2742. CUCUMIS MELO.** **Muskmelon.**
From the Don territory, Russia. Received through Mr. M. A. Carleton, March, 1899.
Tsaritsa. New sort, with rose-colored flesh. (1 package.)
- 2743. CITRULLUS VULGARIS.** **Watermelon.**
From the government of Astrakhan, Russia. Received through Mr. M. A. Carleton, March, 1899.
- 2744. CITRULLUS VULGARIS.** **Watermelon.**
Red Beauty. New, rich-flavored sort.
From the government of Saratov, Russia. Received through Mr. M. A. Carleton, March, 1899.
Golden Honey. Flesh, golden yellow.
- 2745. RIBES.** **Currant.**
From the Don territory, Russia. Received through Mr. M. A. Carleton, March, 1899.
Caucasian Red. Originally from the Caucasus.
- 2746. CITRULLUS VULGARIS.** **Watermelon.**
From the vicinity of Budapest, Hungary. Received through Mr. M. A. Carleton, March, 1899.
A large striped melon, dark green; flesh reddish.
- 2747. CITRULLUS VULGARIS.** **Watermelon.**
From the vicinity of Budapest, Hungary. Received through Mr. M. A. Carleton, March, 1899.
Large, banded, light green, with narrow, white stripes; solid, reddish core; few seeds. Good, but seemingly rare.
- 2748. CUCUMIS MELO.** **Muskmelon.**
From the banks of the Amu-Darya, at Chardzhui, in Turkestan, Asiatic Russia. Donated by Professor Speshnev, of Tiflis, through Mr. M. A. Carleton, March, 1899.
Chardzhui.
- 2749. CUCUMIS MELO.** **Muskmelon.**
From New Khiva, in Trans-Caspia, Russia. Donated by Professor Speshnev, of Tiflis, through Mr. M. A. Carleton, March, 1899.
Ilyalii. Seeds of season of 1897.
- 2750. CUCUMIS MELO.** **Muskmelon.**
From Meshod, in Trans-Caspia, Russia. Donated by Professor Speshnev, of Tiflis, through Mr. M. A. Carleton, March, 1899.
Lekhlat.

- 2751. CUCUMIS MELO. Muskmelon.**
 From the garden of the Emer of Bukhara, Russia. Donated by General Medved, director of the Tiflis Botanical Gardens, through Mr. M. A. Carleton, March, 1899.
Bukhara. Large, round, yellow melon, with rose-colored flesh.
- 2752. CAMELINA SATIVA. False flax.**
 From Marie Agricultural Experimental Farm, near Saratov, Saratov government, Russia. Received through Mr. M. A. Carleton, March, 1899.
 The oil is commonly employed in cookery. A hardy plant. Should be sown in rows early in the spring, at the rate of 10 to 15 pounds per acre.
 "This is a troublesome weed in flax fields." (*L. H. Dewey.*)
- 2753. VICIA FABA. Horse bean.**
 From the Marie Agricultural Experimental Farm, Saratov government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Horse Bean.
- 2754. PISUM ARVENSE. Pea.**
 From the Marie Agricultural Experimental Farm, Saratov government, Russia. Received through Mr. M. A. Carleton, March, 1899.
- 2755. CICER ARIETINUM. Garbanzos.**
 From the Marie Agricultural Experimental Farm, Saratov government, Russia. Received through Mr. M. A. Carleton, March, 1899.
 Makes a good growth there. (See Nos. 2139 and 2376 in Inventory No. 5.)
- 2756. VICIA. Vetch.**
 From the Marie Agricultural Experimental Farm, Saratov government, Russia. Received through Mr. M. A. Carleton, March, 1899.
- 2757. TRITICUM VULGARE. Wheat.**
 From Sukhum-Kale, Trans-Caucasia, Russia. Received through Mr. M. A. Carleton, March, 1899.
 Sown November 27, and harvested July 12. Adapted for growing in the Southern States.
- 2758. TRITICUM VULGARE. Wheat.**
 From Novo-Uzhensk district, Samara government, obtained at Saratov flour mills, Russia. Received through Mr. M. A. Carleton, March, 1899.
Kubanka Spring wheat. A superior strain of the wheat grown in that district and adapted to unusually dry, hot regions. Suitable for cultivation on the Southern Great Plains and the Palouse country.
- 2759. TRITICUM VULGARE. Wheat.**
 From Armavir in Kuban territory, Russia. Received through Mr. M. A. Carleton, March, 1899.
 One of the very best Russian red winter wheats.
- 2760. TRITICUM VULGARE. Wheat.**
 From Kozlov district, in Tambov government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Theiss Winter wheat. Probably adapted for growing in Iowa and northern Illinois. Ought to be quite hardy.

- 2761. TRITICUM VULGARE. Wheat.**
 From Chiliabinsk, in western Siberia, Russia. Received through Mr. M. A. Carleton, March, 1899.
Winter (?) wheat. Said to be adapted for winter sowing, though obtained from a strictly spring wheat region.
- 2762. TRITICUM VULGARE. Wheat.**
 Obtained at the Agricultural Museum at St. Petersburg, Russia. Received through Mr. M. A. Carleton, March, 1899.
Red Winter wheat. Locality unknown.
- 2763. TRITICUM VULGARE. Wheat.**
 From Russia. Received through Mr. M. A. Carleton, March, 1899.
Sandomir Winter wheat. The original pure strain from the vicinity of Sandomir. The most popular wheat in Poland. Adapted for growing in the Northeastern States and perhaps the northern Pacific Coast States.
- 2764. TRITICUM DURUM. Wheat.**
 From the Lenkoran district, in government of Baku, Russia. Received through Mr. M. A. Carleton, March, 1899.
Sari-Bugda. A durum or poulard wheat, the grain of which is apparently adapted for making macaroni. Suited to cultivation in the southern Great Plains.
- 2765. TRITICUM VULGARE. Wheat.**
 From Kursk government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Winter Ghirka. A very hard sort, suitable for cultivation in Iowa and Wisconsin.
- 2766. SECALE CEREALE. Rye.**
 From Pirna-on-Elbe, in Saxony, Germany. Received through Mr. M. A. Carleton, March, 1899.
Pirna Winter rye. Considered one of the best German varieties.
- 2767. TRITICUM VULGARE. Wheat.**
 From the government of Voronezh, Russia. Received through Mr. M. A. Carleton, March, 1899.
Sandomir Winter wheat. Developed from the true Sandomir of Poland into a harder, darker-colored grain, suitable for growing in the region from Michigan to Nebraska.
- 2768. TRITICUM VULGARE. Wheat.**
 From Sukhum-Kale, in Trans-Caucasia, Russia. Received through Mr. M. A. Carleton, March, 1899.
Cape Winter wheat. Sown November 12 and reaped June 27. Adapted for growing in the Southern States.
- 2769. TRITICUM VULGARE. Wheat.**
 From Sukhum-Kale, in Trans-Caucasia, Russia. Received through Mr. M. A. Carleton, March, 1899.
Italian Bearded Spring wheat. Used in Trans-Caucasia as a winter sort. Sown November 15 and reaped July 7. Adapted for our Southern States.

- 2770. TRITICUM VULGARE. Wheat.**
 From Zhukavskaya, in Stavropol government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Red Winter wheat. A very hard winter variety of the very best quality, suitable for trial in the middle and northern prairie States.
- 2771. TRITICUM VULGARE. Wheat.**
 From Ekaterinoslav, Russia. Received through Mr. M. A. Carleton, March, 1899.
Red Winter wheat. Adapted for growing in Kansas, Missouri, and Iowa.
- 2772. TRITICUM VULGARE. Wheat.**
 From the Marie Agricultural Experimental Farm, in Saratov government, Russia. Received through Mr. M. A. Carleton, March, 1899.
White-eared Ghirka Spring wheat. Adapted for cultivation in the northern States of the Plains.
- 2773. TRITICUM VULGARE. Wheat.**
 From Karayazi, in government of Tiflis, Russia. Received through Mr. M. A. Carleton, March, 1899.
Gokchaiska Winter wheat. Sown in September or October (depending upon the weather) and reaped the latter part of May. A very early variety, suitable for growing in the Southern States and the Pacific coast States.
- 2774. TRITICUM DURUM. Wheat.**
 From the vicinity of Baku, Russia. Received through Mr. M. A. Carleton, March, 1899.
Sari-Bugda wheat. An excellent durum or foulard sort, with exceedingly hard grains, suitable for making macaroni, and adapted admirably to our southern Great Plains and the Palouse country.
- 2775. TRITICUM VULGARE. Wheat.**
 From Malii Yazur, in Stavropol government, North Caucasus, Russia. Received through Mr. M. A. Carleton, March, 1899.
Red Winter wheat. Probably one of the three best bread wheats in the world. Adapted for growing in the middle prairie States.
- 2776. TRITICUM VULGARE. Wheat.**
 From the government of Stavropol, North Caucasus, Russia. Received through Mr. M. A. Carleton, March, 1899.
Red Winter wheat. An excellent hard wheat from one of the very best wheat regions known. Adapted for growing in the middle prairie States.
- 2777. TRITICUM DURUM. Wheat.**
 From the Marie Agricultural Experimental Farm, in Saratov government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Beloturka Spring wheat. Suitable for making macaroni, but also a good bread wheat when a small per cent of a red wheat is mixed with it. Adapted to the States west of the ninety-seventh meridian. Should be sown very early in the spring.
- 2778. AVENA SATIVA. Oat.**
 From the Marie Agricultural Experimental Farm, in Saratov government, Russia. Received through Mr. M. A. Carleton, March, 1899.
French oat. Adapted to the northern prairie States.

- 2779. PANICUM MILIACEUM. Broom-corn millet.**
 From the Marie Agricultural Experimental Farm, in Saratov government, Russia.
 Received through Mr. M. A. Carleton, March, 1899.
Yellow. Adapted for the northern prairie States.
- 2780. PANICUM MILIACEUM. Broom-corn millet.**
 From the Marie Agricultural Experimental Farm, in Saratov government, Russia.
 Received through Mr. M. A. Carleton, March, 1899.
Red. Adapted for trial in the northern prairie States.
- 2781. TRITICUM VULGARE. Wheat.**
 From the government of Elizavetpol, Trans-Caucasia, Russia. Received through
 Mr. M. A. Carleton, March, 1899.
Aqdashka Winter wheat. Adapted for trial in the Southern States.
- 2782. AVENA SATIVA. Oat.**
 From Karsyazi, in the government of Tiflis, Russia. Received through Mr.
 M. A. Carleton, March, 1899.
Shatilovski oat. Adapted for growing in the Eastern and North Central States.
- 2783. HORDEUM VULGARE. Barley.**
 From Karayazi, in the government of Tiflis, Russia. Received through Mr.
 M. A. Carleton, March, 1899.
Select Black barley. Adapted for trial in the Eastern and Southern States.
- 2784. AVENA SATIVA. Oat.**
 From the Marie Agricultural Experimental Farm, in Saratov government, Russia.
 Received through Mr. M. A. Carleton, March, 1899.
Shatilovski oat. Adapted for trial in the Eastern and Southern States.
- 2785. ZEA MAYS. Corn.**
 From Sukhum-Kale, in Kutais government, Trans-Caucasia, Russia. Received
 through Mr. M. A. Carleton, March, 1899.
Caucasian maize. Adapted for trial in the Southern States.
- 2786. SECALE CEREALE. Rye.**
 From the Marie Agricultural Experimental Farm, in the Saratov government,
 Russia. Received through Mr. M. A. Carleton, March, 1899.
Probsteier Winter rye. Adapted to the northern prairie States.
- 2787. CARTHAMNUS TINCTORIA. Safflower.**
 From the Marie Agricultural Experimental Farm, in the Saratov government,
 Russia. Received through Mr. M. A. Carleton, March, 1899.
 A dye plant.
- 2788. AVENA SATIVA. Oat.**
 From Russia. Received March, 1899, through Mr. M. A. Carleton.
Swedish Select. From the government of St. Petersburg. Mean annual rainfall,
 18½ inches; for the growing season (May to September, inclusive), 10½ inches.
 Mean annual temperature, 38.6°. Soil, a dark humus clay with considerable sand
 intermixed. Sown April 27. Period of growth, 106 to 108 days. A very large-
 grained white oat, much improved from the original seed, which was introduced
 from Sweden into Finland and the St. Petersburg government. Well suited for trial

in western New York, Michigan, Wisconsin, Minnesota, Iowa, eastern North and South Dakota, and perhaps southern Alaska. Amount obtained, 20 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 21.

2789. TRITICUM DICOCUM.

Emmer.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Yaroslaf Spring. From the government of Yaroslaf. Mean annual rainfall a little over 20 inches; for the growing season (May to September, inclusive), a little more than 12 inches. Soil, sandy, with considerable clay, but very little humus. Sown in Yaroslaf about May 1, but in this country should be sown earlier, depending, however, upon the latitude where tried. Period of growth, 108 to 112 days. Seed should always be drilled in, at the rate $2\frac{1}{2}$ to $2\frac{1}{2}$ bushels per acre. A hardy cereal, little known in this country, but considered a very valuable one in parts of Russia. The hull remains on the seed similarly as in oats and barley. The seed is used both for stock feed and for human food; in the latter case in the form of gruel. It is a variety of *Triticum dicocum*, called correctly "emmer," but known also as Russian spelt. The Russian name is "polba." Adapted for trial in all States from New York to the Dakotas and Kansas and in Washington and Oregon. Amount obtained, 18 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 27.

2790. SECALE CEREALE.

Rye.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Teshitin Winter. From the government of Tver. Annual rainfall, 18 to 21 inches; for the growing season (May to September, inclusive), 11 or 12 inches. Soil, a sandy clay and very poor. Harvested July 12 to 15. An excellent variety of rye, well adapted to all the States from New York to the Dakotas and southward to Kentucky and Kansas, and possibly to southern Alaska. Amount obtained, 18 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 23.

2791. TRITICUM VULGARE.

Wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Yaroslaf Winter. From the government of Yaroslaf. Mean annual rainfall near 21 inches; for the growing season (May to September, inclusive), $11\frac{1}{2}$ to 12 inches. Soil, a strong clay, well manured and well drained. Sown September 9; harvested July 24. Yield, about 18 bushels per acre. A semihard red wheat, which ought to be rather resistant to severe winters. Should be tried in Iowa, eastern South Dakota, northern Nebraska, Michigan, southern Wisconsin and Minnesota, and northern New York, to replace spring wheat, if possible. Amount obtained, 9 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 23.

2792. TRITICUM VULGARE.

Wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Yaroslaf Winter. From the government of St. Petersburg. Mean annual rainfall, $18\frac{1}{2}$ inches; for the growing season (May to September, inclusive), $10\frac{1}{2}$ inches. Mean annual temperature, 38.6° . Soil, a clay loam, rich in humus. Sown in well-prepared ground September 4, and harvested July 24. Yield, 20 bushels per acre. A semihard red wheat, which should be very resistant to winter cold. Should be tried in northern New York, Wisconsin, Minnesota, Iowa, western North and South Dakota, and southern Alaska, to replace spring wheat, if possible. Amount obtained, 9 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 20.

2793. HORDEUM VULGARE.

Barley.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Kostroma Spring. From the government of Kostroma. Mean annual rainfall, about 20 inches; for the growing season (May to September, inclusive), 12 inches. Soil, sandy clay loam, well manured. Sown during the first week of May, about $1\frac{3}{4}$ bushels per acre. Ripens in 88 days. Yields about 26 bushels per acre. In Russia

this sort is especially used for beer brewing. It is well suited to a rather cold climate, not very wet. Might well be tried in any of the Northwestern States from Michigan to the Dakotas. Amount obtained, $1\frac{1}{2}$ bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 22.

2794. PANICUM MILIACEUM.

Broom-corn millet.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Tambof. From the vicinity of Morzhansk, in northern Tambof government. Mean annual rainfall, about 20 inches; for the growing season (May to September, inclusive), about 10 inches. Soil, sandy black loam, rather rich in humus. Sown at Morzhansk during the last week of May, but should probably be sown earlier in this country—near May 15 perhaps. Period of growth about 112 days. It is best drilled in at the rate of 12 to 15 pounds of seed per acre. Yields anywhere from 18 to 50 bushels per acre, depending upon treatment and the nature of the season. A yellow-seeded, paniced millet, much different from the ordinary forage millets. This particular sort is a new variety, not well known yet even in Russia, but said to give excellent results. Grown chiefly for the seed, which, besides furnishing excellent stock feed, is extensively used in Russia for human food in the form of grits or gruel and with soups. Should be tried in the Dakotas, Nebraska, east Colorado, Minnesota, and Iowa, and perhaps in Wyoming, Montana, and Washington. Amount obtained, 9 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 28.

2795. PANICUM MILIACEUM.

Broom-corn millet.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Black Voronezh. From the government of Voronezh. Mean annual rainfall, 20 to 21 inches; for the growing season (May to September, inclusive), 10 to 11 inches. Soil, sandy black loam, rather rich in humus. Sown in Voronezh during the last week of May, but should probably be sown a little earlier in this country—soon after May 15, or earlier. Period of growth about 112 days. It is best drilled in at the rate of 12 to 15 pounds per acre. Yields anywhere from 18 to 50 bushels per acre, depending upon the treatment and the kind of season. A black-seeded, paniced millet (*Panicum miliaceum nigrum*), quite different from the ordinary forage millets of the prairie States. Grown chiefly for the seed, which, besides being excellent stock feed, is also extensively used in Russia for human food in the form of grits or gruel and with soups. Well adapted for trial in almost all the prairie States, especially in the drier, colder districts. Amount obtained, 9 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 29.

2796. PANICUM MILIACEUM.

Broom-corn millet.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Red Voronezh. From the government of Voronezh. Mean annual rainfall, 20 to 21 inches; for the growing season (May to September, inclusive), 10 to 11 inches. Mean annual temperature, 41.1° . Soil, sandy black loam, rather rich in humus. Sown in Voronezh during the last week of May, but probably should be sown a little earlier in this country—soon after May 15. Period of growth about 115 days. It is best drilled in at the rate of 12 to 15 pounds per acre. Yields anywhere from 18 to 50 bushels per acre, depending upon treatment and the season. A red-seeded millet, but having the compacted form of panicle. Grown chiefly for the seed, which, besides being good stock feed, is extensively used in Russia for human food in the form of grits or gruel and with soups. Well adapted for trial in almost all the prairie States, but especially the drier, colder districts. Amount obtained, 3 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 29.

2797. PANICUM MILIACEUM.

Broom-corn millet.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Red Russian. From the government of Voronezh. Mean annual rainfall, 20 to 21 inches; for the growing season (May to September, inclusive), 10 to 11 inches. Mean annual temperature, 41.1° . Soil, sandy black loam, rather rich in humus. Sown in Voronezh during the last week of May, but probably should be sown a little earlier in this country—about May 15, or before. Period of growth about 115 days. It is best drilled in at the rate of 12 to 15 pounds of seed per acre. Yields anywhere

from 18 to 50 bushels per acre, depending upon treatment and the season. A red-seeded, panicked millet (*Panicum miliaceum*), but varying greatly as to the form of panicle. Grown chiefly for the seed, which, besides being good stock feed, is extensively used in Russia for human food in the form of grits or gruel and with soups. Well adapted for trial in almost all the prairie States, but especially in the drier, colder districts. Amount obtained, 3 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 29.

2798. CHÆTOCHLOA ITALICA.

Millet.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Kursk. From the government of Kursk. Mean annual rainfall, about 21 inches; for the growing season (May to September, inclusive), about 11 inches. Soil, a sandy, black, clay loam, rather rich in humus. Sown at the usual time for sowing forage millets. Best drilled in at the rate of 25 to 30 pounds per acre. A very good form of the ordinary German millet, until recently known as *Panicum germanicum* or *Setaria germanica*, now regarded as one of the numerous varieties of *Chaetochloa italica*. In Kursk, grown only for the forage it produces. Suitable for trial in the North Central States from Ohio to Kansas. Amount obtained, $1\frac{1}{2}$ bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 30.

2799. ZEA MAYS.

Sugar corn.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Malakhof. From the government of Tula. Mean annual rainfall, near 21 inches; for the growing season (May to September, inclusive), about 11 inches. Considered in that region excellent sugar corn, and especially one that ripens very early. Suitable for trial in Iowa, Nebraska, Kansas, and perhaps South Dakota, Michigan, and Illinois. Amount obtained, $\frac{2}{3}$ bushel.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 27.

2800. AVENA SATIVA.

Oat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Tobolsk. From Tobolsk government. Mean annual rainfall, about 18 inches; for the growing season (May to September, inclusive), 12 inches. Mean annual temperature, 31.7° ; for the growing season, 56.5° . Seems an excellent sort of white oat for a cold climate. Should be tried in northern New York, Wisconsin, Minnesota, North Dakota, and southern Alaska. Amount obtained, 12 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 21.

2801. FAGOPYRUM ESCULENTUM.

Buckwheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Orenburg. From the government of Orenburg. Mean annual rainfall, 15.5 inches; for the growing season (May to September, inclusive), 8 inches. Mean annual temperature, 37.9° ; for January, 4.5° ; for July, 68.8° . Soil, black, sandy loam. Sown as soon as there are no longer night frosts of any importance, at the rate of $1\frac{1}{2}$ bushels per acre. Period of growth about 90 days. A very large seeded buckwheat, of a deep brown color, wingless. Grown much in east Russia and west Siberia. A sort of gruel is often made of the hulled seed, or it is made into cakes and served with soups. Should be tried in the Great Plains from Oklahoma or Kansas northward, and in portions of the mountain States and perhaps in Iowa and Minnesota. Amount obtained, 15 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 30.

2802. LATHYRUS SYLVESTRIS WAGNERI.

Flat pea.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Tambof. From the government of Tambof. Mean annual rainfall, 20 inches; for the growing season (May to September, inclusive), 10 inches. Considered an excellent forage plant in the drier regions, though it is slow in obtaining a start. Suitable for the plains States north of Oklahoma. Amount obtained, $\frac{2}{3}$ bushel.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 31.

- 2803. PAPAVER SOMNIFERUM.** **Poppy.**
 From Russia. Received March, 1899, through Mr. M. A. Carleton.
Light blue.
- 2804. POLYGONUM WEYRICHII.**
 From Russia. Received March, 1899, through Mr. M. A. Carleton.
 Originally from the island of Sachalin, and recently grown in the government of Kief. This perennial plant was discovered by a Russian physician, Dr. Weyrich, and first introduced from Sachalin by Prof. A. T. Batalin, and grown at the Imperial Botanical Gardens at St. Petersburg. It seems to have all the good qualities of sachaline (*Polygonum sachalinense*), and at the same time the leaves are tender and the branches not woody, as in the case of the other plant, which was its chief objection. Should be tried wherever sachaline has been most successful. Amount obtained, 2 pounds.
 Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 31.
- 2805. CAMELINA SATIVA.** **False flax.**
 From Russia. Received through Mr. M. A. Carleton, March, 1899.
- 2806. PANICUM MILIACEUM.** **Broom-corn millet.**
 From Voronezh government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Red. Adapted for trial in North and South Dakota and Nebraska. (1 package.)
- 2807. PANICUM MILIACEUM.** **Broom-corn millet.**
 From Yaroslav government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Grey-Yellow. Adapted for growing in Iowa, Minnesota, and Wisconsin. (1 package.)
- 2808. PANICUM MILIACEUM.** **Broom-corn millet.**
 From Tambov government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Black. Adapted for trial in the northern prairie States. (1 package.)
- 2809. ZEA MAYS.** **Corn.**
 From the Kuban territory, Russia. Received through Mr. M. A. Carleton, March, 1899.
Chenkvantina. Adapted for trial in Kansas, Missouri, and Oklahoma. (1 package.)
- 2810. TRITICUM DURUM.** **Wheat.**
 From Askhabad, in Turkestan, Asiatic Russia. Received through Mr. M. A. Carleton, March, 1899.
 Adapted for trial in the Great Plains west of the one-hundredth meridian.
- 2811. ZEA MAYS.** **Corn.**
 From the Kuban territory, Russia. Received through Mr. M. A. Carleton, March, 1899.
Kuban. Adapted for trial in Kansas and Oklahoma. (1 package.)
- 2812. ZEA MAYS.** **Corn.**
 From the Kuban territory, Russia. Received through Mr. M. A. Carleton, March, 1899.
Checkler. Adapted for trial in Kansas and Oklahoma.

- 2813. HORDEUM VULGARE.** **Barley.**
 From the Kuban territory, Russia. Received through Mr. M. A. Carleton, March, 1899.
 Adapted for trial in the middle prairie States.
- 2814. SECALE CEREALE.** **Rye.**
 From Vytka government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Winter. Adapted to the very northernmost portions of the United States proper and to Alaska.
- 2815. SECALE CEREALE.** **Rye.**
 From Moscow government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Teshitin. Adapted for growing in the Northern States.
- 2816. AVENA SATIVA.** **Oat.**
 From Viborg government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Viborg. Adapted for trial in the coldest portions of the United States.
- 2817. FAGOPYRUM ESCULENTUM.** **Buckwheat.**
 From the Kursk government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Kursk. Adapted for trial in the Northern States.
- 2818. LUPINUS.** **Lupin.**
 From Tambof government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Yellow lupin.
- 2819. HORDEUM VULGARE.** **Barley.**
 From St. Petersburg government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Two-rowed barley. Adapted for trial in the coldest portions of the United States.
- 2820. AVENA SATIVA.** **Oat.**
 From Vyatka, Russia. Received through Mr. M. A. Carleton, March, 1899.
Vyatka oats. Adapted for trial in the very coldest portions of the United States and Alaska.
- 2821. TRITICUM VULGARE.** **Wheat.**
 From Penza government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Banat winter wheat. Adapted for trial in Iowa, Nebraska, and Minnesota. A hardy strain of the Hungarian Banat.
- 2822. AVENA SATIVA.** **Oat.**
 From Podolia government, Russia. Received through Mr. M. A. Carleton, March, 1899.
Tsobilie oats. Adapted for trial in the North Central States.
- 2823. TRITICUM VULGARE.** **Wheat.**
 From the Kuban territory, Russia. Received through Mr. M. A. Carleton, March, 1899.
Nemerchinska Spring. Adapted for trial in the middle States of the Plains.

- 2824. VICIA SATIVA.** **Vetch.**
 From the government of Vladimir, Russia. Received through Mr. M. A. Carleton, March, 1899.
White vetch.
- 2825. MADIA SATIVA.** **Tarweed.**
 From the experiment grounds of the Agricultural Academy at Moscow, Russia.
 Received through Mr. M. A. Carleton, March, 1899.
 An annual of low growth, with sticky leaves and a fetid odor. Largely grown in Russia as an oil plant. Of little value compared with cotton seed or oleomargarine.
- 2826. LALLEMANTIA IBERICA.** **Lallemantia.**
 From the experiment grounds of the Agricultural Academy at Moscow, Russia.
 Received through Mr. M. A. Carleton, March, 1899.
 A low annual of the mint family, with small blue flowers.
- 2827. LUPINUS VARIUS (OR L. ANGUSTIFOLIUS).** **Lupin.**
 From the experiment grounds of the Agricultural Academy at Moscow, Russia.
 Received through Mr. M. A. Carleton, March, 1899.
- 2828. LUPINUS LUTEUS.** **Yellow lupin.**
 From the experiment grounds of the Agricultural Academy of Moscow, Russia.
 Received through Mr. M. A. Carleton, March, 1899.
 This lupin is commonly grown in northern Europe as a soil renovator. It has some value as a forage plant on sandy soils.
- 2829. LUPINUS LUTEUS.** **Yellow lupin.**
 From the experiment grounds of the Agricultural Academy of Moscow, Russia.
 Received through Mr. M. A. Carleton, March, 1899.
 A black-seeded variety. (See No. 2828.)
- 2830. LUPINUS PERENNIS.** **Blue lupin.**
 From the experiment grounds of the Agricultural Academy of Moscow, Russia.
 Received through Mr. M. A. Carleton, March, 1899.
- 2831. LUPINUS ALBUS.** **White lupin.**
 From the experiment grounds of the Agricultural Academy of Moscow, Russia.
 Received through Mr. M. A. Carleton, March, 1899.
- 2832.**
 Wanting.
- 2833. PHLEUM BOEHRERI.** **Boehmer's timothy.**
 From the experiment grounds of the Agricultural Academy at Moscow, Russia.
 Received through Mr. M. A. Carleton, March, 1899.
 A promising grass for dry regions.
- 2834. HIBISCUS ESCULENTUS.** **Okra.**
 From Samarcand, in Turkestan, Asiatic Russia. Received through Mr. M. A. Carleton, March, 1899.
- 2835. AVENA STRIGOSA.** **Wild oat.**
 From Novogronnsk, in Minsk government, Russia. Received through Mr. M. A. Carleton, March, 1899.
 May be a bad weed; should be planted only where it can be eradicated easily.

2836. TRisetum PRATENSE. Yellow oat-grass.

From the experiment grounds of the Agricultural Academy at Moscow, Russia
Received through Mr. M. A. Carleton, March, 1899.

A rather slender, loosely tufted perennial, about 2 feet high. It is a good pasture grass for rich soils.

2837. SECALE CEREALE. Rye.

From Shugnan, in Turkestan, Asiatic Russia. Donated by Professor Korzhinskii,
through Mr. M. A. Carleton, March, 1899.

Adapted for trial in the Great Plains and the Palouse country.

2838. TRITICUM VULGARE. Wheat.

From Roshan, in Turkestan, Asiatic Russia. Donated by Professor Korzhinskii,
through Mr. M. A. Carleton, March, 1899.

Short-eared sort. Adapted for trial in the middle prairie States and in the Palouse country.

2839. HORDEUM VULGARE. Barley.

From Roshan, in Turkestan, Asiatic Russia. Donated by Professor Korzhinskii,
through Mr. M. A. Carleton, March, 1899.

Adapted for trial in the middle prairie States and the northern Pacific Coast States.

2840. TRITICUM VULGARE. Wheat.

From Shugnan, in Turkestan, Asiatic Russia. Donated by Professor Korzhinskii,
through Mr. M. A. Carleton, March, 1899.

Adapted for trial in the middle prairie States and the northern Pacific Coast States.

2841. HORDEUM VULGARE. Barley.

From Shugnan, in Turkestan, Asiatic Russia. Donated by Professor Korzhinskii,
through Mr. M. A. Carleton, March, 1899.

Adapted for trial in the middle prairie States and the northern Pacific Coast States.

2842. TRITICUM VULGARE. Wheat.

From Roshan, in Turkestan, Asiatic Russia. Donated by Professor Korzhinskii,
through Mr. M. A. Carleton, March, 1899.

Adapted for trial in the middle prairie States and the Palouse country, Washington.

2843 to 2850. CITRULLUS VULGARIS. Watermelon.

This collection of varieties of watermelons was received in March, 1899, through Mr. M. A. Carleton. They were donated by Professor Williams, of Moscow, and are from the Kakhanov experiment field at Groznii, in Ter government, North Caucasus, Russia, as follows:

2843. *Big Kakhanov Watermelon.*

2844. *Kakhanov.*

2845. *Yellow-seeded Kakhanov.*

2846. *Early Kakhanov.*

2847. *Kamishin.*

2848. *Astrakhan.*

2849. *Kamishin*, changed by long culture in Groznii.

2850. *Korea.*

2851. MADIA SATIVA. Tarweed.

From Russia. Received through Mr. M. A. Carleton, 1898. (See No. 2825.)

2852 to 2867. LACTUCA SATIVA. Lettuce.

This collection of varieties of lettuce was received in 1899. The seeds were used for cooperative experiments conducted under the direction of the Division of Vegetable Physiology and Pathology.

The varieties are as follows:

From Erfurt, Germany:

- 2852. *Hampel's Improved Yellow Forcing.*
- 2853. *Emperor Forcing.*
- 2854. *Yellow Egg.*
- 2855. *Stonehead or Golden Ball.*
- 2856. *Wheeler's Tom Thumb.*
- 2857. *Buttercup.*
- 2858. *Forcing, Emperor Improved.*
- 2859. *Cos.* Donated by Mr. F. C. Heineman.

From London, England.

- 2860. *Carter's Longstander.*
- 2861. *Carter's Harbinger.*
- 2862. *All the Year Around.*
- 2863. *Tom Thumb.*
- 2864. *Continuity.*
- 2865. *Paris Market.*
- 2866. *Hanson.*
- 2867. *White Nonpareil.*

2868. BETA VULGARIS.

Sugar beet.

From Germany. Imported by the Division of Chemistry from Dippe Brothers, Quedlinburg. Received March, 1899.

Kleinwanzlebener. This seed was all distributed, mainly to State experiment stations, during the season of 1899.

2869 to 2882.

From China. A collection of seeds presented by Prof. G. D. Brill, of the Hupeh Agricultural School, Wuchang. Received March, 1899. They comprise the following:

2869. GLYCINE HISPIDA.

Soy bean.

"This is called the yellow bean and is very much grown here, generally on a trellis. The pods are long and contain many beans each. It is soaked in water for a day or two, then ground and the skins and coarser parts separated by filtering through a coarse cloth. This filtrate is boiled with powdered gypsum, which causes it to curdle, after which it is pressed in molds. The seeds are also soaked in water until the sprouts are 2 or 3 inches long. These are then fried and eaten. The bean is also a source of oil."

2870. DOLICHOS.

Bean.

"I suppose this is a Dolichos. It is planted in the fall, about October, and is gathered before June. The plants are stocky, about 3 feet high and very full of pods. The green beans are much cooked and eaten. They are also parched, resembling our pop corn, and sold on the streets in large quantities. They are generally gathered before they are fully ripe to make way for another crop."

2871.

Bean.

"The green bean I have not seen growing, but it is much liked by the people in its dry form. It is said to grow to a height of 2 or 3 feet."

2872.

Bean.

"I have not seen this black bean growing, but it is said to resemble the green one (No. 2871) in growth and to have about the same value for food."

2873. GLYCINE HISPIDA.

Soy bean.

"I think this is the same as the Soy bean already grown so much in the United States. Here it is often planted among the growing rice of the second crop, and matures the seed after this is cut. It is planted as a catch crop. It is eaten while green, cooked with rice, and when dry it is ground with poor rice, made into dough with water, rolled out thin, cooked and cut into narrow strips, and eaten at the Chinese New Year—why more at that time than any other I do not know."

2874. VIGNA CATJANG.**Cowpea.**

"These are regarded as the poorest of the lot and are often fed to horses. As I saw them growing they were only about 1½ feet high."

2875. BRASSICA.**Cabbage.**

"This cabbage is very much grown in the vicinity of the city during the winter. It has smooth leaves of dark green color and white midrib and veins; hence its name, 'Black cabbage.'"

2876. BRASSICA OLERACEA.**Cabbage.**

"This is the best cabbage that is raised here. It is curly like the Savoy cabbage, though it is small and does not have any more head than our lettuces. It is called Nanking white cabbage, as the seed was said to have come from there at some time."

2877. BRASSICA PETSAL.**Petsai.**

"This is the loose white cabbage grown in many parts of China and figured in Bul. 67, Cornell Agric. Exp. Sta., 1894. It is not grown so much in the winter as the others, but is pickled in the fall and used through the winter. It is, as well as turnips, dried in the fall for winter use." (See No. 2118, Inventory No. 5.)

2878. AMARANTHUS.

"This is a summer vegetable and is cooked like spinach."

2879. RAPHANUS SATIVUS.**Radish.**

"This is a very fine, smooth radish; red color; round; large size. It grows about 60 miles from here, but is shipped in in large quantities. The people call it a turnip, and say it is the best one grown in the Yangtze Valley."

2880. PYRUS JAPONICA.**Japan quince.**

"A large quince called 'Mung Kua' or wood squash. They are said to come from near Ichang, 400 miles farther up the river. They are not eaten here, simply placed in a room for their fragrance."

2881. PYRUS SINENSIS.**Pear.**

"A fall pear, which is considered very good. It is said to keep for a long time."

2882. DOLICHOS LABLAB.**Bean.**

"This is a very strong grower, with purple or white flowers and a profusion of pods, each containing from two to four beans. They are much eaten as snap beans while the pods are young. They are generally grown along the edges of the fields and allowed to run on the mud walls which serve as fences."

2883. ARRACACHA ESCULENTA.**Arracach.**

From Jamaica. Received through Messrs. Lathrop and Fairchild, from the Hope Botanical Gardens, Kingston, through the kindness of Mr. Wm. Fawcett, director.

A carrot-like vegetable much used in tropical and subtropical South America. The roots are propagated by subdivision. (See No. 3511.)

2884. BETA VULGARIS.**Sugar beet.**

From Germany. Imported by the Division of Chemistry from M. Knauer, Gröbers. Received March, 1899.

Mangold.

2885. BETA VULGARIS.**Sugar beet.**

From Germany. Imported by Hoff Brothers, Chicago, Ill., and presented to the Division of Chemistry. The seed was grown by Carl Braune, of Biendorf, Germany. Received March, 1899.

Biendorf Elite Klein-Wanzlebener.

2886. CITRUS AURANTIUM?**Orange.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild, (No. 108), 1899.

"A variety of orange introduced from Chile into Panama by Mr. Gerardo Lewis. The fruits are exceedingly small, often not more than three-quarters of an inch in diameter. Skin very thin and tender, separating very easily from the flesh, which is very sour and juicy. It is rumored the variety came originally from China. Leaves narrowly lanceolate, obtuse; petiole not winged; spineless." (*D. G. Fairchild.*)

2887. LINUM USITATISSIMUM.**Flax.**

From Oregon. Donated by Prof. J. Withycombe. Seed raised from Belgian stock at the Experiment Station Farm, Corvallis, Oregon.

A fiber flax.

2888. ANDROPOGON SORGHUM.**Sorghum.**

From Kansas. Received March, 1899.

A series of miscellaneous lots of individual seed heads from plants showing high sugar content. These were distributed to twenty of the State agricultural experiment stations.

2889 to 2891. DIOSPYROS KAKI.**Kaki.**

From Japan. Received through Prof. S. A. Knapp, March, 1899.

The following three varieties belong with those listed under Nos. 2726 to 2730 (q. v.). The descriptions are those published by the Japanese Agricultural Society.

2889. *Hiyakume.* "Fruit very large, roundish-oblate. Skin vermilion red, and shows black marks on the end when quite ripe; fleshy, few seeds. Flesh rusty brown with many purplish brown dots, juicy, very delicious. Superior to any other variety."

2890. *Daidaimaru.* "Fruit large, oblate, four-sided. Skin yellowish orange. Flesh pale yellow, juicy, sweet; seeds rare."

2891. *Shimomaru.* "Fruit medium, round. Skin yellowish orange. Black cobweb marks appear on the end when quite ripe. Flesh rich in flavor."

2892. PYRUS SINENSIS.**Pear.**

From Japan. Received through Prof. S. A. Knapp, March, 1899.

"Fruit large, round, and in quality similar to Keifer, but superior. The tree is recommended as very hardy and free from blight. It is the best stock upon which to graft American pears."

2893 to 2900. PRUNUS.**Plum.**

The following collection of young trees of eight of the best varieties of Japanese plums were received through Prof. S. A. Knapp from Japan early in 1899. They are as follows:

2893. *Yone-momo.*

2894. *Nagate-maru.*

2895. *Haku-botan.*

2896. *Cyca-momo.*

2897. *Oku-botan.*

2898. *Beni-botan.*

2899. *Hatankio.*

2900. *Botankin.*

2901. CITRUS.**Orange.**

From Mount Ran, Japan. Received through Prof. S. A. Knapp, March, 1899.

*Unshiu.***2902. CITRUS.****Orange.**

From Mount Ran, Japan. Received through Prof. S. A. Knapp, March, 1899.

*Sa Kurajima.***2903 to 2908. BAMBUSA.****Bamboos.**

From Japan. Received through Prof. S. A. Knapp, March, 1899.

“The bamboo in Japan is one of the most useful in daily life of any of the plants. It enters into the construction of almost everything in common use among the people, from simple household utensils, to the peasant’s house. Its use for the construction of laborers’ homes is especially commended for comfort and economy. It is universally used among the common people for conveying water, for eaves’ troughs, light fences, staging poles, rafters, etc. It is a highly ornamental plant. It is the product of a warm climate, and when planted in a rich, moist soil frequently grows 60 feet in one year. Invaluable for various convenient uses about a farm.” (*Knapp.*)

2903. *Hotei-chokee*, pot-grown plants.**2904.** *Maso-chookee*, pot-grown plants.**2905.** *Ma-dake*, pot-grown plants.**2906.** *Moso-chokee*, roots.**2907.** *Ma-dake*, roots.**2908.** *Koro-chokee*.**2909. CINNAMOMUM CAMPHORA.****Camphor.**

From Japan. Received through Prof. S. A. Knapp, March, 1899.

“This is the tree from which commercial camphor is manufactured in Japan. It becomes as large as the Elm, with a similar top, making an attractive and desirable ornament. For commercial purposes it may be grown in dense forests. It is hardy under considerable frost.” (*Knapp.*)

2910. ERIBOTRYA JAPONICA.**Loquat.**

From Japan. Received through Prof. S. A. Knapp, March, 1899.

Giant Loquat or *Biwa*.**2911. BROUSSONETIA PAPYRIFERA.****Paper mulberry.**

From Japan. Received through Prof. S. A. Knapp, 1899.

“The fibrous portion of the bark from the limbs makes strong strings, which are used by the farmer and gardener for many purposes. The Japanese make a tough paper, almost equal to cloth, by steeping the bark of this tree in warm water for several days, then adding a small amount of starch and pounding into a pulp; after which add water until of required consistency and manipulate as in hand-made paper.” (*Knapp.*)

A medium-sized tree, rather common in the Southeastern United States, from Washington, D. C., southward; often escaped, and growing half wild.

2912 to 2921.**Lilies.**

From Japan. This is a collection of new Japanese lilies secured through Prof. S. A. Knapp. Received March, 1899. They comprise the following:

2912. *Lilium auratum, rubro vittatum.***2913.** *Lilium auratum, willei.***2914.** *Lilium auratum, macranthum.***2915.** *Lilium speciosum, album.***2916.** *Lilium speciosum, rubrum.***2917.** *Lilium hansonii.***2918.** *Lilium elegans, incomparable.***2919.** *Lilium elegans, flora simple.***2920.** *Lilium leightlini.***2921.** *Lilium tigrinum.*

2922. CRYPTOMERIA JAPONICA.**Cryptomeria.**

From Japan. Received through Prof. S. A. Knapp, March, 1899.

"One of the most beautiful and useful evergreens in Japan. It grows to an enormous size. At Nikko trees of this species 7 feet in diameter, and one 300 feet in height, may be seen. In Japan it is extensively planted to reforest the mountains. It is also grown as an ornamental tree. By severe pruning when young it will thrive as a hedge. The wood is about as hard as white pine, but when cut into lumber and polished is beautiful, and is used for finishing the interior of dwellings and public buildings. It is hardy under considerable frost." (*Knapp.*)

"It is hardy as far north as New York and thrives in sheltered positions, even in New England." (*Rehders.*)

2923. LESPEDEZA BICOLOR.**Hagi.**

From Japan. Received through Prof. S. A. Knapp, March, 1899.

"This plant was seen by an agent of the Agricultural Department in the experiment grounds of the Imperial Agricultural College at Tokyo, Japan, where it had been under test for three years, with the most excellent results. It is similar to alfalfa in character and nutritive value, but is more hardy, thrives on poorer soil, and has a more vigorous growth. It should be cut from three to five times a year. If allowed to stand too long it takes on a rank growth (5 to 6 feet high) and becomes woody. Soil, sandy loam." (*Knapp.*)

2924. COFFEA ARABICA.**Coffee.**

From Trinidad, British West Indies. Received through Messrs. Lathrop and Fairchild, 1899.

2925. PASSIFLORA.**Passion fruit.**

From Caracas, Venezuela. Received through Messrs. Lathrop and Fairchild (No. 116), 1899.

"Passion fruits from the market at Caracas. A purple variety with delicious grape-flavored pulp. Species unknown." (*D. G. Fairchild.*)

2926. CAPSICUM ANNUM.**Pepper.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 100), 1899.

"Native varieties of Chile peppers from the market. Said to be the hottest known in Panama." (*D. G. Fairchild.*)

2927. COFFEA ARABICA.**Coffee.**

From Caracas, Venezuela. Received through Messrs. Lathrop and Fairchild (No. 94), 1899.

"A variety of giant coffee. Seed all from a single tree." (*D. G. Fairchild.*)

2928. EUGENIA.**Panama cherry.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 106), 1899.

"The so-called 'Cherry' of Panama. Possibly a *Eugenia*. Very sour. Used for preserves and planted by Europeanized Columbians. A small tree, 10 feet high; foliage like that of mandarin orange, but much smaller." (*D. G. Fairchild.*)

2929. FRAGARIA VESCA.**Strawberry.**

From Caracas, Venezuela. Received through Messrs. Lathrop and Fairchild (No. 93), 1899.

"The native wild strawberry, bought in the market of Caracas. Highly prized by the Europeans living in Caracas, and of very good flavor. Dr. A. Ernst informs me that they are descendants of strawberries originally introduced by the Spaniards, although now growing wild. From the *Tierra fria* or high (3,000 feet and over altitudes)." (*D. G. Fairchild.*)

2930. PHASEOLUS VULGARIS.**Bean.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 109), 1899.

"The so-called *Blanco*, or white bean of Peru. Said to be excellent." (*D. G. Fairchild.*)

2931. CHENOPODIUM QUINOA.**Quinoa.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild, 1899.

The seeds are much used, being cooked with soups and with fish. "The leaves are eaten like spinach; in Peru the seeds are used in soups, for making cookies, and even for making a sort of beer. It is necessary before using the grain to boil it in water to get rid of an acrid bitter principle, which otherwise will render the taste very disagreeable." (*Vilmorin.*)

In France the Quinoa is sown from the month of April on. It must be abundantly watered during very hot weather. The seed ripens in August or September.

2932. VIGNA CATJANG.**Cowpea.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 110), 1899.

Colorado. "A native variety of bean; the name means simply brown. Details as to culture wanting." (*D. G. Fairchild.*)

2933. SESAMUM INDICUM.**Sesame.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 107), 1899.

"The seed is used as a medicine. Put in water (soaked eight to ten hours) it becomes mucilaginous, and when sweetened to taste and with a small quantity of lime juice is said to be a more refreshing drink than linseed. It might be used in the harvest field instead of oatmeal and water. Should be tested for invalids. Perhaps it is the same as the Benne seed of India." (*D. G. Fairchild.*)

2934. VIGNA CATJANG.**Cowpea.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 111), 1899.

Morado, "a native bean of the isthmus. Said to be excellent in quality." (*D. G. Fairchild.*)

2935. CAPSICUM ANNUM.**Pepper.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 96), 1899.

"An indigenous variety of Chile pepper, said to be hot but not so strong as birds-eye pepper. From market of Panama." (*D. G. Fairchild.*)

2936. BENINCASA CERIFERA.**Wax-gourd.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 99), 1899.

"A curious curcubit, like a watermelon but pubescent, with long hairs. Flesh said to be palatable raw or cooked. Probably introduced here from China." (*D. G. Fairchild.*)

This plant was introduced into America in 1892, as "Chinese preserving melon." The fruits are said to keep a long time and are recommended by various writers for eating like cucumbers, or cooked liked squash.

Bailey says: "I have been unable to relish the food when uncooked, but made into preserves or sweet pickles it is one of the best of all subjects for the purpose, and it is worthy of general cultivation for such culinary use."

Naudin notes the existence of at least two varieties of this vegetable, one sort with cylindrical fruits, the other with larger oval fruits. It is known to the Chinese as *Zit-kwa*, or *Tung-kwa*.

2937. RICINUS COMMUNIS.**Castor bean.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 105), 1899.

"An ornamental called Rhubarb tree; small; 3 feet high, with curious swollen trunk like *Boucarnea*. Native, but cultivated in gardens for its bright scarlet flowers and flower stalks. Leaves somewhat like pawpaw or castor bean. May be related to *Ricinus*." (*D. G. Fairchild.*)

2938. CAPSICUM ANNUM.**Pepper.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 98), 1899.

"Large sweet peppers from Chinese garden in environs of Panama. May possibly have been imported from China, though probably indigenous. No name obtained." (*D. G. Fairchild.*)

2939. CHRYSOPHYLLUM CAINITO.**Star apple.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 102), 1899.

"Seed from two specimens; 3 inches in diameter; fine flavor." (*D. G. Fairchild.*)

2940. VIGNA SINENSIS.**Cowpea.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 103), 1899.

"A variety of snap-bean grown by the Chinese near Panama, with unusually long, slender pods; said to be of excellent quality. Possibly introduced from China, although no definite information could be obtained." (*D. G. Fairchild.*)

2941. EUGENIA JAMBOS.**Rose apple.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 101).

"This fruit, if properly candied, is one of the finest for the purpose. The rose odor and flavor is remarkably pronounced, and it certainly deserves attention." (*D. G. Fairchild.*) The Rose apple is a medium-sized tree, native of India. It is cultivated in southern Florida.

2942. CAPSICUM ANNUM.**Pepper.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 97), 1899.

"A very hot pepper. Cherry-shaped; orange when ripe." (*D. G. Fairchild.*)

2943. RHIZOPHORA MANGLE.**Mangle.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 115), 1899.

"The so-called 'Mangle,' a large tree growing abundantly in swamps. Tans a very fine red. The bark has never been exported. Wood used for rafters." (*D. G. Fairchild.*)

2944. BYRSONIMA?**Nance.**

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 113).

"The *Nance* is a small, slow-growing tree, with hard wood, the very best known in this country for building boat ribs; very tough. The trees are wild in this region. The bark is used for tanning, and I am told is the best tanning material of this region. It tans skins a light yellow. The roots are macerated in cold water and the pulp strained out and a sort of 'chicha,' or drink, is prepared, which is relished by Europeans and natives. An ice is made from this 'chicha,' said to be very good.

The drink is sour, and has in it a large amount of vegetable fat, giving it a peculiar greasy flavor. The bottled fruits keep for months if completely under water, and 'chicha' can be prepared from it at any time. The fresh ones are, however, preferable. No medical properties are ascribed. Should be called to the attention of makers of summer drinks." (*D. G. Fairchild.*)

According to Baillon, the Nance-bark of Mexico is possibly *Byrsonima crassifolia*. Speaking of this genus, which belongs to the *Malpighiaceae* family, Niedenzu says: "The fruit of all the species are probably edible; the Indians of northern Brazil and Guiana use as a stone fruit especially *B. verbascifolia*, *B. crassifolia*, *B. serica*, *B. intermedia*, *B. pachyphylla*, and *B. spicata*. These fruits are called (probably because of their small nutritive value) *Moro-cy Murecy*, *Murici*, *Murei*, or *Mureila*, in French *Moureller*." Niedenzu also states that some of the species are used for medicinal purposes, tanning, dyeing, and in construction. (See No. 2943.)

2945. ORYZA SATIVA.

Rice.

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 114), 1899.

"Shortest-kerneled variety known here. Said to have been sent to the States for cleaning, but the mills there failed to remove the thin integument close to the kernels." (*D. G. Fairchild.*)

2946. MOMORDICA CHARANTIA.

Balsam apple.

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 104), 1899.

"A curious cucurbit grown by the Chinese near Panama, possibly introduced from China. Flowers three-fourths inch across, lemon yellow; vigorous creeper, trained on trellis; fruit, when young, green, with gray blotches; cucumber-shaped, but tapering to a point; foliage luxuriant, leaves small. Fruit, when ripe, a showy orange, with seeds in bright crimson pulp. Whole rind is soft and sweetish. Eaten raw, and cooked as a vegetable. Fruit opens into three valves like a pod." (*D. G. Fairchild.*)

"This plant is nice as a condiment and an ingredient of curries and other table preparations in the Tropics, especially of the Old World, where it is native. It is also grown as an ornamental vine, and for this purpose is sold by American seedsmen, along with an allied species. *Mormordica balsamina*, or Balsam apple." (*Bailey.*)

This fruit is known to the Chinese as La-kwa, K'u-kwa. Numerous forms are cultivated in India, the rainy-season one being called *Kareili*, and the hot-weather variety *Karela*. Edward Wilminn suggests that it may be used in salad, as pickles, or in curry. He further says in India the fruit is sliced, then fried. It is necessary to boil it in water first, in order to remove a bitterness.

2947. CONVULVULUS.

From Panama, Colombia. Received through Messrs. Lathrop and Fairchild (No. 112), 1899.

"Grown as sweet-potatoes are grown, in raised ridges, but producing no enlarged roots and running only scantily. The foliage and tips of the shoots are used as greens; boiled like spinach. The plant was found growing in a Chinese garden near Panama and very little information regarding the method of cutting was obtainable. The plants were attacked by a white rust (*Albugo*), and care should be exercised to prevent this disease from spreading to sweet-potatoes in regions where it does not yet exist. (*D. G. Fairchild.*)

2948. CITRUS LIMETTA.

Lime.

From Colombia, South America. Donated by Mrs. L. N. Webb, Takoma Park, Washington, D. C., through Mr. H. J. Webber; received March, 1899.

2949. ACACIA.

From Colombia, South America. Donated by Mrs. L. N. Webb, Takoma Park, Washington, D. C., through Mr. H. J. Webber; received March, 1899.

2950. PSIDIUM. Guava.

From Colombia, South America. Donated by Mrs. L. N. Webb, Takoma Park, Washington, D. C., through Mr. H. J. Webber; received March, 1899.

2951. PSIDIUM. Guava.

From Colombia, South America. Donated by Mrs. L. N. Webb, Takoma Park, Washington, D. C., through Mr. H. J. Webber; received March, 1899.

2952. PSIDIUM. Guava.

From Colombia, South America. Donated by Mrs. L. N. Webb, Takoma Park, Washington, D. C., through Mr. H. J. Webber; received March, 1899.

2953. TRITICUM DURUM. Wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Kubanka Spring wheat. From the Turghai territory in the Kirghiz Steppes, 40 miles southeast of Orenburg. Grown by Mr. Gnyezdilof. Average rainfall for the year, about 15 inches or a little less; for the growing season (May to September, inclusive), about 8 inches. The last season was an unusually dry one. Summer short but very hot. Soil much grayer than the usual black earth, with a greater mixture of clay, and also considerable sand. The common custom is to plow the ground the preceding autumn, and then stir the surface again before sowing in the spring. Period of growth in this region about 100 days. Mean time of harvest, August 10 to 12. The wheat is a *durum*, extremely hard, and of excellent quality. The best bread wheat in the Volga-Ural region, but may be received complainingly by our millers; 10 to 25 per cent of a softer red wheat, however, is mixed with it in grinding. It is very drought resistant, and considerably resistant to orange-leaf rust. Suitable for trial in this country in extreme western Nebraska, Kansas, the Dakotas, east Colorado, Texas Panhandle, and perhaps the Columbia plains and New Mexico. This variety might be transformed into a winter sort in warm latitudes. Amount obtained, 6 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 14.

2954. TRITICUM DURUM. Wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Perododka Spring wheat. From Orsk district, Orenburg government. Average annual rainfall of the region, about 15 inches; for the growing season (May to September, inclusive), about 8 inches. The last season was an unusually dry one. Mean annual temperature, 37.9°. Soil, the usual "black earth" of east Russia, though perhaps not so dark as in the Samara government; similar to western Nebraska or eastern Colorado soil. Should be sown early. Period of growth about 100 days. Harvest time, August 10 to 12. Sown in soil plowed the previous autumn. It is a wheat allied to the Kubanka, and said to be originally identical, but it is a little darker and perhaps softer, and has become changed by transference to darker, richer soils. A hard wheat, making good bread, but hardly so good as Kubanka. It is a very drought-resistant variety. In this country it may well be tried in the Dakotas, Minnesota, Nebraska, Kansas, and perhaps Oklahoma, eastern Colorado, Texas, and Columbia plains. Amount obtained, 6 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 16.

2955. TRITICUM VULGARE. Wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Russian Spring wheat. From the Kirghiz Steppes, in the vicinity of Orenburg. Mean annual rainfall of the region, about 15 inches; for the growing season (May to September, inclusive), about 8 inches. Summers short but very hot. Soil, the rich "black earth" of the Russian plains, but probably not so dark as in Samara government; much like west Dakota soils. Wheat should be sown early. Period of growth about 100 days. Mean harvest time, August 10 to 12. Sown in soil that was plowed the previous autumn. Rather a small-grained, hard, or semihard red wheat. Makes a very good bread itself, but is also used to mix with Kubanka by millers

of the Volga region. Suitable for trial in this country in the Dakotas and Minnesota particularly, but might also be transformed into a good winter wheat in districts farther south. Amount obtained, 6 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 16.

2956. TRITICUM VULGARE.

Wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Banatka Winter wheat. From Kublich, in eastern Podolia, but introduced there originally from the Banat district in Hungary. Mean annual rainfall of the region, about 18 inches; for the growing season (May to September, inclusive), about 10 inches. Mean annual temperature, near 44.6°. The locality is near the edge of the "black earth" belt, and therefore partakes also somewhat of the nature of the soils of the "gray forest lands." The wheat is probably adapted to almost any medium soil of our prairie region, or even of New York. Should be sown early (September 10 to 15). Mean harvest time, July 27. An excellent semihard red wheat, of medium-sized grains. Very popular in Hungary, but made perhaps all the better by acclimation in Russia. Suitable for trial in Michigan, Ohio, New York, Indiana, Illinois, Kansas, and perhaps Nebraska and Iowa. Amount obtained, 9 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 17.

2957. TRITICUM POLONICUM.

Polish wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Polish Spring wheat. From Glinyanaya, in northern part of Kherson government. Mean annual rainfall of the region, about 20 inches. Mean annual temperature, about 44.6°. Sown in this region about April 15, but the seed time varies exceedingly, depending on the condition of the weather. Period of growth about 115 days. Mean harvest time about August 1. This variety belongs to the species *Triticum polonicum*, and must not be confused with the sort that is most commonly called Polish wheat in Russia, which latter is a variety of *Triticum vulgare* and entirely different. It is the largest-grained wheat known, is extremely hard, and contains a very large per cent of gluten comparatively. It is especially valuable for macaroni production and for certain pastries. It is at first bearded, but loses its beards at harvest time. It seems adapted to a soil not too rich in humus, with considerable clay and some sand, and a rather warm, dry climate. Should be tried in this country in the western portions of Texas, Oklahoma, Kansas, and Nebraska, in eastern Colorado, Arizona, and California, and perhaps in some of the Southern States. It is considerably resistant to orange-leaf rust. Amount obtained, 6 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 18.

2958. TRITICUM VULGARE.

Wheat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Sandomir Winter wheat. From the government of Radom, in Poland. Mean annual rainfall, 27 inches; for the growing season (May to September, inclusive), 15.5 inches. Mean annual temperature, about 44.6°. Mean harvest time, August 6. A rather soft, plump, white wheat, quite susceptible to changes of soil and climate. Best grades of the variety to be obtained only in Poland, near the town of Sandomir. Has already been tried in the United States with some success. Might be of especial value for cracker making and for certain breakfast foods. Should be tried on the Columbia plains, in northern California, and in New York. Amount obtained, 3 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 19.

2959. TRITICUM DICOCCUM.

Emmer.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Ufa Spring emmer. From the government of Ufa, about 8 miles from the city of the same name. Mean annual rainfall, 16.6 inches; for the growing season (May to September, inclusive), 10.9 inches. Mean annual temperature, 37.5°; for January, 9.5°; for July, 69.4°. Soil a very rich, deep, black loam, the famous "black earth" of Russia. Should be sown quite early in the spring, drilled in at the rate of 2 to 2½ bushels per acre. Period of growth about the same as for oats. This very hardy

cereal is little known in this country, but is much valued in Russia and Germany. It is used both for stock feed, similarly to oats, and also as human food in the form of gruel. It is very resistant to cold and often to drought also, but may suffer some from rust in warm, wet seasons. It is a variety of *Triticum dicoccum*, correctly called emmer, but also known as Russian spelt. The Russian name is "polba." Is worthy of thorough trial. Admirably adapted for trial in all the extreme Northern States, from Minnesota to Washington, and in Alaska; also in arid districts. Amount obtained, 6 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 26.

2960. PANICUM MILIACEUM.

Broom-corn millet.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Red Orenburg. From the Turghai territory of the Kirghiz Steppes, about 40 miles southwest of Orenburg. Mean annual rainfall, about 15 inches or less; for the growing season (May to September, inclusive), about 8 inches. Mean annual temperature, about 37.9°. Summers short but very hot. Soil differs from the usual "black earth" in being a rather stronger clay with a considerable mixture of sand, making it also grayer in color—the same sort of soil to which durum wheats are so well adapted. Should be sown probably about May 15 or soon after, though in Russia it is sown about the 25th or later. Period of growth, 110 to 115 days. A red-seeded, panicked millet (*Panicum miliaceum sanguineum*), quite different from the ordinary forage millets of our prairie States. Grown chiefly for the seed, which is not only excellent for stock feeding, but in Russia is most widely used for human food in the form of grits or gruel and with soups. Well adapted for trial in the Dakotas, Nebraska, eastern Colorado, Kansas, and similar cold and arid districts. Amount obtained, 3 bushels.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 29.

2961. SECALE CEREALE.

Rye.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Sisolsk Winter rye. From Ust-Sisolsk, in Vologda government, about 61½° north latitude. Mean annual temperature, 31.7°; for the growing season (May to September, inclusive), 56.5°. Normal rainfall not known, but during one year it was 18 inches. Seed obtained from Mr. A. E. Sukhanof, free of charge. Rotation of crops where seed was grown as follows: (1) Fallow without manure; (2) winter rye; (3) spring barley and oats with manure. Variety grown in that region for many years and therefore thoroughly adapted to extreme cold, and rather drought-resistant. Should be tried in Alaska, and perhaps also in the very coldest districts of the United States proper. Amount obtained, ⅔ bushel.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 24.

2962. HORDEUM VULGARE.

Barley.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Sisolsk Spring barley. From Ust-Sisolsk, in Vologda government, about 61½° north latitude. Mean annual temperature, 31.7°; for the growing season (May to September, inclusive), 56.5°. Normal rainfall unknown, but during a single year it was 18 inches. Seed obtained from Mr. M. I. Tur, free of charge. Rotation of crops where seed was grown as follows: (1) Fallow without manure; (2) winter rye; (3) spring barley and oats with manure. Should be tried principally in Alaska or other extremely cold districts. Amount obtained, ⅔ bushel.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 23.

2963. AVENA SATIVA.

Oat.

From Russia. Received March, 1899, through Mr. M. A. Carleton.

Zhelamii oat. From Ust-Sisolsk, in the Vologda government, about 61½° north latitude. Mean annual temperature, 31.7°; for the growing season (May to September, inclusive), 56.5°. Normal rainfall not known, but during a single year it was 18 inches. Variety grown in the region 12 years; originally obtained from Moscow. Thoroughly acclimated. The grower strongly recommends a two-days' soaking of the seed before sowing in order to hasten germination. Seed obtained from Mr. M. I. Tur, free of charge. Rotation of crops where seed was grown as follows: (1) Fallow

without manure; (2) winter rye; (3) spring barley and oats with manure. Harvested season of 1898. Should be tried in Alaska and the very coldest regions of the United States. Amount obtained, $\frac{3}{8}$ bushel.

Reprinted from Inventory No. 4. See Carleton, Bull. 23, Div. Bot.: 21.

2964. *BROMUS INERMIS.*

Smooth brome grass.

From France, 1899.

This grass is also known as Austrian brome, Hungarian brome, and awnless brome. Last year the Department of Agriculture imported from Russia and distributed in the Northwest 12 tons of seed. Many favorable reports have been received, indicating that the cultivation of this species is likely to prove one of the most important agricultural resources of the subarid regions of the West. It is extremely resistant alike to cold and to drought, and is a vigorous grower, furnishing both hay and pasturage in abundance, and of a superior quality. Some correspondents have reported that they did not obtain a stand the first season, and have applied for more seed. Attention is accordingly called to the fact that in unfavorable seasons this grass may make very little progress the first summer, but if allowed to remain through the winter such plots not infrequently put forth a vigorous growth the next season.

The South Dakota station has had perhaps the most extended and successful experience with *Bromus inermis*, with the result that Professor Chilcott has been able to prepare the following practical directions for planting and subsequent care:

Seed bed.—Prepare the seed bed by plowing to a good depth, using land as free as possible from weeds. Harrow and fine thoroughly.

Sowing.—Sow the seed broadcast early in the spring at the rate of from 15 to 20 pounds per acre, and cover with the harrow. In case the ground is liable to blow, sow a thin nurse crop of about one-half bushel of barley or oats.

After care.—In case the weeds grow vigorously or a nurse crop is used, mow once or twice in order to prevent smothering the tender plants and robbing them of moisture. If, however, no dry spell is present the nurse crop can be cut for hay, but if a drought does come, mow without delay, and leave the crop to mulch the ground unless it be so heavy that it will smother the young grass. These precautions are given to insure a stand. You must remember you are not trying to raise the nurse crop but to get a stand of this new and valuable grass, which will last you many years. Where the danger of blowing is not great, sow without a nurse crop. It is best not to pasture the first year. If the stand looks thin the first fall, do not plow it up, but leave it a second year.

It will usually furnish a crop of seed and a crop of hay the second year. There is a ready sale for the seed at good prices, but it will be more valuable to you for seeding more ground.

The success of this grass in the Dakota region has been demonstrated, but the extent of its utility remains to be discovered by experiments in other parts of the country. For this purpose packages of 2 pounds of seed, enough to plant an eighth of an acre, are sufficient. Commercial quantities should be secured from the seed dealers, who will probably have an adequate supply available next year.

2965. *EUCHLÆNA LUXURIANS.*

Teosinte.

From Florida. Received March, 1899.

“This plant needs a long season of hot weather, a rich soil, and abundant moisture in order to succeed well, and it is useless to plant it where all these conditions can not be had. It is a remarkably vigorous grower, reaching 10 or 12 feet in height, with an unusually abundant supply of leaves and slender stems, which continue to grow until killed by frosts. If cut when it reaches 4 or 5 feet in height it makes excellent fodder, and will produce a second crop fully as large as the first. If left to grow until September or October it furnishes excellent material for the silo, in greater amount per acre than either corn or sorghum, and we have found no other plant which is its equal for soiling purposes. Its leaves are similar to those of sorghum, but much longer. The stalks contain 8 to 10 per cent of sugar. The plants stool freely, sometimes as many as 50 stalks growing from a single seed. It has done fairly well at the Georgia and Mississippi experiment stations and very fairly in North Carolina, but has made a heavier crop than any other plant which has ever been grown at the Florida and Louisiana stations. In Mississippi the heaviest yield has been 22 tons per acre, while the Louisiana station reports the enormous yield of over 50 tons of green forage per acre. Its value for feeding is apparent from the fact that the entire crop grown at the Louisiana station was sold to local dairymen at the rate of \$2 per

ton while standing in the field. Its season of growth is so long that it seldom matures north of latitude 30° N., but it has ripened well at the Florida and Louisiana stations. The seed, 4 to 5 pounds per acre, should be planted in hills 4 or 5 feet apart each way, about the time when cotton is planted, and the crop cultivated like corn. The greater distance should be given on the richer soils." (*S. M. Tracy.*)

2966. DIOSCOREA.**Yam.**

From Barbados. Received through Messrs. Lathrop and Fairchild (No. 61), 1899.

Crop or Hunt. "The most expensive yam grown in Barbados, selling for \$2 per 100 pounds. They are grown like sweet potatoes, planted as pieces of the root, one in a hill, 3 to 6 feet apart. Each root should be cut into eight pieces. No poles are needed. Planted in April and harvested in December in Barbados. Cook exactly like Irish potatoes. For Florida." (*D. G. Fairchild.*)

2967. DIOSCOREA.**Yam.**

From Barbados. Received through Messrs. Lathrop and Fairchild (No. 62), 1899.

Barbados Red. "This is a quicker starting variety than the 'Crop yam' (No. 2966). Grown like sweet potatoes, although considered an inferior yam as regards quality, selling here (Barbados) for only 80 cents a hundred pounds. It is worthy of trial because it is quicker to start." (*D. G. Fairchild.*)

2968. DIOSCOREA.**Yam.**

From Barbados. Received through Messrs. Lathrop and Fairchild (No. 63), 1899.

Lisbon. "This variety is sold at about \$1 per 100 pounds here (Barbados), and for boiling and roasting is considered to be the best in the island. Grown like Nos. 2966 and 2967, except that it is generally planted in May instead of April." (*D. G. Fairchild.*)

2969 to 2972. IPOMEEA BATATAS.**Sweet potato.**

From Barbados. Received through Messrs. Lathrop and Fairchild (No. 64), 1899.

"This comprises selected roots of four of the varieties of sweet potatoes which are the best grown in Barbados. The sweet potatoes of Barbados are noted throughout the West Indies, and are worthy a trial in New Jersey and Florida." (*D. G. Fairchild.*)

2969. *White Gilk.* "The best shipper."

2970. *Caroline Lee.* "The sweetest."

2971. *White Sealy.* "Has short vines."

2972. *Red Sealy.*

2973. LACTUCA SATIVA.**Lettuce.**

From France. Received April, 1899.

Laitue blonde d'ete. *Large, white cabbage lettuce.* *All the year around.* "This lettuce is one of the most generally cultivated, as indicated by the multiplicity of its names. It is very early; is very productive in spite of its small size, because, as the gardeners say, it is all heads. It makes a fine salad, the leaves being tender, crisp, and crinkly. This variety grows on almost all soils, and is cultivated all over the world." (*Vilmorin.*) The seed is white.

2974. LACTUCA SATIVA.**Lettuce.**

From France. Received April, 1899.

Algiers.

2975. LACTUCA SATIVA.**Lettuce.**

From France. Received April, 1899.

Laitue gotte lente a monter. *Cabbage lettuce.* *Tom Thumb.* *Stone tennis ball.* "A rather small and relatively productive variety, which heads well. It is one of the best for spring and summer; tender and of excellent quality." (*Vilmorin.*) The head is compact and well formed when grown outside, but very tender, and keeping a long time even in summer.

2976. TRIFOLIUM PRATENSE.**Clover.**

From Russia. Received through Prof. N. E. Hanson, February, 1898.

Russian Red clover. A strain said to be more hardy than the American-grown sorts.

2977. CICER ARIETINUM.**Garbanzos.**

From Casa Blanca or Mogador, Morocco. Presented by Captain Coghlan, of the U. S. S. *Raleigh*, through Mr. W. T. Swingle.

"Used for fodder and green manure. The peas are not bad for food if soaked well before boiling." (See No. 2139 in Inventory No. 5.) This was collected about October, 1897, and went through the battle of Manila.

2978. VICIA FABA.**Horse bean.**

From Casa Blanca or Mogador, Morocco. Donated by Captain Coghlan, of the U. S. S. *Raleigh*, through Mr. W. T. Swingle.

This was collected about October, 1897, and went through the battle of Manila. The "Feverole" of the French. Used for forage and for green manure, while the beans are eaten. Dr. Trabut says the smaller horse beans are the better. Dr. Trabut also says there is a similar sort grown in Kabylia. M. Yahia says that they are used by the Arabs to make goats give more milk. (See No. 2375 in Inventory No. 5.)

2979. COFFEA.**Coffee.**

From Beagle, French Congo, Africa. Gift of Dr. Trabut, through Mr. W. T. Swingle, April, 1899.

Does well on low, wet lands.

2980. BRASSICA OLERACEA.**Cabbage.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria, through Mr. W. T. Swingle, April, 1899.

This cabbage, according to Dr. Trabut, grows wild in North Africa. It is a form of the original plant from which the many cultivated races of cabbage have come.

2981. NOPALIA COCCINELLIFERA.**Prickly pear.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria, through Mr. W. T. Swingle, April, 1899.

This is said by Schumann to be used as a host plant for the cochineal insect. It is supposed to be a native of South America, but is commonly cultivated throughout the Tropics. This number comprises pads having enormous numbers of fruits. Hybridize with edible *Opuntias*.

The genus *Nopalía* differs from *Opuntia*, with which it coincides exactly in habit, only in having longer stamens, and a style which projects far out of the flower. These plants are frequently referred to as species of *Opuntia*.

2982. SORGHUM HALAPENSE.**Wild sorghum.**

From Algeria. Received through Mr. W. T. Swingle, April, 1899.

Considered by Dr. Trabut to be undoubtedly the wild form of sorghum and Milo-maize. This is probably the same as Johnson grass, and great caution should be exercised in planting it, as the latter is a very bad weed in the South and Southwest.

2983. SORGHUM VULGARE.**Sorghum.**

From Algeria. Received as a gift from Dr. Trabut through Mr. W. T. Swingle, April, 1899.

Sorgo vivace or *Sorgho d'Alep géant*. Perennial sort from Soudan. A remarkable race propagated by cuttings like sugar cane. Yields prodigiously but requires water. Try in the South. Probably will be useful for silage.

2984. CHAMAEROPS HUMILIS.**Palm.**

From Algeria. Received through Mr. W. T. Swingle, April, 1899.

One of the many ornamental varieties of the European dwarf fan-palm, having deep green, nearly closed leaves (i. e., with a small sinus). An improved ornamental variety. (See Nos. 1931, 1932, 2216, and 2217, Inventory No. 5.)

2985. EUCALYPTUS RAMELIANA.**Eucalyptus.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria, through Mr. W. T. Swingle, April, 1899.

A hybrid between *E. rostrata* and *E. botryoides*. Dr. Trabut himself planted the seeds from *E. botryoides* and obtained these hybrids. This, as well as *Eucalyptus trolardiana* (No. 2987), is highly recommended by Dr. Trabut for planting in Algeria, because of its great vigor.

2986. EUCALYPTUS RAMELIANA.**Eucalyptus.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria, through Mr. W. T. Swingle, April, 1899.

Seed from a small tree in the Botanic Gardens at Mustapha. (See No. 2985.)

2987. EUCALYPTUS TROLARDIANA.**Eucalyptus.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria, through Mr. W. T. Swingle, April, 1899.

Another of Dr. Trabut's hybrids. This is a hybrid of *E. rostrata* and *E. tereticornis*. *E. trolardiana* is also a vigorous grower. Both this hybrid and *E. rameliana* (Nos. 2986 and 2987) are highly recommended by Dr. Trabut, who says they come nearly true to seed.

2988. EUCALYPTUS GOMPHOCEPHALA.**Touart.**

From Algeria. Received from Mr. W. T. Swingle, April, 1899.

A west Australian tree 100 to 150 feet high, of rapid growth, producing valuable timber. "This wood is of a pale yellowish color, remarkable for strength and hardness, very heavy, of a close, twisted, and curled grain." (*Von Mueller*.) "On account of its great strength it is much used in shipbuilding." (*J. H. Maiden*.) This species has recently been recommended for general culture in Algeria by Dr. Trabut, Government Botanist. It is still rather rare in North Africa, though there is a fine plantation at Morengo, where it is used for making wine casks, etc., by M. de Malglaive.

2989. EUCALYPTUS CORYNOCALYX.

From Algeria. Received from Mr. W. T. Swingle, April, 1899.

Resists drought. Eaten by cattle on account of small amount of essence in leaves. A vigorous tree at Algiers. Fruit said to take eighteen months to ripen. "The sweetish foliage is browsed by cattle and sheep." (*J. H. Maiden*.)

2990. EUCALYPTUS.

From Mustapha, Algeria. Donated by Dr. Trabut, Government Botanist of Algeria, through Mr. W. T. Swingle, April, 1899.

"A hybrid of at least three species, in which *E. rudis* and *E. rostrata* enter." (*Dr. Trabut*.) Has long weeping branches, very pretty. Flowers for a long period. Possibly *E. Andreana*, Naudin. Should be hybridized with pink-flowered species to obtain forms with ornamental flowers.

2991. SORGHUM VULGARE.**Sorghum.**

From Tizi Ouzou, Kabylia, Algeria. Received through Mr. W. T. Swingle, April, 1899.

Bechna. A variety of sorghum, the grain of which is consumed in large quantities by the natives.

- 2992. CICER ARIETINUM.** **Garbanzos.**
From Tizi Ouzou, Kabylia, Algeria. Received through Mr. W. T. Swingle, April, 1899.
S'ben (Arabic). *Teelvan* (Kabyle). A gray-green mottled chick pea, said to resist drought and yields very well. It has been suspected to cause paralysis of natives who eat it largely, but experiments made on rabbits, pigeons, and goats gave negative results. Probably some lupine is the real cause of the disease. (See Nos. 2139, 2376, in Inventory No. 5; see also No. 2977 above.)
- 2993. TRITICUM VULGARE.** **Hard wheat.**
From Tizi Ouzou, Kabylia, Algeria. Received through Mr. W. T. Swingle, April, 1899.
The wheats of Algeria are very good and should be tested thoroughly.
- 2994. VICIA FABA.** **Horse bean.**
From Tizi Ouzou, Kabylia, Algeria. Received through Mr. W. T. Swingle, April, 1899. (See No. 2978.)
- 2994a. COFFEA ARABICA.** **Coffee.**
From Botanic Gardens, Trinidad. Received through Messrs. Lathrop and Fairchild (No. 95), 1899.
"A giant variety. Said by Director J. H. Hart, of the Jamaica Botanic Gardens, to be the largest variety known to him." (*D. G. Fairchild.*) (See No. 1925.)
- 2995. OPUNTIA FICUS-INDICA.** **Prickly pear.**
From Tizi Ouzou, Kabylia, Algeria. Received through Mr. W. T. Swingle, April, 1899.
A spineless cactus growing by the roadside near a Kabyle village.
- 2996. FICUS CARICA.** **Caprifig.**
From Tizi Ouzou, Kabylia, Algeria. Received through Mr. W. T. Swingle April, 1899.
Thadukarth tetskurth. Said to be a very good variety of caprifig. A Kabyle gardener said it was the only kind of caprifig grown in the extensive fig orchards around Tizi Ouzou, and that to find other sorts of caprifigs search must be made in the surrounding mountains.
- 2997. FICUS CARICA.** **Caprifig.**
From Tizi Ouzou, Algeria. Received through Mr. W. T. Swingle, April, 1899.
Thadukarth tetskurth. The same caprifig as No. 2996, but this number comprises cuttings from another tree.
- 2998. PHOENIX DACTYLIFERA.** **Date.**
From Algeria. Received through Mr. W. T. Swingle, April, 1899.
Deglet el Beida. A common dry date (see No. 3201). Sample fruit.
- 2999. PHOENIX DACTYLIFERA.** **Date.**
From Algeria. Received through Mr. W. T. Swingle, April, 1899.
M'Kentichi. A dry date said to be of rather inferior quality, at least in the M'Zab, according to M. Yahia, and presumably different from the *M'Kentichi Degla.* (See No. 3499.) It is considered the best dry date in the oases about Biskra.
- 3000. PHOENIX DACTYLIFERA.** **Date.**
From Algeria. Donated by M. Yahia Ben Kassem, Orleansville, Algeria. Received through Mr. W. T. Swingle, April, 1899.
El Horra (or *El Harra*). A few sample fruits of this variety, which is one of the dry dates grown in the M'Zab country, northern Sahara.

- 3001. PHOENIX DACTYLIFERA.** **Date.**
 From Algeria. Donated by M. Yahia Ben Kassem, Orleansville, Algeria. Received through Mr. W. T. Swingle, April, 1899.
Tadala. Sample fruits of this very early variety of soft date, which is the earliest, and one of the best sorts grown in the M'Zab country in northern Sahara. (See more extensive account under No. 3200.)
- 3002. PHOENIX DACTYLIFERA.** **Date.**
 From Algeria. Donated by M. Yahia Ben Kassem, Orleansville, Algeria, through Mr. W. T. Swingle, April, 1899.
Timdjouert. (See No. 3274.) Sample fruit.
- 3003. PHOENIX DACTYLIFERA.** **Date.**
 From Algeria. Donated by Mr. Yahia Ben Kassem, Orleansville, Algeria, through Mr. W. T. Swingle, April, 1899.
Bent kebela. This number includes a few sample dates of this variety, which is said by Mr. Yahia to be one of the best sorts of soft dates grown in the M'Zab country in northern Sahara. It is considered third in order of merit, ranking after the *Tadala* and *Timdjouert*.
- 3004. BROMUS INERMIS.** **Smooth brome grass.**
 From South Dakota. Grown by the United States Experiment Station at Brookings. (See No. 2964.)
- 3005. COULUTEA CRUENTA.** **Bladder senna.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
Baguenaudier du Levant. An ornamental half-hardy leguminous shrub, 5 or 6 feet high, bearing, in June and July, numerous red-purple flowers, with a yellow spot at the base of the standard; pods reddish in color.
- 3006. CAPPARIS INERMIS.** **Spineless caper.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
Caprier sans épine. An improved variety of the caper. The buds are much easier to gather than those of the ordinary spiny sort. This variety is said to come true from seed. For the semiarid regions of the Southwest. See No. 2164, Inventory No. 5, for cultural directions.
- 3007. CEANOTHUS AZUREUS (?).** **California lilac.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
Gloire de Versailles. A low ornamental shrub, possibly a hybrid of *Ceanothus azureus* and *C. americanus*, producing a profusion of large, deep-blue flowers.
- 3008. ELAEAGNUS ANGUSTIFOLIA.** **Elaeagnus.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
Chalef argenté or *Chalef à feuille étroite.* A large shrub or small tree, 15 to 20 feet high, often called wild olive, or oleaster, and sometimes Jerusalem willow. Though a native of the Mediterranean regions, it is said to endure the climate of South Dakota. "The foliage is late in breaking out, so that it escapes late frosts, and the roots go deeply into the earth, thus enabling it to withstand periods when the rainfall is so light that many other sorts fail." (*Davis.*)
 "The silvery whiteness of the foliage of this tree renders it a most conspicuous object in plantations; and hence, in any landscape where it is wished to attract the eye to a particular point, it may be usefully employed." (*Loudon.*) The red-brown fruits which ripen in autumn lighten the ornamental effect of this plant. The fruit, as well as that of other species, is edible. (See Nos. 1114 and 1158, Inventory No. 2.)

3009. FRAXINUS DIMORPHA (?) **Ash.**

Received from France. Received through Mr. W. T. Swingle, March, 1899.

Frene des montagnes de la Kabylie. An ash from the mountains of Kabylia, Algeria. "A large and splendid species, very tall and with abundant foliage. It grows in the region of *Abies barboriensis*." (*Vilmorin*.)

3010. CORYLUS AVELLANA. **Filbert.**

From France. Received through Mr. W. T. Swingle, March, 1899.

Noisette de bois. The wild filbert of Europe. Truffles are sometimes cultivated on the roots of this shrub in France.

3011. PISTACIA LENTISCUS. **Mastic tree.**

From France. Received through Mr. W. T. Swingle, March, 1899.

An evergreen bush or small tree, very abundant on the semiarid hillsides bordering the Mediterranean Sea. A resinous substance called mastic, used for chewing gum by Turkish women, is obtained from an improved form of this tree grown on the island of Chios, just off the coast of Asia Minor. Occasionally used as a stock on which to graft the Pistache, but inferior to the deciduous Turpentine tree (*P. terebinthus*) for this purpose. (See Nos. 3140 and 3654.)

3012. SKIMMIA JAPONICA.

From France. Received through Mr. W. T. Swingle, March, 1899.

"A pretty dwarf-growing, holly-like shrub, with dark, shining, evergreen, entire, flat leaves, and clusters of bright red berries which give the plant a very handsome appearance." (*Lindley*.)

3013. PYRUS AUCUPARIA. **Mountain ash.**

From France. Received through Mr. W. T. Swingle, March, 1899.

Sorbier des Oiseleurs. An ornamental tree. (See No. 404, Inventory No. 1.)

3014. ACACIA ARABICA. **Gum arabic.**

From France. Received through Mr. W. T. Swingle, March, 1899.

This species, a native of Arabia, is usually considered to be the one which yields the gum arabic of commerce. This is the small, spiny tree now cultivated throughout many parts of tropical Africa and India. There are many other trees which yield gum arabic, and it is now considered that this species does not yield the best quality of gum.

3015. ALBIZZIA MOLLUCANA. **Wattle.**

From France. Received through Mr. W. T. Swingle, March, 1899.

"A beautiful ornamental tree of very rapid growth, useful for shading plantations of tea, coffee, and cacao. The wood is used for fuel and in joinery. It grows on the Molucca islands at an altitude of 4,000 feet; rare." (*Vilmorin*.) Considered by Dr. Treub, director of the Buitenzorg Gardens, Java, to be the most rapidly growing tree in the Tropics, being rivaled only by *Schizolobium excelsum*. At Buitenzorg trees a year and a half after germinating ranged from 9 to 12 feet in height. A tree 3½ years old was 55 feet high and 10 inches in diameter. A tree 11½ years old was 127 feet high and 31 inches in diameter 3 feet from the ground. It is very sensitive to frost.

3016. CINCHONA CALISAYA. **Peruvian bark.**

From France. Received through Mr. W. T. Swingle, March, 1899.

"A tree 30 to 40 feet high, which occurs in the Andes from Colombia to Chile at altitudes of from 5,000 to 10,000 feet. The bark is richer than that of any other *Cinchona* in quinine. This tree has been successfully introduced into Java and India. It yields the 'yellow bark' and a part of the 'crown bark' of commerce."

- 3017. ACANTHOPHOENIX RUBRA.** **Palm.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
 A fine ornamental palm from Mauritius, having pinnatifid leaves and spiny stems.
- 3018. CHRYSALIDOCARPUS LUTESCENS.** **Palm.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
Areca lutescens. An elegant palm native to Mauritius and Bourbon, having very long pinnatifid leaves. The stem is slender, smooth, and swollen at the base. One of the best palms for house and indoor cultivation.
- 3019. CORYLUS AVELLANA.** **Filbert.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
 An ornamental purple-leaved filbert.
- 3020. CISTUS MONSPELIENSIS.** **Rock rose.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
 A perennial shrub with white flowers, native to the Mediterranean region. This and the following species are the host plants of the edible species of *Terfezia*, a genus of truffle-like subterranean fungi.
- 3021. CISTUS SALVIFOLIUS.** **Rock rose.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
 An ornamental white-flowered shrub from the Mediterranean region. Like *Cistus monspeliensis*, it is a host plant for *Terfezia*.
- 3022. ASPARAGUS OFFICINALIS.** **Asparagus.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
Asperge d'argenteuil hâtive. An improved variety of asparagus, originated at Argenteuil, near Paris. Possibly the same as Canover's Colossal. (See No. 2605, Inventory No. 5.)
- 3023. PLANTAGO LANCEOLATA.** **Rib grass.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
 Rib grass or ripple grass is a very common garden and field weed in the Eastern United States. It occurs as a bad weed in clover and grass seed and in meadows and grain fields. In England it is much employed for pastures in dry, poor soils.
- 3024. EUCHLAENA LUXURIANS.** **Teosinte.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
 A native of Central America. This well-known forage plant is adapted for cultivation on rich bottom lands in the South. The culms stool like winter wheat, as many as 40 or 50 stems often arising from one root. Sow 3 to 5 pounds of seed per acre in drills 5 feet apart, the hills 2 feet apart in the row. Cultivate like corn. The forage may be cut several times during the season.
- 3025. CHAMAEROPS HUMILIS.** **Palm.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
 A low fan palm, very common around the Mediterranean. (See Nos. 1931, 1932, 2216, and 2217 in Inventory No. 5.)
- 3026. QUERCUS COCCIFERA.** **Kermes oak.**
 From France. Received through Mr. W. T. Swingle, March, 1899.
 This small tree supplies a bark rich in tannin. A red dye is made from the leaf galls. It is often associated with the holly oak *Q. ilex* (No. 3036) in artificial truffle

forests. De Bosredon says of this species: "A variety of evergreen oak which is never more than a bushy tree; it grows on the poorest lime soils and yields excellent and very fragrant truffles, which are, in general, smaller than those produced on the holly oak. The one merit of the Kermes oak is that it yields truffles sooner than the holly oak."

3027. CELTIS SINENSIS.

Nettle tree.

From France. Received through Mr. W. T. Swingle, March, 1899.

The *Henoki* from China and Japan. It is a tree that bears extreme cold. Wood useful for carpenters' and turners' work. Fruit edible but small." (*Von Mueller.*)

3028. HOVENIA DULCIS.

Raisin tree.

From France. Received through Mr. W. T. Swingle, March, 1889.

The fruit has the flavor of raisins. These seeds are from a very productive tree. The pulpy fruit stalks are the portion eaten. Fairly hardy. Requires rich, moist soils. May be used in making sweet wine. (See No. 3310.)

3029. CHAMAEROPS HUMILIS ELEGANS.

Palm.

From France. Received through Mr. W. T. Swingle, March, 1899.

An ornamental variety of the common dwarf palm of the Mediterranean region. (See No. 3025.)

3030. COCOS INSIGNIS.

Palm.

From France. Received through Mr. W. T. Swingle, March, 1899.

A Brazilian palm cultivated in greenhouses for ornament.

3031. EUPHORBIA CANARIENSIS.

Spurge.

From France. Received through Mr. W. T. Swingle, March, 1899.

A succulent much-branched spurge from the Canary Islands. Like the cacti, this is grown as a garden curiosity or for ornament. Said to be extremely poisonous. The drug *Euphorbin* is derived from this species. The milky juice coagulates into a sort of rubber.

3032 to 3034. CAESALPINA CORIARIA.

Divi-divi.

From France. Received through Mr. W. T. Swingle, March, 1899.

A small leguminous tree 20 to 30 feet high, from the West Indies to Brazil. The pods contain a high percentage of tannin and are largely exported to Europe. The tree thrives only on the seashore or in salt marshes. For trial along the Florida coast and in the tropical possessions.

3035. ILEX PARAGUAYENSIS.

Maté.

From France. Received through Mr. W. T. Swingle, March, 1899.

Paraguay tea. The leaves of this shrub or small tree are extensively used in South American countries as a substitute for tea. This is a small tree reaching the height of 15 or 20 feet, which grows all through southern South America. The leaves are prepared by drying and roasting; but instead of being handled separately, as in preparing Chinese tea, large branches are dried by a wood fire and then placed on the hard floor and beaten with sticks until the dry leaves fall off. These leaves are then used in much the same way as ordinary tea. It is used as a beverage by millions of people in South America and is used as medicine to a small extent. The tree is not cultivated in South America, but there are said to be numerous and extensive forests where it is the predominating species.

3036. QUERCUS ILEX.

Holly oak.

From France. Received through Mr. W. T. Swingle, March, 1899.

The holly oak is one of the species especially planted in France for trufficulture. It grows best on well-drained limestone soils. The trees should be started in nursery beds and transplanted when 3 years old. When transplanted the taproot should be

cut off to force the formation of surface roots, which are desirable for the successful cultivation of the truffles. The holly oak is an evergreen, only adapted for cultivation in California and in the Southern States. (See No. 3026.) (10 pounds.)

3037. CICHORIUM INTYBUS.

Chicory.

From France. Received March, 1899.

Large-rooted Brunswick. This is the chicory commonly used as a substitute for coffee. This sort is also known as Belgian root. It attains a length of 12 to 14 inches and 2 inches in diameter, just below the crown. It has very deeply cut leaves, divided like those of the dandelion. (For more extended account of this variety, see Bul. 19, Division of Botany.)

3038. CICHORIUM INTYBUS.

Chicory.

From France. Received March, 1899.

Large-rooted or coffee Magdebourg. The Magdebourg chicory differs from the Brunswick (No. 3037) in having entire leaves which stand upright. It also has larger and heavier roots, which sometimes weigh from 12 to 17 ounces. Both varieties are sometimes used for salads in winter. For this purpose the roots are forced in the dark; they are either planted in soil up to within about one-half inch of the crown, or are inserted through holes into a barrel of earth, the leaves being allowed to expand freely in either case, but being blanched by darkness.

3039. QUERCUS SUBER.

Cork oak.

From France. Received through Mr. W. T. Swingle, March, 1899.

"This is an Algerian cork oak which produces cork of excellent quality and of unusual thickness. The cork oak is from 30 to 70 feet in height. It grows especially on sandy soil, is able to thrive where the climate is very dry and where the soil is of the poorest. The trees attain great age. The imports of cork into the United States amounted to over \$1,440,000 in 1898. It is quite possible that the culture of cork oak might be profitable in some parts of California. It should also be tried in the sandy regions of the Southern States. The trees commence to yield in Algeria when they are about 20 years old. When they have attained a diameter of 18 inches they are subjected to an operation called *demascalage*. The cork is sold when it attains a thickness of from 1 to 1½ inches, which requires from six to fifteen years—about nine years on an average. It is considered the most profitable to remove the bark when about 1 inch thick. The Algerian barks are sold at from 40 to 150 francs per 100 kilos, which is about \$3 to \$10 per 100 pounds. In forests of cork oak a tree is said to yield at the rate of about 2 to 5 cents per year, and the forest should yield about \$2 per year per acre." (Swingle.)

3040. TROPÆOLUM TUBEROSUM.

Ysaño.

From France. Received through Mr. W. T. Swingle, March, 1899.

A native of the higher mountain ranges of Peru and Bolivia. The tubers are eaten as a vegetable. They are of a yellow color, striped with red. The tubers should be planted in the open ground in April or May, about 20 inches apart in every direction. They are not injured by frost if left in the ground, and should not be dug until late in autumn. They are used extensively for food in Bolivia. The Ysaño tubers are often frozen after being boiled and are then considered delicious. They are sometimes used in France for entrées. For this purpose they are prepared by being cut into extremely thin slices and seasoned with salt, olive oil, vinegar, and mustard. They are also prepared as pickles.

3041 to 3047. CITRULLUS VULGARIS.

Watermelons.

From Canada. Grown from Russian seed at the London Insane Asylum, London, Ontario, by Dr. R. M. Bucke, medical superintendent. Received April, 1899.

3041. *Yellow flesh.*

3042. *First to mature.*

3043. *From a melon weighing 33 1-4 pounds.*

3044. *Green and white, striped, very sweet.*

3045. *Winter melon.*

3046. *White flesh.*

3047. *Russian.*

3048. AGARICUS CAMPESTRIS.**Mushroom.**

From France. Received through Mr. W. T. Swingle, April, 1899.

Blanc de Champignon vierge (Virgin spawn). "The cultivation of mushrooms is carried on extensively in Paris. The tunnels of the abandoned stone quarries, with which the ground on which the city is built is literally honeycombed, are used for this purpose. The beds used are of composted manure, and are built up into conical ridges 18 inches to 2 feet wide at the base and 18 inches high. There are often from three to ten parallel beds in each tunnel. M. Lecaillon has over 20 miles of these beds, and many other growers have as much space in cultivation. In preparing the beds horse manure, which has been fermented for three weeks, is used. When thoroughly composted the manure has very little odor. It is then very firmly packed into shape in the caves or tunnels by men who tamp it with their hands and knees. When the temperature is right, pieces of spawn the size of one's hand are inserted in the right side of the bed every foot or so. When the spawn has grown through the manure the bed is covered with one-half to three-fourths of an inch of quarry dust. The mushrooms appear in about two months, and the spawn continues to yield for two or three months, depending on the temperature. Cool weather is the best for the growers, because the mushrooms grow slower and more perfectly, and the ventilation is better. In summer, when the air in the tunnels is colder than outside, there is no ventilation except that induced by fires, which are built at the bottom of shafts in order to cause a circulation of air constantly in one direction. Eddies should be avoided. Mushrooms are never allowed to open before being picked—they could not then be sold in the Paris markets.

The spawn soon runs out, and new spawn must repeatedly be obtained. If taken in an early stage the spawn can be propagated, but never after mushrooms have been gathered from it. As a matter of fact, there are considerable variations in mushrooms, and, should a method be found to propagate spawn indefinitely without allowing it to fruit, the industry would be revolutionized. The mushroom growers are continually on the lookout for new spawn, which they usually obtain from the gardeners, who force melons in small hotbeds. The spawn is prepared as rapidly as possible, and a portion of it forced until it produces mushrooms. If these prove to be good, the rest of the spawn is set in the beds and fruited; if not, the whole mess of the spawn is destroyed. Recently Dr. Repin has discovered a method of raising spawn from spores of the best mushrooms, and this is the spawn included under this number. It is claimed not to contain any bacteria or other organism which might cause disease. This virgin spawn is sold in the form of sterilized and compressed slabs of manure, freely permeated by the spawn. These slabs are about 10 inches square and one-half inch thick, and may be planted whole or divided into two 'sets.'" (W. T. Swingle.)

3049. HELIANTHUS TUBEROSUS.**Jerusalem artichoke.**

From France. Received through Mr. W. T. Swingle, April, 1899.

Topinambour patate. A tall perennial with annual stems producing underground tubers. Largely cultivated in Europe. The tubers are a violet red, slender at the bottom and swollen in the upper part, where they are about 2 inches in diameter. The tubers form very late in autumn and should not be dug until the stems have nearly ceased growing. The flesh is sweet and very watery. The tubers are planted in March or April, 12 to 14 inches apart in rows 3 feet apart. They require about the same cultivation as corn. This artichoke is commonly grown for food for hogs in America. In Europe they are used for making alcohol, and there are some especially fine varieties which are grown exclusively for the table. These are said to be very fine when baked like sweet potatoes; and they may be cooked in a variety of other ways. This new variety called "Patate" is distinguished from the ordinary Jerusalem artichoke. It is plumper, with angular tubers of a yellow color. It is of equal value for starch and alcohol manufacture, and yields decidedly more than the ordinary sorts. This variety was grown from seed at Verrières, from seed obtained in Corsica. It was first introduced to the trade in 1884.

3050. SOLANUM TUBEROSUM.**Potato.**

From France. Received through Mr. W. T. Swingle, April, 1899.

Royal ash-leaved kidney. This and Nos. 3052 and 3054 are the earliest varieties of potatoes used for forcing in the market gardens about Paris. They are usually sprouted before being planted. This is accomplished by placing the tubers in an

upright position, stem end down, in trays. These trays are then set in a room cool enough to prevent spoiling, but warm enough to produce slow growth. At planting time the trays are carried to the field and the tubers planted one in a place, in holes, with the sprouts uppermost. When the plots are prepared in this way a crop is said to yield from ten to twelve days earlier than if planted in the ordinary way. These forcing varieties commonly produce a single sprout. This variety, called the "Royale" in France, is much like the "Marjolin," but its tubers do not grow so close together around the base of the stem, and the foliage is more abundant. These tubers are smooth and of excellent quality.

3051. ALLIUM ASCALONICUM?

Jersey shallot.

From France. Received through Mr. W. T. Swingle, April, 1899.

Echallote de Jersey. "Bulbs short, almost always irregular in shape, but sometimes perfectly rounded and broader than long, when they quite resemble a small onion; skin coppery red, thin, and easily torn. The bulb, when stripped of the dried coats, is entirely violet colored, the tint being somewhat paler than that of the true shallot. The leaves are distinguished by their very peculiar glaucous hue. The bulbs do not keep so well as those of the true shallot, and commence to grow sooner in spring. The Jersey shallot flowers and seeds pretty regularly, the seed exactly resembling onion seed. Indeed, in all the characteristics of its growth the plant is an onion, and has nothing to do with the true shallot." (*Vilmorin.*)

3052. SOLANUM TUBEROSUM.

Potato.

From France. Received through Mr. W. T. Swingle, April, 1899.

Victor Extra hative. (See No. 3050.) This is one of the earliest varieties, being even earlier than the Marjolin. The stems always remain short, which makes it a very good variety to grow under glass, where it is said to form tubers in forty days. The tubers are smooth, flattened-oval in outline. The flesh is yellow.

3053. SOLANUM TUBEROSUM.

Potato.

From France. Received through Mr. W. T. Swingle, April, 1899.

Belle de Fontenay. "One of the best varieties; stems short; the tubers yellow, smooth, oblong; flesh yellow; very early and of good quality." (*Vilmorin.*)

3054. SOLANUM TUBEROSUM.

Potato.

From France. Received through Mr. W. T. Swingle, April, 1899.

Marjolin. The Marjolin is one of the best known of the early potatoes used for forcing. It is called in England the "Ash-leaf Kidney." It is one of the very earliest, and, if planted in the open ground in April, ripens its crop in June. This variety sprouts with difficulty if planted in the field as usual. It is, therefore, nearly always started in frames as described for No. 3050.

3055. EUCHLAENA LUXURIANS.

Teosinte.

From France. Received through Mr. W. T. Swingle, April, 1899. (See No. 2965.)

3056. BETA VULGARIS.

Beet.

From Germany. Received April, 1899. Presented by Kraus & Stettin, of New York. Grown near Magdeburg, Germany.

Kleinwanzlebener original.

3057. BETA VULGARIS.

Sugar beet.

From Germany. Presented to the Department of Agriculture by R. Weichsel & Co., Magdeburg, April, 1899.

Pitzschke Elite. Grown by F. Pitzschke, Sandersleben, Germany.

3058. CYPHOMANDRA BETACEA.**Tomato tree.**

From Cape Colony, South Africa. Received through Messrs. Lathrop and Fairchild, April, 1899. (See No. 1977.)

A shrub or small tree, 9 to 12 feet high, native of Central and South America from Mexico to Peru, now cultivated throughout the more elevated portions of South America and in the West Indies. The tomato tree is cultivated for its fruit, which has a very agreeable, sweetish, acid flavor. The fruits, peeled and the seeds removed, may be used in the same manner as the tomato. Dr. Morris reports that it is impossible to cultivate this tree in Jamaica below 2,000 feet altitude. Its cultivation is easy in subtropical regions. The tree has been introduced into southern France and northern Africa.

3059. CASSIA OCCIDENTALIS.**Mexican coffee.**

From Florida. Received through George H. Wright, Orlando, Fla., April, 1889.

This is also called the Espinoza bean. It is a perennial legume and one of the commonest weeds of the Southern States from Arkansas to Texas and Florida. It is cultivated in Mexico and also in Florida, the beans being used in the manufacture of a coffee substitute. Cases of poisoning have been reported from the use of the unroasted seeds, and the roots are said to be poisonous to hogs and other animals which eat them.

3060. FICUS CARICA.**Caprifig.**

From Italy. Received through Mr. W. T. Swingle, April, 1899.

Torre del Greco. This, as well as Nos. 3061, 3062, 3064, and 3066, are caprifigs from southern Italy. They have been imported for trial and with the hope of finding a superior sort better adapted to harbor the fig insect than any now growing in California. This number, as the name indicates, is from Torre del Greco, a city on the southwestern slope of Vesuvius.

3061. FICUS CARICA.**Caprifig.**

From Italy. Received through Mr. W. T. Swingle, April, 1899.

Calabria. From the province of Calabria, in southern Italy. (See No. 3060.)

3062. FICUS CARICA.**Caprifig.**

From Italy. Received through Mr. W. T. Swingle, April, 1899.

Portici. From the western slope of Mount Vesuvius. (See No. 3060.)

3063. VITIS VINIFERA.**Grape.**

From Hope Botanic Gardens, Kingston, Jamaica. Received through Messrs. Lathrop and Fairchild (No. 59), August 4, 1899.

Muscat. A variety found on the race course or Liguana plain, at Kingston. The grapes ripen about the end of May. The vines are, however, subject to pruning.

"Said by Professor Fawcett to be the most productive of all the European grapes grown in Jamaica. Specially suited to experiments in California." (*D. G. Fairchild.*)

3064. FICUS CARICA.**Caprifig.**

From Italy. Received through Mr. W. T. Swingle, April, 1899.

Vesuvio. From the slopes of Mount Vesuvius. (See No. 3060.)

3065. FICUS CARICA.**Caprifig.**

From Italy. Received through Mr. W. T. Swingle, April, 1899.

Somma. Presumably from the slopes of Monte Somma, the older portion of Mount Vesuvius. (See No. 3060.)

3066. FICUS CARICA.**Caprifig.**

From Italy. Received through Mr. W. T. Swingle, April, 1899. (See No. 3060.)

3067. ZEA MAYS.**Corn.**

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 117), May, 1899.

Morado. "This variety of indian corn furnishes a coloring matter which is used by the Peruvians to color their drink called *Chicha Morado*. The shelled corn is mixed with ordinary corn, a bit of cinnamon bark, a piece of pineapple (proportions of each according to taste). It is then boiled, thoroughly strained, and cooled, after which it is sweetened to taste. It is drunk either fresh or after standing a day or two." (*D. G. Fairchild.*)

3068. CUCURBITA MAXIMA.**Squash.**

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 118), May, 1899.

Avinca. "Seeds from a good specimen. This is the dearest and most highly esteemed squash in Lima. The pulp is dried, then powdered and mixed with alum, and put in hot water and used as a yellow dye. The dish '*Locro*' is made from it about Lima." (*D. G. Fairchild.*)

3069. CAPSICUM ANNUUM.**Pepper.**

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 119), May, 1899.

Pimiento de Castilla. Seeds of a large Spanish pepper, 3 inches long, almost cylindrical, $1\frac{1}{2}$ inches in diameter.

3070. PHYSALIS PERUVIANA.**Ground cherry.**

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 120), May, 1899.

Semilla de Capuli. "A shrub grown about Lima for its edible, very fragrant fruits, which are eaten raw. They are made up into bouquets of a dozen or so, attached to the end of a stick, and decorated with a bow of white, fringed paper and a sprig of cedar. The envelopes of the fruit are turned back to expose the light greenish-yellow berries. They have a refreshing, tomato-like taste." (*D. G. Fairchild.*)

3071. SOLANUM TUBEROSUM.**Potato**

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 122), May, 1899.

"Highly prized by the Peruvians. This is a sticky, solid, bright yellow-fleshec sor with prominent, irregular knobs. Used in salads they are excellent. They should be tested in the South, and an attempt made to find a special market for them. May prove of value for breeding purposes." (*D. G. Fairchild.*)

3072. LUCUMA MAMMOSA.**Lucuma.**

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 123), May, 1899.

"There are two edible species in Peru, according to Martinet. The large sapotaceous one-seeded fruit is composed of a thin, brown rind and a mass of very mealy, bright ochre-yellow pulp of a characteristic sweet taste. Lucuma ices are sold in the cafés of Lima and are very good. Plant in rich soil in southern California and Florida. Thrives about Lima. A large tree." (*D. G. Fairchild.*)

3073. CHENOPODIUM QUINOA.**Quinoa.**

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 124), May, 1899.

Blanco. "This variety is used especially for cooking purposes. This seed came from Gauco, in the cordillera region, at an altitude of several thousand feet. They should be planted like alfalfa, 15 pounds to the acre, and require high altitude here. In America should be tested in the South and the mountain regions of Colorado and

Arizona. It forms an important food all over Chile and Peru. The plant is an annual and should mature in five or six months at most. Plants in the Botanic Garden of New York failed to seed. I believe for lack of altitude.

"Several dishes are prepared and are relished by Europeans as well as Peruvians. A drink called "chicha" is made from the ground seeds. This variety is not supposed to possess any medicinal properties." (*D. G. Fairchild.*) (See No. 2931.)

3074. CHENOPODIUM QUINOA.

Quinoa.

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 125), May, 1899.

Quinoa amarga. "The bitter quinoa is used as a medicine. Taken in doses of 100 grams two or three times a day, in capsules, as a remedy against catarrh. May prove useful for crossing." (*D. G. Fairchild.*)

3075. MEDICAGO SATIVA.

Alfalfa.

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 126), May, 1899.

Omas. "This variety is said to be one of the best in Peru, and superior to any of the Chilean sorts tested in comparison with it in Peru. It is longer lived than Chilean. If cut seven times a year it will live five years, while Chilean dies within three. Grown by irrigation here; matures for a new cutting in sixty days after mowing. Try in California and Arizona. The California alfalfa came from Chilean seed." (*D. G. Fairchild.*)

3076. CAPSICUM ANNUM.

Pepper.

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 121), May, 1899.

Mirasol (Sunflower) Chile pepper.

3077. JUGLANS NIGRA?

Walnut.

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 127), May, 1899. (25 seeds.)

Nuez de nogal. "This is said to be *Juglans nigra* by Raimondi, but from the shape of the nut I judge it to be quite a different species. It is a very large tree, and is found near Lima. (At Surco, for example.) The leaves are made into a tea and used as a tonic. The outer rind boiled in water is made into a hair lotion to prevent the hair from falling out. For dyeing the rind is mixed with alum. The strong extract is used with alum." (*D. G. Fairchild.*)

3078. PROSOPIS HORRIDA.

Algaroba.

From Paita, Peru. Received through Messrs. Lathrop and Fairchild (No. 128), May, 1899.

"A fodder tree of great value in Peru, growing in regions where it rains only once in seven years. Tender; should be planted in Arizona and in southern California." (*D. G. Fairchild.*)

"The tree producing these beans is of the locust family, grows to a height of 50 to 60 feet, and from 1 to 4 feet in diameter at base. It is the forest tree of this department of Piura and grows from the coast to an altitude of 2,000 feet. In good soil, not lacking root humidity, it produces two crops a year, the beans falling to the ground when ripe or yellow. As a food for mules and asses it is superior to corn. Cargo mules working the year round will eat 25 pounds daily and keep in good condition; asses half that quantity. It is also fed to horses, but with grass, as it is a very strong food.

"The people on this hacienda are paid 5 cents (2½ cents, gold) for gathering 25 pounds. We store it in adobe houses, which, when filled, are hermetically closed, so that not a particle of air can get in, for if this occurs it soon 'picars' (is eaten by worms). After the harvest, and when there is a scarcity of forage, the algaroba is sold at from 20 to 50 cents, gold, per arroba, depending on supply and demand.

"To plant the seed it is simply a matter of covering the bean with earth and seeing that it does not lack humidity. The tree has a tap root. The natives say the root is as long as the top. This is the case with small trees. In land which lacks

humidity the tap root goes down, seeking moisture. Due to this, trees flourish on high lands from one year of rains to another, this interval being in this department seven years." (*Edouardo Fowkes.*)

3079. MALPIGHIA SETOSA.

Cherry.

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 129), June, 1899.

Cerezo. "A small fruit, the size of Murillo cherry, with refreshing acid flavor, highly appreciated as a table fruit. For sale everywhere in Lima markets. A fruit worthy of cultivation in Florida and California. Frost shy; irrigated." (*D. G. Fairchild.*)

3080. SPONDIAS.

From Lima, Peru. Received from E. B. Cisneros through Messrs. Lathrop and Fairchild (No. 130), March, 1899.

Cruelas. "A species of fruit worthy serious attention in subtropical regions. Fruit the size of green gage, with pleasant acid, aromatic flavor and very juicy. Would be immediately appreciated and could probably be shipped. Grown about Lima, where regular southern California climate is found." (*D. G. Fairchild.*)

3081 to 3088. PHASEOLUS VULGARIS.

Bean.

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 131), May, 1899.

This is a collection of beans commonly grown in Peru. Bought in a market in Lima. They are as follows:

- 3081. *Blancos.*
- 3082. *Panamitos.*
- 3083. *Carachos.*
- 3084. *Negros.*
- 3085. *Caballeros.*
- 3086. *Burros.*
- 3087. *Bayos.*
- 3088. *Cannarios.*

3089. CICER ARIETINUM.

Garbanzos.

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 139), March, 1899.

Garbanzos. "Used largely as a vegetable; prepared similarly to peas. Will grow anywhere in the United States, but will probably prove different from variety known there." (*D. G. Fairchild.*)

3090 to 3095. CAPSICUM ANNUM.

Pepper.

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (Nos. 140-145), May, 1899.

A collection of red peppers from the markets in Lima. They are as follows:

- 3090. *Panca. Semilla de Aji.*
- 3091. *Limita.* A small lemon-colored variety, very ornamental and much sought after.
- 3092. *Aji comun.*
- 3093. *Aji cereza.*
- 3094. *Aji Rocoto.* A large, beautiful, rich red variety. A great favorite in southern Peru.
- 3095. *Aji morado, Tucute.*

3096. CYCLANTHERA PEDATA.

Caigue.

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 146), May, 1899.

"The Caigue is cultivated like other squashes and melons; can even be grown in a pot. The fruit resembles in shape the pods of a milkweed (*Asclepias*). These fruits are cooked only slightly by putting them in the dish a few minutes before serving. Indigenous to Mexico." (*D. G. Fairchild.*)

3097. CUCURBITA MAXIMA.**Squash.**

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 147), May, 1899.

Zapillo Fuge. "A melon, with snow-white flesh and squash flavor; 2 feet by 1 foot; looks just like a watermelon. Possibly of use to plant breeders." (*D. G. Fairchild.*)

3098. ULLUCUS TUBEROSUS.**Ulluco.**

From Lima, Peru. Received through Messrs. Lathrop and Fairchild (No. 148), May, 1899.

"Sample of tubers of the so-called Ullucos of the Peruvians. These tubers should be planted just like potatoes. They are from the Sierra, 1,000 meters (3,000 feet) altitude. They are considered very nutritious by the common people and are eaten by them mixed with salt meat. Prepare just like potatoes." (*D. G. Fairchild.*)

The Ulluco is related to the Malabar nightshade but has tubers as large as a hazelnut which are borne under ground like those of the potato.

3099. PASSIFLORA QUADRANGULARIS.**Granadillo.**

From Lima, Peru. Received through Messrs. Lathrop and Fairchild, March 16, 1899.

Granadillo. "The fruit is an oblong gourd-like fruit, with an abundance of refreshing sweet pulp surrounding the seeds. Sold everywhere and seen on every hotel and club table. A favorite fruit. Propagated generally by cuttings." (*D. G. Fairchild.*)

3100. ESCOBEDIA SCABRIFOLIA.**Palillo.**

From Lima, Peru. Received through Messrs. Lathrop and Fairchild, April, 1899.

"The roots are called Palillo. They are used in place of saffron as a coloring matter for soups and other dishes. A small quantity of the root is powdered and put in the soups." (*D. G. Fairchild.*)

It belongs to the family Scrophulariaceae and "is an upright herb, covered with rough hairs, with entire leaves, and large, white flowers in few flowered terminal racemes." (*Wettstein.*)

3101 to 3111. FRAGARIA sp.**Strawberries.**

From France. Received through Mr. W. T. Swingle, April, 1899.

"The culture of ever-bearing strawberries has been given some impetus of late years in France by the origination of several very new varieties by Abbé Thivolet, a country curate in Saone et Loire, east central France. For many years he has been occupied in sowing the seeds of various strawberries, and finally, in 1896, obtained the variety known as St. Joseph, and in 1898 the St. Antoine de Padone. These two varieties were obtained, and at the same time the other French ever-bearing strawberries were secured for comparison. Upon arrival the plants were turned over to the Division of Pomology to be distributed to their correspondents for trial. The collection comprised the following varieties:

- 3101. Red Alpine Strawberry.** (*Fraisier des quatre saisons.*) This, as well as the four following numbers, is a cultivated form of *Fragaria alpina*. These species are like the English wood strawberry, but bear very early and continue to produce throughout the entire summer. This variety reproduces rapidly from seed, which should be sown in spring under glass. The young plants should be transplanted in June and again in August, this time 8 inches apart, being put out finally in place late in September or early in October, being careful to transplant after a rain. This time they should be spaced about 10 inches each way. The following year the plants should produce an abundant crop. When once a plantation is obtained, the plants may be propagated by runners, the same as other strawberries. This variety has red fruits and is the most common form of the Alpine strawberry in cultivation.

- 3102.** *White Alpine Strawberry.* This differs from the ordinary kind in the color of the fruit and in being not quite so acid. This plant is an equally continuous bearer.
- 3103.** *Improved Red Alpine Strawberry.* Also called *Améliorée Duru.* 'This is distinguished from the other varieties by the peculiar shape of the fruit, which is very long and slender.' (*Vilmorin.*)
- 3104.** *Red Bush Alpine Strawberry.* (*Fraisier des Alpes sans filets.*) 'This very distinct variety has the advantage of growing without producing any runners, which often render it troublesome to keep strawberry beds in order, and on this account it is peculiarly adapted for planting as edgings.' (*Vilmorin.*)
- 3105.** *White Bush Alpine Strawberry.* Variety exactly like the preceding one, except in color and fruit.
- 3106.** *St. Joseph (Saint-Joseph).* This is the first variety originated by the Abbé Thivolet. This is said to be the first truly ever-bearing, large-fruited strawberry ever obtained, and it had a great success in France, where it received the highest premium from the National Society of Horticulture. This variety produces fruits from May until the end of October in the latitude of Paris. The fruits are frequently an inch in diameter, and sometimes an inch and one-half, of a deep-red color with an equally red pulp, very firm in texture, juicy, and of the first quality. More fruit will be produced if the runners are carefully cut away during the summer. These runners may be planted at once and often fruit the first year. (*Vilmorin.*)
- 3107.** *St. Anthony (St. Antoine de Padone).* This variety, which was sent out in 1898 by the Abbé Thivolet, was obtained by crossing the St. Joseph with the large-fruited English Royal Sovereign. The fruits of this sort are larger than those of the St. Joseph, are firm, good keepers, and have an excellent flavor. The fruit clusters are erect and do not require support, as do those of St. Joseph. This is the newest and most remarkable of the large-fruited, ever-bearing strawberries.
- 3108.** (*Louis Gauthier.*) This is not truly an ever-bearing strawberry, but the runners produce fruits after those in the parent plant have ripened, and by means of a succession of runners fruits may be obtained until late in autumn.
- 3109.** *Belle de Meaux Alpine Strawberry.* This is a seedling of the ordinary Alpine strawberry, distinguished by the red coloration of its fruits, which is indeed so deep that they appear almost black. When ripe the stem and runners are a reddish brown and the flowers are often tinted with red. Like the other Alpine strawberries, this variety reproduces from seed.
- 3110.** *The Janus Alpine Strawberry (Janus améliorée).* A very fine variety, characterized by the fruit being conical, large, and well shaped, and becoming almost blackish when ripe. It is a very productive and continuous bearer, and highly worthy of recommendation in every respect. The variety comes very true from seed. (*Vilmorin.*)
- 3111.** *Leo XIII.* A new ever-bearing French strawberry, with large fruit. The oldest of the large ever-bearing strawberry." (*Swingle.*)

3112. CERATONIA SILIQUA.**Carob tree.**

From France. Received through Mr. W. T. Swingle, April, 1899.

"The carob tree or St. John's bread is a handsome leguminous tree with evergreen, glossy, dark-green pinnate leaves. It grows well in the semiarid hills all around the Mediterranean. It prefers limestone soils. It is sensitive to the cold and does not succeed north of the regions where oranges grow. It grows slowly, makes a round top, and attains a great size. It bears in great abundance large pods, chocolate colored when ripe, which contains an abundance of saccharine matter between the hard

and indigestible seeds. Italian analyses show the pods to contain over 40 per cent of sugar and some 8 per cent of protein. Over 75 per cent of the total weight is digestible.

Carobs may be grown from seed, but improved varieties are best propagated by grafting or budding. This is best done in spring, but dormant buds may be made in autumn. The trees are difficult to transplant, and it is usually best to raise seedlings and graft them where the tree is to stand. The beans should be soaked for four days before sowing, and are best planted from 20 to 45 feet apart. If not sown in position, they had best be potted at the end of the first year, and ultimately the pots can be set where desired without danger of loss. If planted on a hillside, it is usually necessary to build a rampart of stones in the shape of a crescent in the lower side of the hill, to prevent them from being washed away.

In Italy it is claimed best to allow the plants to attain a strong growth before attempting to graft them, this being done usually in the third year from seed. The carob bears the staminate and pistillate flowers on different trees, and it is necessary in order to insure a crop of pods to have a considerable proportion of staminate trees in the plantation. Another method of securing fertilization of the flowers is to graft branches of the male tree in the ordinary carob. The trees begin to produce three years after being grafted, and in six years should produce from about 100 pounds of pods to the tree. When in full bearing each tree produces from 400 to 600 pounds. The unusually large trees may reach a height of 60 feet, having a crown 75 feet in diameter, and may produce as high as 3,000 pounds of pods. The great carob-growing regions of the Old World are along the Adriatic coast of southern Italy, the island of Sicily, the southern half of Sardinia, and the island of Cyprus. They are, however, produced all along the Mediterranean Sea. The single province of Syracuse exports no less than 25,000 tons annually, worth more than \$250,000, while the total production for the island of Sicily averages about 90,000 tons a year. The carob is a concentrated food for horses, milch cows, and for fattening stock. To a certain extent it replaces oats for horse feed. It must always be fed with some more bulky fodder. It has been suggested that it is very useful in some arid regions to feed along with the thornless cactus. Sirups and various sweetmeats are sometimes prepared from carob pods, and the pods are sometimes offered for sale in America, to be eaten from the hand.

Dr. Franceschi, Santa Barbara, Cal., writes that the carob tree has been introduced into southern California many years ago. He says specimens are to be seen in different places growing much more rapidly than in their native habitat, and some of them bearing very profusely. He adds that it is the first tree to get established on the lava about Vesuvius and Etna, after the American cactus *Opuntia ficus indica* has first broken the way. It should be remembered that this tree belongs to the Leguminosæ, and, like the clovers, vetches, and other plants of this family, is able to draw its nitrogen largely from the air through the bacteria which grow in little tubercles on the roots. It should certainly be tested in all parts of the Southwest where the mesquite is of importance as food for cattle, since the carob belongs to the same family and produces pods containing much more digestible material." (Swingle.)

3113 to 3116. CYNARA SCOLYMUS.

Artichoke.

From France. Received through Mr. W. T. Swingle, April, 1899.

These four numbers, as well as Nos. 3118 and 3119, are some of the best varieties of artichoke grown in France. The varieties grown in America have almost, if not quite all, originated from seed. By this importation it is hoped to obtain the very best sorts now grown in Europe. A special circular giving methods of culture and other information about artichoke has been issued by this office and published as No. 22 of the Division of Botany.

3113. *Large green Paris artichoke.* (*Gros vert de Laon.*) This variety is one of the most extensively cultivated in the neighborhood of Paris. It yields regularly and abundantly and has larger heads than any other variety. It has the great advantage of reproducing itself from seed. The scaly leaves composing the head are reflexed, forming an open burr looking very different from the smooth "green lobe" commonly grown in England and America.

3114. *Green Provence.* "This variety, which is extensively grown in the south of France, is particularly esteemed for eating raw with pepper sauce. If grown from seed this variety always yields a large number of spiny plants." (*Vilmorin.*)

- 3115.** *Flat-headed Brittany.* (*Camus de Bretagne.*) A very tall variety, often 4 feet high, with luxuriant leaves and large, broad, globular heads, flattened on top. This variety is very extensively cultivated in Anjou and Brittany, from which provinces large quantities are sent in May to the central market in Paris.
- 3116.** *Perpetual (Remontante).* See also Nos. 3118 and 3119.
- 3117.** COCHLEARIA ARMORACIA. **Horseradish.**
From France. Received through Mr. W. T. Swingle, April, 1899.
Bohemian horseradish. Distributed.
- 3118, 3119.** CYNARA SCOLYMUS. **Artichoke.**
See Note under No. 3113.
- 3118.** *Violet quarantain de Provence.* Probably the same as the violet quarantain or camargue, which is a medium-sized annual variety, bearing rather small heads with round, dark scales tinted with violet.
- 3119.** *Blanc quarantain de Provence.*
- 3120.** PHOENIX MARIPOSAE. **Palm.**
From France. Received through Mr. W. T. Swingle, April, 1899.
"This palm, which has been called *Phoenix melanosperma* by Naudin, is probably a hybrid of the ordinary date palm and the Canary palm (*P. canariensis*). This palm originated from seed sown in 1875 by Madame B. Hall, then owner of the Villa Mariposa. There is a fine specimen in the Villa Victor de Cessole at Nice, but whether this is the same palm as the original one grown by Madame Hall is not known. Among the thousands of date palms growing along the northern shore of the Mediterranean, this is the only one which produces edible fruits of good quality. Unlike the ordinary date palm, which flowers in spring and ripens its fruit in autumn, this date flowers in autumn. The unripe fruits hang on the trees through the winter, ripening early the next summer. The fruits are small, about an inch to an inch and one-fourth long, and have a rather thin pulp, which is said to be delicious. The remarkable fact about this date is that the sugar contained in the fruits is not cane sugar, as in the ordinary date, but grape sugar. It being impossible to obtain suckers from this tree, young plants, grown from seed from the best one of the group at the Villa, were obtained and were included in the shipment. It is, of course, not certain as to what the quality of the fruits of these seedlings will be. It is hoped, however, that some of them may, like the parent tree, ripen fruit in humid regions near the sea. This palm should produce fruit abundantly along the coast of California as far north as San Francisco, where the ordinary date does not mature its fruits, because of the insufficient heat of the summer. The stem of the best palm at the Villa de Cessote is much more slender than the stem of the Canary Island palm. The leaf-stalks and fruit stems, however, are usually of a yellow coloration, unlike the ordinary forms of the true date palm, and much like the Canary Island palm." (*Swingle.*)
- 3121.** LESPEDEZA SERICEA. **Hagi.**
From Japan. Received through Prof. S. A. Knapp from Japan, May, 1899.
A perennial Japanese legume, valuable for forage.
- 3122.** FATSIA JAPONICA. **Fatsia.**
From France. Received through Mr. W. T. Swingle, May, 1899.
An ornamental Araliaceous shrub, with large evergreen leaves; said to stand a temperature of 7° F. Said to be more handsome than *Fatsia papyrifera*, the rice-paper tree, to which it is closely related. The seeds ripen in April in France, and must be planted at once, as they speedily lose their vitality.
- 3123.** FATSIA JAPONICA. **Fatsia.**
From France. Received through Mr. W. T. Swingle, May, 1899.
Moseri. A sort having a more stocky habit of growth and much larger leaves than the parent species. (See No. 3122.)

3124. EUCALYPTUS PLATYPUS.**Eucalyptus.**

From France. Received through Mr. W. T. Swingle, May, 1899.

"A very curious small shrub, which merits planting in clumps in the parks of southern France. The rose-colored or carmine-red stamens which appear after the operculum of the flower bud falls are very decorative. Its small size permits its being grown in a box. It is injured by humidity." (*Vilmorin.*)

3125. ABIES NOBILIS ROBUSTA.**Fir.**

From France. Received through Mr. W. T. Swingle, May, 1899.

An improved form of this beautiful Californian fir, said to be much more vigorous than the parent species and also more easily grown.

3126. CYCAS NEO-CALEDONICA.**Cycad.**

From France. Received through Mr. W. T. Swingle, May, 1899.

A very ornamental palm-like plant, of a different species from the cycad ordinarily grown.

3127. BETA VULGARIS.**Sugar beet.**

From Russian Poland. Presented to the Division of Chemistry by S. Rykowski, of Krzynowloga-Wielka, near Chorzele.

3128 to 3131. GOSSYPIMUM HERBACEUM.**Cotton.**

Donated by the Seed Division, United States Department of Agriculture.

A small quantity of each of the following varieties of American cottons were distributed by this office during 1899:

- 3128. *Texas Storm-proof.*
- 3129. *Hawkin's Prolific.*
- 3130. *Drake's Cluster.*
- 3131. *Cook's Improved long-staple.*

3132. CUCURBITA PEPO.**Vegetable marrow.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Cocozzella of Geneva. "An extremely distinct variety. Stems not running, very thick and short, producing numerous leaves of a dark-green color, very large and very deeply cut into five or six lobes, which are also more or less notched. The luxuriant foliage forms a regular bush. Fruit very much elongated, being 20 inches or more in length, with a diameter of 3 to 4 inches, furrowed by five ribs, which are most prominent on the part next the stalk, where the fruit is also narrowest. Skin very smooth, dark green, marbled with yellow or with paler green. All through Italy, where this vegetable is very commonly grown, the fruit is eaten when it is hardly the size of a small cucumber, sometimes even before the flower has opened, when the ovary, which is scarcely as long or as thick as the finger, is gathered for use. The plants which are thus deprived of their undeveloped fruits continue to flower for several months most profusely, each producing a great number of young gourds, which, gathered in that state, are exceedingly tender and delicately flavored." (*Vilmorin.*)

The following numbers are different varieties of vegetable marrow: 3133, 3136, 3137, 3141, 3145, 3148, 3152, 3155, 3166, 3168, 3171, and 3172. The method for cultivation is the same as for the summer squash, which this new vegetable somewhat resembles.

3133. CUCURBITA PEPO.**Vegetable marrow.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Cocozzella of Tripoli (new). A vegetable marrow with straight, rather short, thick fruits. (See No. 3132.)

3134. CUCURBITA PEPO.**Vegetable marrow.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Cocozzella of Tripoli, White. (See No. 3132.)

3135. PISTACIA VERA.**Pistache.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

"The pistache is a small tree, native of eastern Mediterranean countries, and is said to have been introduced into Italy by Vitellinus, the governor of Syria, during the reign of the Emperor Tiberius. It is now cultivated in all of the warmer regions about the Mediterranean. The deciduous leaves are usually composed of five leaflets. It bears the staminate and pistillate flowers on different trees. The fruits, which are first green, then reddish, and finally almost black, are about the size of olives and contain a nut of delicious flavor, much like the almond. The shell of the pistache nut is easily opened by the fingers, exposing the greenish meat, which is usually covered with a yellow or reddish pellicle. These nuts are employed by confectioners and are used in making ice cream. They are delicious to eat, roasted. The tree will grow in almost any warm country, but does not produce an abundance of good fruit except on dry hills having a deep soil and an exposure to the south. It is much injured by standing water, and is said to be difficult to irrigate. It resists drought very well, however, and will doubtless succeed in many parts of California without irrigation. In order for the fruit to be of the best quality the plant needs plenty of sunlight. Seeds may be sown in February. In order to preserve the seeds for sowing, the ripe fruits are stratified in pots during the autumn and winter and finally planted in February. The young plants have a strongly developed tap root, which necessitates their being transplanted if possible during the first year and at least by the end of the second season. The best varieties can be propagated only by grafting, or better by making dormant buds in late summer. In southern France and in Greece the pistache is commonly grafted on the terebinth (*Pistacia terebinthus*). (See No. 3149.) One tree in five, or at least one of eight, should be male, or else branches of the male tree should be grafted on the bearing pistache. The trees attain great age, especially when grafted on the terebinth. They should be planted about 20 feet apart. The tree grows slowly and begins to bear within two or three years from grafting, and within eight or ten years from seed. The fruit is picked when fully ripe and laid away to dry on trays in the shade. They are kept in a dry place. In order to introduce this valuable nut tree into America it will first be necessary to plant seed both of the pistache and of the terebinth to serve as stocks on which to graft the improved varieties. This shipment consists of seeds of Sicilian pistaches." (Swingle.)

3136. CUCURBITA PEPO.**Vegetable marrow.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Cocozzella, snow-white of Belmonte. A dwarf vegetable marrow, with long, curved, white fruits: said to be very fine. (See No. 3132.)

3137. CUCURBITA PEPO.**Vegetable marrow.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Long green bush or Neapolitan Cocozzella. (See No. 3132.)

3138. ANGELICA SYLVESTRIS.**Angelica.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Received as *Angelica anomala*. Said to have much more fleshy leaf and stalk than the ordinary *Angelica (Archangelica officinalis)*. Of this latter plant *Vilmorin* says: "The stems and leaf stalks are eaten preserved with sugar. The leaves are also used as a vegetable in some parts of Europe. The root, which is splendidly shaped, is employed in medicine. It is sometimes called 'The Root of the Holy Ghost.' The seeds enter into the composition of various liqueurs."

3139. RHUS CORIARIA.**Tanner's sumac.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

"The leaves of this shrub, dried and ground, form the commercial sumac which is used for tanning. It requires well-drained calcareous soils. The percentage of tannin in the leaves is higher in dry than in humid climates. This bushy small tree sometimes attains a height of 10 feet. It is cultivated in Italy and Spain, but more especially in Sicily. It prefers a hot climate, and a dry soil frequently yields the best product. The plant is usually propagated by planting the stolons in ditches in

late autumn. It is probable that in the United States the cost of gathering the sumac would prevent successful introduction of this culture. Plantations of sumac yield from \$30 to \$40 worth of leaves per acre, and in addition about three-fourths of a ton of fagots." (*Swingle*.)

3140. PISTACIA LENTISCUS.

Mastic.

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

An evergreen shrub or small tree which grows abundantly about the Mediterranean. An improved form yields a resinous substance called mastic on the island of Chios, and is sometimes used as a stock on which to graft the pistache. In Algeria this plant, there called *lentisque*, is used as a substitute for tanner's sumac (No. 3139), to which it is somewhat related. The leaves contain 11 per cent of tannin, or only half as much as those of sumac. (See Nos. 3111 and 3135.)

3141. CUCURBITA MOSCHATA.

Summer squash.

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Charles Naudin. "A beautiful sort, slightly climbing, with round, white-striped, white-fleshed fruits and large silvery seeds." (*Dammann*.)

3142. CICHORIUM INTYBUS.

Chicory.

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Asparagus chicory. "An excellent Italian variety, quite different from any other. Leaves and stalks give a most wholesome and refreshing salad when cooked and served cold." (*Dammann*.)

3143. CUCUMIS MELO.

Muskmelon.

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Cercola. "Oval, dark green, strongly netted, flesh white, sweet, and of fine flavor. The fruits grow up to 8 to 10 pounds weight." (*Dammann*.)

3144. SOLANUM MELONGENA.

Eggplant.

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Black Prince. "Pear-shaped, very early." (*Dammann*.)

3145. CUCURBITA PEPO.

Vegetable marrow.

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Neapolitan Portmanteau green. (See No. 3132.)

3146. FENICULUM VULGARE.

Fennel.

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Morosini. A new variety of sweet fennel, said to be the largest, finest, and sweetest; very thick. Plant with fleshy overlapping leafstalks forming a kind of head, which is bleached by being kept covered with earth. These plants and stalks have a very pleasant, sweetish, aromatic taste, and are eaten raw for dessert in Italy. The seed is usually sown in spring for a summer crop, and late in summer for the autumn crop. It should be sown in rows 16 to 20 inches apart. Seedlings should be thinned at the leafing of the plants to 5 or 6 inches apart in the row. As the plants grow they must be earthed up to keep the stalks blanched.

3147. LYCOPERSICUM ESCULENTUM.

Tomato.

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

King Humbert red. This is a well-known variety of tomato grown about Naples, Italy. The fruits are bright red, about 1¼ inches thick by 1 inch wide, and are especially valued because of their high flavor. They are used in making various sauces and dressings for macaroni and for meats.

- 3148. CUCURBITA PEPO. Vegetable marrow.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Cocozzella of Molfetta. "Dwarf with long, yellowish-white fruits; very fine."
 (Dammann.) (See No. 3132.)
- 3149. PISTACIA TEREBINTHUS. Turpentine pistache.**
 "This is a small tree with deciduous leaves, native in the Mediterranean regions. It is usually employed as a stock on which to graft the pistache, to which it is closely related, being considered by some to be the parent. By making incisions in the bark the turpentine is obtained, sometimes called Chian or Cyprian turpentine, used in medicine. "The principal product of this tree is the galls which are produced on the branches, flower stem, and leaves. These galls, known as *Gallae terebinthi*, or *Carobe di giuda*, are roundish, or pod-like, in shape, and in the Orient are an important article of commerce, since they are used for coloring silk and for coloring wine." (Engler.) The trees should be planted in the Southwest as stock on which to graft the pistache, when important varieties of the latter are obtained." (Swingle.) (See Nos. 2185 and 3135.)
- 3150. LYCOPERSICUM ESCULENTUM. Tomato.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
King Humbert golden yellow. "The finest of all yellow sorts." (Dammann.)
- 3151. LYCOPERSICUM ESCULENTUM. Tomato.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
King Humbert white. "Very prolific and of fine flavor." (Dammann.)
- 3152. CUCURBITA PEPO. Vegetable marrow.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Scarlet Chinese sugar. "Fruits round, with scarlet rind; flesh very solid and sweet."
 (Dammann.) (See No. 3132.)
- 3153. LYCOPERSICUM ESCULENTUM. Tomato.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Ficarazzi. The earliest of all Italian tomatoes.
- 3154. FÆNICULUM VULGARE. Fennel.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Sweet Bolognese. (See No. 3146.)
- 3155. CUCURBITA PEPO. Vegetable marrow.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Cocozzella of Tripoli. (See No. 3132.)
- 3156. CYNARA SCOLYMUS. Artichoke.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Artichoke of Nodica.
- 3157. CUCUMIS MELO. Muskmelon.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Giant of Porto. "Very large, attaining a weight of about 15 pounds; slightly netted, juicy, and of fine flavor." (Dammann.)

- 3158. LYCOPERSICUM ESCULENTUM. Tomato.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Semperfructifera. "Enormously prolific, bearing large clusters of plum-shaped scarlet fruits (often 50 to one cluster). The first fruits are ready in May, and the plants continually produce them almost until Christmas. They are not very large, but solid and of fine flavor." (*Dammann.*)
- 3159. FÆNICULUM VULGARE. Sweet fennel.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Largest sweet of Sicily. The seeds of this sweet fennel are about twice the size of those of the common strain. (See No. 3146.)
- 3160. CYNARA SCOLYMUS. Artichoke.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Artichoke of Terranova. Very early and fine flavored.
- 3161. CUCUMIS MELO. Muskmelon.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Portoghese. "Oval, yellow, dark-green spotted; flesh white, tender, of the best flavor; contains but few seeds." (*Dammann.*)
- 3162. CUCUMIS MELO. Muskmelon.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Large Spanish. "Very large, yellow, much netted; flesh yellowish red, juicy, and of an exquisite flavor." (*Dammann.*)
- 3163. CUCUMIS MELO. Winter muskmelon.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Neapolitan Winter. Said to keep very well.
- 3164. CUCUMIS MELO. Muskmelon.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Galata. "Fruit large, oval, about 16 inches long, yellow, dark-green marbled; flesh greenish white, very juicy and sweet." (*Dammann.*)
- 3165. FÆNICULUM VULGARE. Fennel.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Prince Bismarck. A very large sort. (See No. 3146.)
- 3166. CUCURBITA PEPO. Vegetable marrow.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Snow-white Belmonte. The same seed as No. 3136.
- 3167. ASPARAGUS ACUTIFOLIUS. Asparagus.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Ivory. "New; very tender, remaining white even if shot up very high above the ground." (*Dammann.*)
- 3168. CUCURBITA PEPO. Vegetable marrow.**
 From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.
Cocozzella of Tripoli, white. (See No. 3132.)

3169. CYNARA SCOLYMUS.**Artichoke.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Remontant. "One of the finest; large, dark green, without any spines; bears twice with us, i. e., in spring and autumn." (*Dammann.*)

3170. CUCUMIS MELO.**Muskmelon.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Turkish Giant. "Fruits large, orange yellow, smooth, weighing up to 11 pounds; flesh glaucous, very sweet and juicy." (*Dammann.*)

3171. LAGENARIA.**Gourd.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Neapolitan longest green running. (See No. 3132.) Received as "*Lagenaria leucantha longissima*;" at Naples, Italy, called "*Cocozzella da pergola*." "When young, this sort furnishes an excellent dish; cut into pieces about 3 inches long, take out the seeds, fill it up again with a stuffing of meat, etc., boil and serve with tomato sauce." (*Dammann.*) (See No. 3299.)

3172. CUCURBITA PEPO.**Vegetable marrow.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Cocozzella of Molfetta. Same seed as No. 3148.

3173. CUCUMIS MELO.**Muskmelon.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Iberia. "Of medium size, green-fleshed, of best flavor." (*Dammann.*)

3174. OPUNTIA FICUS-INDICA.**Prickly pear.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

3175. EUGENIA UGNI.**Chilean guava.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

A half-hardy shrub with edible berries about three-eighths to one-half an inch in diameter, having a sweet and aromatic flavor; much esteemed in Chile.

3176. EUGENIA.

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Received as *E. pitanga*, a name not to be found in Kew Index.

3177. PSIDIUM GRANDIFOLIUM.**Guava.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

A Peruvian guava, received as *P. albidum*. This and the two following numbers should be tested in the South in comparison with the guavas now grown.

3178. PSIDIUM ARAÇA.**Guava.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

A small tree growing on the high, arid plains of Brazil. The greenish-yellow fruits have a very fine flavor.

3179. PSIDIUM.**Guava.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Received as *P. rhea*, possibly a misprint for *P. thea*, an Argentina species.

3180. JACARANDA OVALIFOLIA.**Jacaranda.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

A Brazilian tree, with beautiful and fragrant bluish-red wood streaked with black (palesandre-wood). It is a highly ornamental tree, related to the Catalpa, suitable for frostless regions. "The top is dense and rounded; the twice-pinnate leaves have all the lightness and grace of the foliage of an *Acacia*; the flowers, of a blue color, tinted with violet, form extremely graceful panicles." (*Bon Jardinier.*) "Frequently planted in Southern California, where it is quite hardy." (*Franceschi.*)

3181. JACARANDA CHELONIA.

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

A species from Argentina.

3182. LAURUS CANARIENSIS.**Laurel.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

3183. PARKINSONIA ACULEATA.**Parkinsonia.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

A handsome, thorny, leguminous tree, native of tropical America. Valuable as an ornamental in warm climates. This is recommended by Dr. Trabut, Government Botanist of Algeria, as a hardy plant. It grows rapidly and attains a height of 6 to 8 feet. On good soils it may be sown any place, as the young plants are easy to transplant. In order to insure quick germination, Dr. Trabut recommends treating the seed with boiling water for five minutes.

3184. CUCUMIS MELO.**Muskmelon.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Abundantia.

3185. CUCUMIS MELO.**Muskmelon.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Cilento.

3186. OPUNTIA FICUS-INDICA.**Prickly pear.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Yellow.

3187. OPUNTIA FICUS-INDICA.**Prickly pear.**

From Naples, Italy. Received through Mr. W. T. Swingle, May, 1899.

Red.

3188. OPUNTIA FICUS-INDICA.**Prickly pear.**

From the Botanic Garden, Catania, Italy. Received through Mr. W. T. Swingle, 1899.

3189. OPUNTIA FICUS-INDICA.**Prickly pear.**

From the Botanic Garden, Catania, Italy. Received through Mr. W. T. Swingle, 1899.

3190. OPUNTIA FICUS-INDICA.**Prickly pear.**

From the Botanic Garden, Catania, Italy. Received through Mr. W. T. Swingle, 1899.

Sanguineo. A variety of prickly pear with red fruit and red pulp. They ripen later than the white and yellow prickly pears grown in Sicily; sometimes so late that they do not mature well, about Palermo at least.

3191. OPUNTIA FICUS-INDICA. Prickly pear.

From Taormina, Sicily. Received through Mr. W. T. Swingle, 1899.

This and Nos. 3192 and 3193 are varieties growing along the roadside on Taormina. The plants are nearly spineless, but nothing could be determined as to the character of the fruit.

3192. OPUNTIA FICUS-INDICA. Prickly pear.

From Taormina, Sicily. Received through Mr. W. T. Swingle, 1899. (See No. 3191.)

3193. OPUNTIA FICUS-INDICA. Prickly pear.

From Taormina, Sicily. Received through Mr. W. T. Swingle, 1899. (See No. 3191.)

3194. OPUNTIA FICUS-INDICA. Prickly pear.

From the Botanic Gardens, Catania, Italy. Received through Mr. W. T. Swingle, 1899.

This and the following number are specimens of the spineless cactus growing near Bronte, on the western slopes of Mount Ætna. Nothing could be determined as to the character of the fruit.

3195. OPUNTIA FICUS-INDICA. Prickly pear.

From the Botanic Gardens, Catania, Italy. Received through Mr. W. T. Swingle, 1899.

The same as No. 3194.

3196. OPUNTIA FICUS-INDICA. Prickly pear.

From the Adernó, Sicily. Received through Mr. W. T. Swingle, 1899. (See No. 3194.)

3197. ZEA MAYS. Corn.

From Norfolk, Va. Received through Capt. John Wallace, May, 1899.

Virginia horse tooth. "The home of this kind of corn seems to be the district of seacoast from the capes of Virginia to Hatteras, N. C., and running west not over 40 or 50 miles. Whether the soil and climate of other sections suit it as well I can not say from experience. By far the greater part that is raised to sell is shipped to Europe, mainly to Germany. It is used there for ensilage, and so is not allowed to come to maturity, even if the seasons would permit. It probably requires too long a season for their climate, and would for our Western corn States, but for ensilage it might do, it would seem, for any section of our country. The stalk is large and the blades heavy. It grows very tall, 10 to 15 feet, and generally with but one ear, though we are getting two ears by selection. Both stalk and grain contain more saccharine than in any other kind, except sugar corn, of course, and the ensilage is said to be more nutritious than that made from common yellow and white Western corn.

"Well-drained black land, on which the growth was large black gum, cypress, and poplar, is the best suited for horse tooth corn. This land will bring 60 to 80 bushels to the acre when first cleared, and when well limed will keep up to 50 bushels, but finally settles to from 30 to 40 bushels per acre, though it would easily run up to 60 to 80 bushels again if grass and potatoes were rotated and the manure which should come from feeding stock was used.

"We cultivate in the drill rows 4 to 4½ feet apart and the stalks 20 to 30 inches apart in the rows. We have to use the plow in cultivation and weed with hoes, because the grass grows so fast that the Western plan of using the harrow and cultivator would not keep down the weeds. It might be planted in squares and this flat cultivation used as well as with other corn, but two stalks left to the hill instead of three or four would be better.

"This should certainly make good corn for canning in the roasting-ear stage. The ears are large and the grains so long that it would yield so much more than ordinary corn. Its flavor is excellent, and a little sugar added when eaten would make it equal to the best sugar corn." (*John Wallace.*)

3198 to 3203. PHOENIX DACTYLIFERA.

Date palm.

From Algeria. Received through Mr. W. T. Swingle, 1899.

“This collection of date palms was obtained from Mr. Yahia Ben Kassem, of Orleansville, Algeria. Orleansville is north of the coast region, not far from the coast of the Mediterranean, and only a slight elevation above the sea. It is outside of the region where the date palm usually matures its fruit, but Mr. Yahia has succeeded in finding a very early species which has ripened in his garden. These plants were dug up, placed in tubs, and shipped to America in March, 1899. They were forwarded upon receipt to the experiment station of Arizona, to be planted in the palm garden at Tempe, where they are now growing.

3198. *Tadala* (also called *Teddala*). This very early sort, brought into general notice by Mr. Yahia, was originally introduced into Orleansville from the M'Zab region in North Sahara, where it is one of the most highly esteemed varieties. The dates are very long and slender, sometimes reaching 3 inches in length, and said to be of good flavor and to keep very well. The palm is of very vigorous growth and has very long leaves and thick stem. This plant is a sucker brought from the M'Zab in the spring of 1898. It was then planted in Mr. Yahia's garden at Orleansville, where it grew for a year, being dug up and put in a tub for shipment to America in March, 1899.
3199. *Timdjouhert*. This is another variety introduced from the M'Zab country by Mr. Yahia. It is a short, thick date of good flavor. This plant was also brought from the M'Zab as a sucker in the spring of 1898 and was grown a year in Mr. Yahia's garden.
3200. *Tadala*. The same variety as No. 3198. This plant was a large sucker cut from a bearing tree in Mr. Yahia's garden in Orleansville. It was removed from a tree early in March, 1899.
3201. *Deglet nour*. This is a famous “light date” from the Algerian Sahara. It is the best-known African date, being sold in great quantity in the Paris and London markets. It is of medium size, amber colored, of exceedingly good quality. This plant was brought from Biskra and planted in Mr. Yahia's garden in 1897, where it remained two years, being dug up for shipment early in March, 1899. This plant produced a few flowers early in 1898.
3202. *Deglet el beida*. This is one of the so-called dry dates, unlike the ordinary “soft dates,” which remain attached to the fruit stalk. These fall to the ground when ripe. They are very firm in texture and are perfectly dry; they keep indefinitely and are consumed in enormous quantities by the Arabs, who prefer them to the soft dates for a regular diet. This is one of the best varieties of dry dates all through the northern Sahara. This plant is from Mr. Yahia's garden at Orleansville. Its origin was not learned.
3203. *Rhars* or *G'hars*, sometimes spelled *R'ars*. This is a standard variety of early soft dates in all parts of the northern Sahara. It is much preferred by the Arabs on account of its keeping qualities. It is commonly offered for sale in tight sheepskins. It is of good flavor but has a very large pit. The plant shipped under this number was brought from the M'Zab country in the spring of 1898 and was grown one year in Mr. Yahia's garden at Orleansville; was dug up and shipped early in March, 1899.” (*Swingle*.)

3204. MACHILUS TOMENTOSA?

Anis wood.

From Algeria. Received through Mr. W. T. Swingle, 1899, from the Jardin d'Essai, Mustapha.

It should be tried as a stock for the Avocado pear. This species, received as *M. tomentosa* (a name that could not be traced), was introduced into the Jardin d'Essai at Algiers in 1875. It is now a fine pyramidal tree, 40 or 50 feet high. It bears violet-colored fruits the size of a hen's egg, which have the flavor of the Avocado pear, to which this plant is closely allied. The tree is said to be more hardy than the Avocado pear, and it fruits even in Italy. It has been suggested as a stock on which to graft Avocado pear. It furnishes the Anis wood of cabinetmakers. This may be the *Machilus macrantha* of the East Indies. Dr. Trabut thinks it may be a species of *Persea* from western South America.

3205. CASMIROA EDULIS.**Zapote blanco.**

From Algeria. Received through Mr. W. T. Swingle, 1899, from the Jardin d'Essai, Mustapha.

"This tree, a native of Mexico, belongs to the family *Rutaceae* and is distantly related to the orange. It forms a large, round-topped tree, sometimes 40 or 50 feet high. The leaves are trifoliate and evergreen. The fruit varies considerably in size, being 1 to 4 inches in diameter. It is pale yellow when ripe, and has a rich subacid flavor somewhat like that of the peach. The tree has been introduced into Algeria and southern France, but does not fruit well in the latter country. There is a fine specimen over 75 years old in Santa Barbara, Cal. In the statistics published by the Mexican Government relative to fruit production in the Republic, issued in 1895, the *Zapote blanco* is given as an important fruit, the annual value of the crop amounting to \$100 or more in a great many municipalities, and in Nogales, in the Canton of Orizaba, State of Vera Cruz, a crop worth \$2,000 (Mexican) is said to be produced, the valuation being 25 cents (Mexican money) per hundred, while in Mantehaula, State of San Luis Potosi, the annual value of the crop is \$1,200 (Mexican). The leaves are said to be used in medicine in Mexico. Efforts made in California to propagate from cuttings proved unsuccessful." (*Swingle.*)

3206. ELAEAGNUS UMBELLATA.**Goumi.**

From Algeria. Received through Mr. W. T. Swingle, 1899, from Jardin d'Essai, Mustapha.

This shrub or small tree was recently introduced into Europe from Japan. It is perfectly hardy in France, grows in all kinds of soil, and produces an abundance of subacid fruits which make excellent tarts and preserves. It has also been used for making a sort of kirsch. It has fine evergreen foliage, and may be used for hedges. These Japanese goumis have been suggested as useful in planting in game preserves to furnish food for game birds. It is readily reproduced by cuttings, and fruits in three years.

3207. PRUNUS PERSICA.**Peach.**

From Algeria. Received through Mr. W. T. Swingle, 1899.

This is a seedling peach, originated by M. Fontaine at Blidah. Said by M. Fontaine to be the earliest peach he knows. It is of the type of the *Amignon*, and is a freestone. This number includes one seedling tree.

3208. EUGENIA GUABIJU.

From Algeria. Received through Mr. W. T. Swingle, from the Jardin d'Essai, Mustapha.

This species is a native of Argentina, and is said by Dr. Trabut to produce good fruit.

3209. MACHILUS TOMENTOSA?

From Algeria. Received through Mr. W. T. Swingle, 1899, from the Jardin d'Essai, Mustapha. (See No. 3204.)

3210. PUNICA GRANATA.**Pomegranate.**

From Algeria. Donated by Dr. Trabut, director of the experiment station at Rouïba.

Grenadier sans pepins. This is a seedless pomegranate, said to be one of the best sorts.

3211. MURRAYA EXOTICA.

From Algeria. Received through Mr. W. T. Swingle, 1899.

This shrub, belonging to the orange family, is spread throughout tropical Asia, the East Indies, and as far as New Zealand. It has beautiful evergreen foliage and fragrant white flowers. The leaves said to be used in the East as an ingredient of curry powders.

3212. SOPHORA SECUNDIFLORA.

From Algeria. Received through Mr. W. T. Swingle, 1899, from the Jardin d'Essai, Mustapha.

An evergreen shrub, native in Texas and Mexico. It produces numerous fragrant racemes of blue flowers in spring. Its seeds are very poisonous. It can be grown only in regions where the orange is hardy.

3213. FICUS NITIDA.

From Algeria. Received through Mr. W. T. Swingle, 1899.

A favorite shade tree for planting along streets and roadsides in Algeria. It has glossy evergreen leaves much like those of the india-rubber tree, but very much smaller, being only 2 or 3 inches long. This species, if correctly named, is a native of the East Indies. (See No. 3220.)

3214. EUCALYPTUS TROLARDIANA.**Eucalyptus.**

From Algeria. Received through Mr. W. T. Swingle, 1899, from the Jardin d'Essai, Mustapha.

This Eucalyptus is a hybrid of *Eucalyptus rostrata* and *E. tereticornis*. It is a very handsome and vigorous form of *Eucalyptus*, which is recommended by Dr. Trabut for general planting. (See No. 2987.)

3215. CARICA.**Pawpaw.**

From Algeria. Received through Mr. W. T. Swingle, 1899, from the Jardin d'Essai, Mustapha.

This species is called *Carica gracilis* at the Jardin d'Essai, Algeria, but this name could not be traced.

3216. GLYCOSMIS TRIFOLIATA.

From Algeria. Received through Mr. W. T. Swingle, 1899, from the Jardin d'Essai, Mustapha.

A Japanese species somewhat related to the orange, but bearing small berries. The plant is evergreen and bears small white flowers.

3217. VITIS ACIDA.**Grape.**

From Algeria. Received through Mr. W. T. Swingle, 1899, from the Jardin d'Essai, Mustapha.

A very pretty evergreen climbing vine; foliage free from disease; a native of the Southeastern United States. (See No. 3303.)

3218. COCCOLOBA LATIFOLIA.**Sea grape.**

From Algeria. Received through Mr. W. T. Swingle, 1899.

A tree from tropical South America; should be tested in Florida for fruit in comparison with the native sea grapes and pigeon plums belonging to this same genus of plants.

3219. MUSA PARADISIACA.**Banana.**

From Algeria. Received through Mr. W. T. Swingle, 1899, from the Jardin d'Essai, Mustapha.

Hamma. "This banana was introduced into Algeria some years ago from Brazil. It is the only one out of the considerable collection of varieties which proved sufficiently hardy and vigorous to stand the climate at the Jardin d'Essai. The plant is said to be very large and to produce small, perfumed, fleshy fruits, of salmon color and high flavor." (*Swingle*.)

3220. FICUS LAEVIGATA.

From Algeria. Received through Mr. W. T. Swingle, 1899.

This tree, together with No. 3213, is commonly used as a shade and avenue tree along the roadsides. It somewhat resembles the india-rubber tree, but has much smaller leaves, larger, however, than those of *Ficus nitida*, to which it is said to be superior as a shade tree.

3221. ADENOCALYMNA.

From Algeria. Received through Mr. W. T. Swingle, 1899.

This vine was received as "*Adenocalymna emarginata*," a name which can not be traced, possibly a misprint of *A. marginata*. It produces abundant yellow flowers in summer and autumn. It is a native of tropical South America and belongs to the *Bignoniaceae*.

3222. PHYLLOSTACHYS AUREA.**Bamboo.**

From Algeria. Received through Mr. W. T. Swingle, 1899.

This small bamboo, a native of China and Japan, is hardy in France.

3223. ARUNDINARIA SIMONI.**Bamboo.**

From Algeria. Received through Mr. W. T. Swingle, 1899, from the Jardin d'Essai, Mustapha.

This small Chinese bamboo is perfectly hardy in the latitude of Paris. It reaches a height of from 12 to 15 feet. It has the drawback of spreading through the ground rapidly by means of suckers. This, however, becomes a useful property if the plant be used to protect embankments from erosion.

3224. FICUS CARICA.**Caprifig.**

From Algeria. Received through Mr. W. T. Swingle, 1899.

Cuttings of caprifigs which bore the winter generation of fruits. These were cut from several different trees growing about Algiers.

3225. FICUS CARICA.**Caprifig.**

From Algeria. Received through Mr. W. T. Swingle, 1899.

Cuttings from a caprifig tree growing in Mustapha, near Algiers, which bore a heavy crop of caprifigs in 1898, which sold for 35 francs. This may prove a valuable variety.

3226. TAMARIX AFRICANA.**Tamarix.**

From Algeria. Received through Mr. W. T. Swingle, 1899, from the Jardin d'Essai, Mustapha.

A species of *Tamarix*, native in Algeria and Tunis. It is not so valuable as *Tamarix articulata* (No. 3343), but should, nevertheless, be tested along with this in the arid Southwest. *Tamarix gallica*, a beautiful ornamental from the Mediterranean region, is hardy south of the latitude of Washington, D. C.

3227. CITRUS AURANTIUM.**Blood orange.**

From Algeria. Received through Mr. W. T. Swingle, 1899.

A seedling blood-red orange, said by M. Fontaine to be of superior quality. There are many in Algeria which reproduce themselves by seed, and this may prove to be one of them.

3228. PHYLLOSTACHYS NANA.**Bamboo.**

From Algeria. Received through Mr. W. T. Swingle, 1899, from the Jardin d'Essai, Mustapha.

An ornamental bamboo.

3229. ACACIA ARMATA.**Kangaroo thorn.**

From Algeria. Received through Mr. W. T. Swingle, 1899.

This acacia is a shrub or small tree, 10 to 20 feet high, from tropical and subtropical Australia; is much grown for hedges, though less manageable than various other hedge plants; more important for covering coast sand with an unapproachable prickly vegetation. (*Von Mueller.*)

It is said to be well adapted to the coast region of California, where it forms impenetrable hedges.

3230. ABERIA CAFFRA.**Kei apple.**

From South Africa. Received April, 1899.

A hedge plant with edible fruits. This evergreen shrub or small tree belongs to the family of *Bivaceae*. It is a native of the Cape, and is used especially in Natal for making hedges, for which its long thorns render it suitable. The fruit, said to resemble a small apple, is called Kei apple or Kafir apple. This fruit is very seedy and is best used for preserves. The staminate and pistillate flowers grow on different plants, and unless both are planted in proximity no fruit is produced. This is said to stand some frost in California, but to succumb at 16° F.

3231 to 3240. VITIS VINIFERA.**Grape.**

From Algeria. Received through Mr. W. T. Swingle, 1899. Donated by Dr. Trabut, Algiers.

This collection of cuttings of varieties of the grape are mostly indigenous to North Africa. Was donated by Dr. Trabut, director of the experiment station at Rouiba. The Mohammedans do not drink wine, and consequently have devoted special attention to the production of table grapes. It is believed that some of these will prove valuable in the warmer parts of the United States. The collection comprises the following sorts:

- 3231.** *Cherchel.* Native in Algeria. It is a black variety, used both as a wine grape and for the table. (4 cuttings.)
- 3232.** *Blanc de Dellys.* This is a seedling grape with loose bunches, originated by Dr. Trabut. It is of good quality. (4 cuttings.)
- 3233.** *Chavenich-Chaouch* (?) This is presumably the well-known Persian variety of white table grape. (4 cuttings.)
- 3234.** *Ain el Seba.* A variety indigenous to North Africa. (4 cuttings.)
- 3235.** *Ribier du Maroc.* From Morocco. "Bunch above medium, a little cylindro-conic, sometimes close and sometimes rather loose, occasionally branched, on a rather stout, short stalk; berry rather large, olive-shaped, on a long and stout pedicel; flesh firm, crisp, sweet, and high flavored; skin somewhat thick, resistant, turning to a violet black when ripe; 3d epoch." (*Pulliat.*) (4 cuttings.)
- 3236.** *Ain Kelb* (meaning literally dog's eye). Native in Algeria. It is a very good table variety, having exceedingly sweet berries. Sometimes they are so sweet that the juice is thick and is difficult to press out. It makes good sweet wine.
- 3237.** *Sultanie de la Carabarnose.* This is said to be one of the best varieties of seedless grapes from Smyrna. It is used in making the highest grade of seedless raisins. (4 cuttings.)
- 3238.** *Ain Reba.* This is an indigenous North African variety. (3 cuttings.)
- 3239.** *Ain Beugra.* This indigenous North African variety makes a very dark wine of second quality. The berries are of large size. (4 cuttings.) "The *Ain Beugra* is one of the indigenous varieties of grapes which merits cultivation for the production of red wine. The wine obtained is not of fine quality, but is rich in color and in extractive materials, making it very useful for mixing. It is fruitful, ripens rather late, and keeps its leaves green and intact very late in the season. It does not suffer from the sirocco." Pom. 17455.
- 3240.** *Sultanie.* Presumably the Turkish variety of this name. (4 cuttings.)

3241. DIOSCOREA SATIVA.**Yam.**

From Hawaii. Donated by Her Majesty ex-Queen Liliuokalani, March, 1899.

Hoi, pronounced "Ho-ye." A vine; tubers used for food in times of drought. It is first baked underground, then the skin is scraped off, and afterwards pounded to the consistency of poi and eaten with fish.

"The Yam, common in the forests of the lower zone, was cultivated for the supply of ships before the introduction of the potato, particularly on Kauai and Niihau. The species ranges westward over all the regions lying between the Hawaiian Islands and Africa, and its native name 'Hoi' follows it to Sumatra. The axillary bulbs are called 'alaala.'" (*Hillebrand.*) There is much confusion in reference to the systematic position of *Dioscorea sativa*. It is said to have been grown by Linnaeus from seeds received from America, but he also said that it grew in India. Bailey (*Cyclopedia*) recommends that the name be dropped, but for the present we have followed Hillebrand in retaining the name *sativa*. (3 tubers.)

3242. DIOSCOREA SATIVA.**Yam.**

From Hawaii. Donated by Her Majesty, ex-Queen Liliuokalani, March, 1899.

"*Uhi*, or yam, pronounced 'u-hee,' a vine. The root of this plant is eaten. It is either found round, as a melon, or long, measuring 3 feet in length. The seeds may also be eaten, but both have to be cooked." (6 tubers.)

3243 to 3249. FICUS CARICA.**Caprifig.**

From Algeria. A collection of cuttings of caprifigs from the vicinity of Algiers secured by Mr. W. T. Swingle.

These male figs do not produce edible fruit. They supply homes for the fig insect, however, and are introduced with the view of providing trees which will harbor the various generations of insects in the Californian climate.

3243.**3244.** *Red caprifig.***3245.****3246.****3247.** *Egg fig.***3248.****3249.****3250 to 3268, and 3317, 3318. EUCALYPTUS.****Eucalyptus.**

From Algeria. Received through Mr. W. T. Swingle. March, 1899.

"The 21 numbers from 3250 to 3268, and 3317 and 3318 include a collection of seeds of Eucalypti from the plantation of M. Cordier, growing at Maison Carrée, Algeria. Through the kindness of the late M. Cordier's nephew, who is now in charge of the plantation, I was given permission to collect branches and seeds of any of the trees on the plantation. The present collection consists of a selection made from the row planted along the west side of the vineyard south of M. Cordier's house, which in his original notes is recorded as the plantation 'près du chemin des bestaux.'" (*Swingle.*)

The numbers given below as those of M. Cordier are those of his original record, and are serial, beginning at the north end of the row and running south. This row includes a large number of species which were planted in March, 1878, mostly from seeds obtained from Vilmorin in the autumn of 1877. Only trees showing unusual vigor, or interesting for some other reason, as, for instance, having large or showy flowers, were collected. In every case the circumference of the tree was measured at 1 meter (39 inches) from the ground, the circumference being given in centimeters. Mr. J. Burt Davy has been kind enough to look over the collection and determine the species, the original labels being in many cases obviously wrong. Nos. 3262 and 3268 were identified by Dr. Trabut; all of the others were determined by Mr. Davy.

3250. *Eucalyptus cornuta.* (Cordier, No. 51.) (Circum., 164 cm.)**3251.** *Eucalyptus teretocornis.* (Cordier, No. 28.) (Circum., 118 cm.)**3252.** *Eucalyptus saligna.* (Cordier, No. 16.) (Circum., 153 cm.)**3253.** *Eucalyptus Stuartiana.* (Cordier, No. 2.) "*Illawarra box.*" (Cordier.) (Circum., 130 cm.)

3254. *Eucalyptus stricta* (?) (Cordier, No. 10.) (Circum., 97 cm.) "Not unlike some forms of *Eucalyptus acmenoides*." (Davy.)
3255. *Eucalyptus resinifera* (?) (Cordier, No. 11.) "Off type. Perhaps *E. resinifera* × *Botryoides*." (Davy.) Labeled "Woolly bui (?) [=Woolly butt?] Ramel" in Cordier's list. (Circum., 103 cm.)
3256. *Eucalyptus tereticornis*. (Cordier, No. 13.) (Circum., 92 cm.)
3257. *Eucalyptus stricta* (?) (Cordier, No. 14.) "White iron bark." "Bark like that of cork oak." (Swingle.) "Determination doubtful because of absence of flowers." (Davy.) (Circum., 63 cm.)
3258. *Eucalyptus tereticornis, brachycoris*. (Cordier, No. 22.) (Circum., 117 cm.)
3259. *Eucalyptus leucorxylon, siderorxylon*. (Cordier, No. 25.) "Same as *E. siderorxylon rosea*." (Davy.) (Circum., 109 cm.) "The pink flowers are large, abundant, and very pretty; much frequented by bees. The only species I saw so frequented. It differs from No. 3265 in having larger, brighter-colored flowers, and in being a much larger tree." (Swingle.)
3260. *Eucalyptus leucorxylon*. (Cordier, No. 29.) "Bark thick, like *E. leucorxylon, siderorxylon*." (Swingle.) (Circum., 126 cm.)
3261. *Eucalyptus rostrata*. (Cordier, No. 32.) "Branches pendant." (Cordier.) (Circum., 117 cm.)
3262. *Eucalyptus viminalis*. (Cordier, No. 34.) Identified by Dr. Trabut. (Circum., 91 cm.)
3263. *Eucalyptus calophylla*. (Cordier, No. 39.) (Circum., 54 cm.)
3264. *Eucalyptus leucorxylon*. (Cordier, No. 43.) (Circum., 117 cm.)
3265. *Eucalyptus leucorxylon, siderorxylon*. (Cordier, No. 46.) "*E. siderorxylon* var. *rosea*. Small-fruited form." (Davy.) "Differs from No. 3259 in having lighter-colored flowers, not so frequented by bees." (Swingle.) (Circum., 59 cm.)
3266. *Eucalyptus melliodora*. (Cordier, No. 47.) J. B. D. (Circum., 103 cm.)
3267. *Eucalyptus rudis* var. (Cordier, No. 5.) J. B. D. "Perhaps *E. rudis* × *rostrata*." (Davy.) "Possibly *E. rudis* × *E. tereticornis*." (Dr. Trabut.) (Circum., 60 cm.)
3268. *Eucalyptus rostrata*. (Cordier, No. 52.) "Red gum." (Cordier.) "Fruits small." (Trabut.) (Circum., 105 cm.)
3317. *Eucalyptus rudis*. (Cordier, No. 45.) Broad-leaved form. (Davy.) (Circum., 118 cm.)
3318. *Eucalyptus polyanthema*. (Cordier, No. 15.) (Circum., 108 cm.)

3269. IPOMOEA BATATAS.**Sweet potato.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

Cuillet. Bears tubers near surface of ground. A new variety, originated from seed by M. Fontaine, at Blidah.

3270. PINUS PINEA.**Stone pine.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

Pignon. "The seeds are eaten. The cones are put for a few minutes in a fire, which causes them to open and allow the seeds to drop out. This pine, known in French as the Parasol pine, grows all about the Mediterranean. It has a dense, round top, and the tree is given a striking appearance by cutting away the lower branches for fuel, a procedure almost universal about the Mediterranean. This leaves a dense, umbrella-like top at the end of the slender, straight stem. The nuts are said to be used in certain nut foods and resemble in flavor the piñons of the Southwest. The tree is said to thrive best in deep, sandy, dry soil. When the seeds are desired for sowing, the cones are thrown into hot water, which causes them to open without risk of endangering the seed. The young seedlings are tender, but after four or five years are said to stand the climate of London and Paris without any protection. In the northern latitudes they are best grown in pots until four or five years old to avoid transplanting." (Swingle.)

3271. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Mr. Yahia Ben Kassem.

Deglet el Beida. A dry date. (See No. 3329.)

3272. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Purchased in the market at Algiers.

M'Kentichi. A small but good dry date. In the city of Algiers the *M'Kentichi* date is preferred to the *Deglet el Beida* (see No. 3329), which, though larger, is not so sweet. At Orleansville Mr. Yahia prefers the latter.

3273. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Purchased in the market at Algiers.

Deglet Nour. This is the standard date grown for export to Europe.

3274. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Mr. Yahia Ben Kassem.

Timdjouert. A red date of good quality, rarely seen by Europeans. (See No. 3002.)

3275. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Mr. Yahia Ben Kassem.

Bent Akbela. A date rarely seen by Europeans. Mr. Yahia considers this one of the best of the *M'Zab* dates.

3276. FICUS CARICA.**Fig.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by M. Jules Borgeaud, Swiss consul at Algiers.

This sample pack of figs is from Kabylia. Figs come packed in small sacks made of braided leaves of the dwarf palm. In 1899 the trade in these figs was very good, owing to the scarcity of Smyrna figs. These figs contain ripe seeds, and consequently have been caprifid. Seeds should be planted in the hope of obtaining new varieties of figs and caprifigs.

3277. OPUNTIA ROBUSTA.**Prickly pear.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.

The large, round, gray pads of this are very ornamental. This cactus is one of the most ornamental species grown in the gardens in southern France and in Algiers. It has very thick, circular pods, about a foot in diameter, grayish green in color. The plant attains a height of from 15 to 20 feet, and is strikingly ornamental. It is commonly called *Opuntia Piccolominiana*, but is referred to *O. robusta* by Schumann.

3278. OPUNTIA CRASSISSIMA.**Prickly pear.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.

A spineless cactus, of possible value for forage. The fruit is said to be edible.

3279. OPUNTIA FICUS-INDICA INERMIS.**Prickly pear.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.

A spineless cactus of great importance as a forage plant in arid countries. There are extensive plantations of it in Tunis and Algeria.

3280. OPUNTIA ACIDA.**Prickly pear.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.

An acid-fruited cactus, used for making cooling summer drinks.

- 3281. COFFEA.** **Coffee.**
 From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.
 A coffee from Angola, said to be the best species for wet lands.
- 3282. ANANAS SATIVA.** **Pineapple.**
 From Blidah, Algeria. Received through Mr. W. T. Swingle, March, 1899.
Trinité. A hardy pineapple. Will stand the rather cold winters of Blidah, Algeria.
- 3283. PASSIFLORA.** **Passion fruit.**
 From Blidah, Algeria. Received through Mr. W. T. Swingle, March, 1899.
 An edible passion fruit from an old garden at Ruisseau des Singes, near Blidah.
- 3284. CEREUS.** **Cactus.**
 From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.
Cierge à fruits comestible. An edible cactus, probably introduced from Mexico.
- 3285. ASPARAGUS ACUTIFOLIUS.** **Asparagus.**
 From Algeria. Received through Mr. W. T. Swingle, March, 1899.
 A wild asparagus, growing at Maison Carrée. This species is edible, but not commonly used because the shoots are too small. May be useful in hybridizing with other species of asparagus.
- 3286. DOLICHOS LABLAB.** **Madagascar bean.**
 From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.
Chinese White flowered No. 1. A valuable bean for hot countries, with edible pods.
- 3287. DOLICHOS LABLAB.** **Madagascar bean.**
 From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.
Chinese White No. 2. A very valuable bean with edible pods; for hot countries.
- 3288. DOLICHOS LABLAB.** **Madagascar bean.**
 From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.
Chinese White No. 4. A valuable bean with edible pods; for hot countries.
- 3289. LATHYRUS TINGITANUS.** **Chicharaca.**
 From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.
 This annual forage plant is native in Algeria and Morocco, and is cultivated on the Canary Islands under the name of *Chicharaca*. Animals are said to eat this forage, which does not seem to contain the more or less poisonous properties which are contained by other species of this genus. It is a typical winter forage plant, being sown in Algeria in October and cut for the first time in February. It is frequently cut the second or sometimes even the third time. It is said to grow so rapidly and so vigorously that it destroys all the weeds, and when allowed to grow wild and cut late it has yielded, in Dr. Trabut's experimental station at Rouïba, as much as 6 tons per acre of hay. It is said to be hardy in the south of France, where it is exposed to winter temperatures of 26° F.

3290 to 3297. HIBISCUS ESCULENTUS. Okra.

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.

Dr. Trabut has made an extensive trial of a large number of named varieties of *okra*. This vegetable is of great importance in the eastern and northern Mediterranean regions. The varieties should be carefully tested in the South in comparison with the best American varieties.

3290.

3291. *Blanc Louisiana.* White Louisiana.

3292. *Gombo a gros fruits.* Large fruited okra.

3293. *Gombo nain vert hatif.* Dwarf early green okra.

3294. *Sultan Giant de Roumaine.*

3295. *Gombo d'Egypte.* Egyptian gumbo.

3296. *Gombo nain amelioire.*

3297. *Gombo a fruit rouge.*

3298. HEDERA HELIX AFRICANA. Ivy.

From Algeria. Received through Mr. W. T. Swingle, March, 1899, from the Jardin d'Essai, Mustapha.

A variety of the English ivy, for warm countries.

3299. LAGENARIA. Gourd.

From Algeria. Given Mr. W. T. Swingle by an Arab proprietor at Blidah.

Karet-el-Hhalm. A gourd attaining a length of 2 to 4 feet. The fruits are said to be very good if cooked when from 8 to 10 inches long. (See No. 3171.)

3300. IPOMOEA BATATAS. Sweet potato.

From Blidah, Algeria. Received through Mr. W. T. Swingle, March, 1899.

A new variety of sweet potato, originated from seed by M. Fontaine. This sort is remarkable in having flesh which turns red when cooked. It is said to be of a superior flavor.

3300a. FICUS CARICA. Caprifig.

From Algeria. Received through Mr. W. T. Swingle, April, 1899. Imported in cooperation with the Division of Entomology.

This number comprises several shipments of the winter generation of fruits (mamme) of the caprifig, collected from the foothills of the mountains in Kabylia, near Algiers. Care was taken to secure caprifigs which were matured and yet still firm. Each caprifig was wrapped separately in tin foil, and then small packages were made up and sent to Washington by mail. A number of different shipments were made. As in the case of the trial shipments made in the spring of 1898 from Naples to New York, it was found that caprifigs packed in this way arrived in America in good condition, provided they were firm when picked. These caprifigs, upon their receipt, were turned over to the Division of Entomology, and forwarded by the latter to Mr. George C. Roeding, of Fresno, Cal., who received them in April, 1899, "the first shipment of forty figs arriving April 6. The fruits received were cut down, placed in open fruit jars, and these hung in a caprifig tree growing in the orchard, the tree having been previously prepared for the insects by covering with sheeting. Five other shipments were received between the date named and April 15, the greater part of the fruits being handled in the manner described." (Roeding.)

As a result of this importation, the caprifig insect (*Blastophaga*) became established in caprifig trees in Mr. Roeding's orchard. As has been demonstrated by Mr. Roeding and Dr. Eisen, the presence of this insect is absolutely necessary to carry on the culture of Smyrna figs on a commercial scale, since Smyrna figs require pollination in order to set their fruit. Hand pollination, which has been practiced to some extent in California by Mr. Roeding and Dr. Eisen, is altogether too expensive to be feasible in commercial plantations. In the fig-producing regions of southern Italy, Sicily, north Africa, Greece, and Asia Minor this pollination of the figs used for drying is accomplished through the agency of the *Blastophaga*, which lives in the caprifigs.

Caprifigs from which the insects are about to escape are tied upon rushes, or threaded on a string, and are thrown up into the branches of the fig trees. The insects, upon leaving the caprifigs, become dusted with pollen from a row of stamens which grow just inside the mouth of the caprifig. They then enter the young figs on the tree in which the chaplet of caprifigs has been hung, and in so doing carry in pollen and fertilize the numerous flowers inside these young figs, thereby causing the crop to set. The insect lives, however, only in the caprifig, and in order to carry on successfully the culture of drying figs it is necessary to have an orchard containing varieties of the caprifig in which the insect can live throughout the year. These varieties of caprifigs must furnish a succession of fruits all through the year, since if the caprifig trees fail to produce fruits at any time of the year the *Blastophaga* dies for want of a suitable breeding place. The Section of Seed and Plant Introduction is accordingly making efforts to secure as many varieties of caprifigs as possible, so that the maintenance of the fig insect in California and other regions suitable for growing Smyrna figs may be rendered certain.

3301. FREYLINIA CESTROIDES.

From Algeria. Received through Mr. W. T. Swingle, March, 1899; from the Jardin d'Essai, Mustapha.

An ornamental vine from tropical Africa.

3302. HAEMATOXYLON (?)

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

A shade tree growing in the park at Blidah, Algeria.

3303. VITIS ACIDA.

Grape.

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.

A fine evergreen vine. Usually free from disease. Foliage of a rich green color; ornamental. (See No. 3217.)

3304. CUCUMIS MELO.

Muskmelon.

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.

Olive.

3305. CUCUMIS MELO.

Muskmelon.

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.

This melon is from Tizi-Ouzou, in Kabilya.

3306. RUBUS ROSIFOLIUS.

Raspberry.

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.

This raspberry, said to be a native of the subtropical regions of Africa and Asia, bears abundant, rather large fruits, which ripen early. Should be tried in the Southern States and in California.

3307. ASPARAGUS ALTISSIMUS.

Asparagus.

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.

A Moroccan species, of little or no food value.

3308. SCHINUS TEREBINTHIFOLIUS.

Pepper tree.

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.

This Brazilian tree is much used for street planting in Tunis. It is said to be much superior to the ordinary pepper tree (*Schinus molle*) for this purpose. The branches are much stiffer than in the latter species and the leaves are larger and darker green. Should be tried in the South and in California.

3309. JUNIPERUS OXYCEDRUS. Cedar.

From Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Trabut, Government Botanist of Algeria.

A splendid ornamental cedar.

3310. HOVENIA DULCIS. Raisin tree.

From Blidah, Algeria. Donated by M. Pelletier, through Mr. W. T. Swingle. Received March, 1899.

A small tree with spreading branches and deciduous foliage. The fruit stalks enlarge and become fleshy, and at the time the seeds are ripe are extremely sweet, resembling raisins in taste. These seeds were collected near Blidah from a very large tree which bore enormous quantities of fruit. The fruits are used for making wine. It has been recommended that the small pedicels be mixed with white grapes, pressed, and the juice allowed to ferment completely, making a heavy wine of from 13 to 16 degrees. This tree seemed much more fertile than those commonly grown in the United States. It is a native of China and is hardy in the latitude of Washington, D. C. It can be reproduced by cuttings. It is probable that by selection a valuable fruit may be developed from this species. (See No. 3028.)

3311. ANANAS SATIVUS. Pineapple.

From Blidah, Algeria. Received through Mr. W. T. Swingle, March, 1899.

Martinique. Very spiny; hardy; will stand cool winters with some frost.

3312. DAUCUS CAROTA. Wild carrot.

From Reghaia, Algeria. Received through Mr. W. T. Swingle, March, 1899.

A sport with nodding pedicels; of botanical interest only.

3313. CLITORIA. Clitoria.

From Reghaia, Algeria. Received through Mr. W. T. Swingle, March, 1899. Donated by Dr. Bourlier.

A black and yellow flowered, ornamental, leguminous vine. It yields no seeds, but is propagated by cuttings.

3314. IRIS SISYRINCHIUM. Iris.

From Reghaia, Algeria. Received through Mr. W. T. Swingle, March, 1899.

A very pretty, small, Algerian iris.

3315. CONVULVULUS DURANDI. Convolvulus.

From Reghaia, Algeria. Received through Mr. W. T. Swingle, March, 1899.

A rare Algerian species. Dr. Trabut thinks that this vine may yield medicinal scammony.

3316. ROMULEA BULBOCODIUM.

From Reghaia, Algeria. Received through Mr. W. T. Swingle, March, 1899.

The plants are dioecious (i. e., male and female flowers on separate plants), and the male flowers are the larger. An ornamental perennial flowering herb related to the blue flag.

3317. EUCALYPTUS RUDIS. Red gum.

From Maison Carée, Algeria, (Cordier's No. 45). Received through Mr. W. T. Swingle, March, 1899.

Broad-leaved form (Davy). (See No. 3250.) (Circum., 118 cm.)

3318. EUCALYPTUS POLYANTHEMA. Red box.

From Maison Carée, Algeria, (Cordier's plantation No. 15.)

Received through Mr. W. T. Swingle, March, 1899. (See No. 3250.) (Circum., 108 cm.)

3319. ASPARAGUS ALBUS. Asparagus.

From Reghaia, Algeria. Received through Mr. W. T. Swingle, March, 1899.

Growing along the roadside. This is a double, wild species of asparagus. The shoots are slender, and have the drawback of rapidly becoming bitter after being gathered.

3320. CRATAEGUS OXYACANTHA MONOGYNA. Thorn.

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

Growing wild in a ravine at Reghaia. Dr. Trabut says that there are races with much larger fruit. May be useful for stocks.

3321. PHOENIX DACTYLIFERA. Date.

From Algeria. Purchased in the Arab market by Mr. W. T. Swingle, March, 1899.

Ghers. The dates were tightly packed in goatskins to prevent their drying out. (See No. 3203).

3322.

From Reghaia, Algeria. Donated by Dr. Bourlier. Received through Mr. W. T. Swingle, March, 1899.

An unknown leguminous forage plant from Madagascar. It is a shrub.

3323. ACACIA ARABICA. Acacia.

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria. Received through Mr. W. T. Swingle, March, 1899.

This small spiny tree occurs from India to the Western Sahara in arid situations. It is used for hedges, and yields an inferior grade of gum arabic (the true gum arabic is produced by *Acacia senegal*). The pods are sometimes used for tanning, and in some parts of India the lac insect is reared on the branches, though the lac produced on this tree is inferior to that on the *Kusum* tree (*Schleichera trijuga*, *Sapindaceae*), the *dkak* (*Butea frondosa*, *Leguminosae*), or the *pipal* (*Ficus religiosa*, *Urticaceae*). The *Acacia arabica* yields lac in dry regions, however, where some of the above species would not thrive. The wood is hard and durable.

3324. CASSIA LAEVIGATA.

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

A shrub growing in the Botanic Garden of the School of Medicine, Mustapha. It is a native of many tropical regions and is sometimes grown for ornament.

3325. LIVISTONA AUSTRALIS. Palm.

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

"*Livistona australis* is one of the most southern palms of the Australian continent, reaching the Snowy Range in latitude 37° 45' S." (*Hooker.*) It is one of the most hardy and most beautiful fan palms. It is extensively planted in southern France and in California. It is often grown as a house palm and is frequently incorrectly called *Corypha australis*.

3326. CAESALPINIA. Acacia.

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

A handsome evergreen shade tree from the Jardin d'Essai, Algiers. Should be tried as a shade tree in the South.

3327. ZIZYPHUS SATIVA(?) **Jujube.**

From Blidah, Algeria. Purchased in the Arab market. Received through Mr. W. T. Swingle, March, 1899.

The scarlet dried fruits called "Haneb" are sold in every Arab market in North Africa.

3328. DIOSPYROS LOTUS. **Trebizond date.**

From Blidah, Algeria. Received through Mr. W. T. Swingle, March, 1899.

Considered to be the best stock on which to graft Japanese persimmons. The roots spread horizontally, and there is no such pronounced tap root as has the American persimmon (*Diospyros virginica*). Transplanting of the young trees is much facilitated by this mode of root growth.

3329. PHOENIX DACTYLIFERA. **Date.**

From Blidah, Algeria. Purchased in the Arab market. Received through Mr. W. T. Swingle, March, 1899.

Deght el Beida. A large date; not so sweet as M'Kentichi, the other common dry date. (See No. 3202.)

3330. ACACIA HORRIDA(?) **Acacia.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

This South African shrub, which has numerous long white thorns, is often used for hedges in North Africa. It is the "Doorboom" of the Dutch settlers in South Africa, and is said to grow well in California.

3330a. ACACIA EBURNEA OR A. HORRIDA.

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

3331. PELARGONIUM CAPITATUM. **Geranium.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria. Received through Mr. W. T. Swingle, March, 1899.

This is the "*Geranium rosat*" of the perfumery industry. It is, according to Dr. Trabut, a sterile hybrid of *P. radula* and *P. odoratissimum*, and can only be propagated by slips or cuttings. The essence obtained from the leaves of this plant is used for adulterating attar of roses, the latter being valued at its weight in gold. It is sprinkled on the roses before they are distilled. The plants are set about 3 feet from each other, and are said to prefer rich clay soils. It is cut three times a year. From 700 to 1,500 pounds of leaves are said to be necessary to produce 1 pound of oil. The plantations last about ten years, and are said to yield a net profit of about \$75 per acre.

3332. CATHA EDULIS. **Kât.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

"A shrub or small tree which is native from southern Africa to Arabia. The slopes of Mount Saber are terraced and devoted to the culture of this shrub. It is said to be a much more profitable culture in Yaman, Afghanistan, than that of coffee. It is used by everybody and is expensive. If the best quality is consumed, it is easy to eat a dollar's worth per day. The leaves are the part eaten. The 3-year-old plants are first defoliated and only a few buds left on the twigs. From these, bushy young shoots are gathered and sold as *Kât mombarreh*. The following year leaves of an inferior quality are produced, called *Kât methani*. The trees are then left three years before being again defoliated, and then treated as before mentioned. Buds and young leaves are eaten without any preparation. Paul Emile Boutta, who traveled in Arabia in about 1835, says these leaves produce a slight exudation which the inhabitants like very much. I myself have found its effect to be very agreeable. According to Boutta the leaves are picked from it and sent wrapped up in banana leaves as far as Mocha. According to some authors, the dried leaves are also used by the Arabs, being either chewed or prepared like tea. It is not impossible that this plant may some time come into use among European peoples, since it is esteemed by the Arabs even more than coffee." (*Swingle.*)

3333. STIPA TENACISSIMA.**Esparto.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria.
Received through Mr. W. T. Swingle, March, 1899.

"This grass, called Halfa by the Arabs, and Esparto by the Spaniards, grows on the arid and high plateaus of northern Africa and to some extent in Spain and southern France. It is extensively collected for use in making high grade book paper in England. The leaves are 18 inches to 2 feet long, wiry, and almost cylindrical. They have the peculiarity of breaking off at the base where they articulate with the sheath. This enables the collectors to grasp the bundle of leaves and detach them from the plant by exerting a steady pull. These leaves are then grouped according to their color and length, tied in bundles, and exported. Much esparto is used in North Africa for the manufacture of cordage and baskets, while a small amount of the very best quality is shipped to Italy and Austria for use in manufacturing cigars, a bit of the leaf being placed in the middle of each cigar to facilitate manufacture. This plant grows at high altitudes in Algeria where the winters are cold and where it is exceedingly dry in summer. About a million dollars' worth of esparto is exported from Algeria annually. In 1885 the exports from Algeria amounted to 95,000 tons; from Tripoli 62,000 tons; from Spain 44,000; from Tunis 20,000; from Morocco 3,000. It is estimated that out of 225,000 tons a year, considered to be the average amount exported, 210,000 tons are used for making paper. About 200,000 of the 225,000 tons are consumed in England. In Spain this grass has been cultivated for many years. If grown from seed, the latter are collected from May to July, according to the locality, and are sown in September. Care must be taken to collect the heads as soon as they are ripe, otherwise the seeds are carried away by the wind. It takes ten years for the plant to become large enough to yield a quantity of leaves sufficient to repay the labor of gathering. The more common method of planting is to divide the tufts into four or more pieces, which are planted in September. The leaves of such plants are harvested within seven or eight years after planting. An acre contains from 1,200 to 2,000 tufts and should yield from 500 to 1,000 pounds of dry leaves. It is not impossible that the esparto grass may be grown profitably in some parts of the Southwest. It is probable, however, that the hand labor of gathering leaves will seriously interfere with the profitableness of such industry. It would probably succeed as far as climate is concerned throughout western Texas, New Mexico, and southern California. It should be noted that the esparto grass does not succeed on alkali soils. It prefers the drier elevations to the more moist and more alkaline depressions. *Albardine* or *Sennerah* (No. 3334), on the other hand, is able to withstand alkali, and grows in the depressions in preference to the elevations. The esparto grass yields a fresh crop of leaves every year." (*Swingle*.)

3334. LYGEUM SPARTUM.**Albardine.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria.
Received through Mr. W. T. Swingle, March, 1899.

Also called *Sennerah*. Albardine grows in depressions, while Halfa (No. 3333) grows on the hilltops. This grass, often confused in books with esparto grass, is totally different from it, and is never confounded by those who collect or use the leaves. The leaves do not contain nearly as much fiber as do those of esparto. In paper making the waste is greater in using albardine, but the fibers are said to be fully equal to those of the esparto. The leaves sell for the same price. While the esparto grows all over the high plateaux of North Africa attaining an altitude of 6,000 feet, the albardine does not grow at above 3,000 feet. As mentioned under No. 3333, this grass is able to withstand considerable amounts of alkali. It is easily propagated from the seed. It is a perennial, and like the esparto furnishes new crops of leaves every year.

3335. POPULUS ALBA INTEGRIFOLIA.**Poplar.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria.
Received through Mr. W. T. Swingle, March, 1899.

A most valuable native poplar grown from cuttings in Algeria. Should be tested in the Southwest in comparison with the poplars already grown there along the irrigating ditches. (See Nos. 3344 and 2700.)

3336. ASPARAGŪS ALBUS.

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria.
Received through Mr. W. T. Swingle, March, 1899.

An edible wild species. The shoots quickly become bitter after being gathered.
(See No. 3319.)

3337. RUBUS ATLANTICUS.**Raspberry.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria.
Received through Mr. W. T. Swingle, March, 1899.

A native of Algeria. This species was found by Dr. Trabut growing wild in the mountains. The fruit is edible.

3338. PANICUM PARLATOREI.

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria.
Received through Mr. W. T. Swingle, March, 1899.

A perennial grass from the Sahara desert. Possibly of value for forage in arid regions.

3339. SACCHARUM SPONTANEUM.

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria.
Received through Mr. W. T. Swingle, March, 1899.

A wild grass from the savannas of tropical Africa.

3340. PYRUS LONGIPES.**Pear.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria.
Received through Mr. W. T. Swingle, March, 1899.

A rare Algerian wild pear of considerable botanical interest. It forms a tall tree, having some spiny branches. The fruits are small, being about the size of a cherry, and have a stalk three times their length.

3341. BESCHORNERIA.

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria.
Received through Mr. W. T. Swingle, March, 1899.

An ornamental plant resembling an agave, or century plant, but more graceful. It is probably a native of Mexico.

3342. EUPHORBIA ABYSSINICA.**Spurge.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria.
Received through Mr. W. T. Swingle, March, 1899.

A large ornamental species native in Abyssinia.

3343. TAMARIX ARTICULATA.**Tamarix.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria.
Received through Mr. W. T. Swingle, March, 1899.

A valuable tree, growing to great size even in the desert. This tree, called *Ethel* by the Arabs, is the most important and largest tree in the interior of the Sahara. It frequently attains 6 feet in circumference and sometimes as much as 17 feet. It is used, especially by the Touaregs, for lumber, boards, furniture, utensils, and for constructing saddle-trees. One species of the Tamarix has already escaped and grows in a half wild condition in Arizona, and it is probable that this species would thrive in the warmer desert regions all through the Southwest.

3344. POPULUS EUPHRATICA.**Poplar.**

From Algeria. Donated by Dr. Trabut, Government Botanist of Algeria. Received through Mr. W. T. Swingle, March, 1899.

A drought resistant poplar from the semiarid Euphrates valley. It also grows in Morocco. This is a medium-sized poplar, with spreading branches. The leaves vary in shape from nearly round to almost linear. It has been said of this tree that it presents a very curious appearance, having two sorts of branches. One would never believe that both belonged to the same tree unless one saw them connected. The young shoots have leaves like willow, while the older branches have leaves like aspen. It should be tested along with No. 3335 for planting along irrigating ditches in the Southwest. This tree was introduced into Louisiana a number of years ago.

3345. GOSSYPIUM BARBADENSE.**Egyptian cotton.**

Donated by Mr. Alfred Dale, Mansourah, Egypt. Received, 1899.

Affi. From the estate of Prince Kamildo, Pasha Kamil.

3346. GOSSYPIUM BARBADENSE.**Egyptian cotton.**

Donated by Mr. Alfred Dale, Mansourah, Egypt. Received, 1899.

Abbasi. From the estate of Prince Hussein.

3347. GOSSYPIUM BARBADENSE.**Egyptian cotton.**

Donated by Mr. Alfred Dale, Mansourah, Egypt. Received, 1899

Ashmouni. From upper Egypt.

3348. CUPRESSUS SEMPERVIRENS HORIZONTALIS.**Cypress.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

This form of the cypress sometimes called *C. horizontalis* is very much employed in Algeria in forming wind brakes and hedges about orange groves and other plantations of fruit trees. The wind brake thus formed is very dense and protects the oranges from the cold winds blowing in from the sea in winter. The pyramidal form of this species, No. 3414, is also used for the same purpose.

3349. ACACIA FARNESIANA.**Cassie.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

This spiny shrub or small tree, native of tropical America, Mexico, and the Southwestern United States, produces, all winter long, little heads of very fragrant yellow flowers much employed in perfumery. At Boufarik, Algeria, the perfumery factory is said to use over 20 tons a year of these flowers. About 9 cents a pound is paid for collecting them. It is said to form thickets in southern California, and does well at Santa Barbara and San Francisco. (See No. 3528.)

3350. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Donated by Mr. Yahia Ben Kassem.

El Horra. A variety of dry date commonly grown in the Zibon region of the northern Sahara. Samples of fruit.

3351. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, March, 1899.

Ghars or *R'hars.* A variety much esteemed by the Arabs. It will keep for years. The Arabs pack the dates in goat or kid skins. These dates were bought in the Arab market at Algiers at a price of 45 centimes per kilo, or about 4 cents a pound. (See No. 3203.)

3352. JUBAEA SPECTABILIS.**Palm.**

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild, June, 1899.

"This is the palm from which the palm honey of Chile is made. This sirup is the most delicious of any I have ever tasted. It is superior, in my estimation, to maple sirup, being milder and not cloying the palate as the latter does. In forty years the trees will be ready to tap for the sap from which this sirup is made. It is a very ornamental palm, but a slow grower. It thrives on poor, very dry soil, and requires very little water. The palm-honey business here has paid very well indeed. Hitherto the palms have been felled, but they can be tapped, I am assured, just as maple trees are tapped." (*D. G. Fairchild.*)

3353. CRYPTOARYA PEUMUS.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 154), July, 1899.

"One of the handsomest shade trees of Chile. Recommended as an avenue tree. Grows well on stony, dry soil. The fruits, as large as small plums, are cooked like chestnuts and eaten. They have an oily, peculiar taste, disagreeable to some, but highly esteemed by others. The tree will stand light frosts and should be placed in California, Arizona, and Florida." (*D. G. Fairchild.*)

3354. TRICUSPIDARIA DEPENDENS.**Patagua.**

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 153), July, 1899.

"A large, ornamental shade tree, suitable for avenues, with large, bell-shaped flowers. Hardy in Santiago, where light frosts occur; requires a wet soil; is called 'Patagua' in Chile." (*D. G. Fairchild.*) For Florida and California.

3355. CHUSQUEA QUILA.**Bamboo.**

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 150), July, 1899.

"The so-called 'Quila' of Chile, a species of bamboo, whose solid stems are used in furniture making and whose leaves furnish the principal fodder for large herds of cattle fattened in southern Chile. The canes grow often 30 feet high in good soil, and branch abundantly. In dry soil they are stunted. In both forms the leaves are greedily eaten by cattle. Some varieties coming from the Cordillera are hardy. These are from Santiago, where it sometimes snows and is often below freezing.

"The plants should be started in good, rich bottom land in Florida and southern California. It is a plant suited to waste land, as its forage is of too low a quality to recommend it for general culture. Its tendency to spread and become a nuisance is not considered objectionable here. In dry soil the leaves become spiny and it is doubtful if the cattle will take to it at first." (*D. G. Fairchild.*)

3356. OPUNTIA STRICTA.**Airampo.**

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 160), July, 1899.

"The *Airampo* of Peru. Brought by Mr. J. Soehrens from near Arequipa, on Lake Titiaca. Hardy to frost; grows in very dry region; 3 feet high; bushy habit; no long spines; flowers yellow; fruit the size of an English walnut. Flesh wine-red acid, used for coloring wines and for making refreshing drinks. Will live in Arizona. No care in planting is required. It thrives best on dry, stony soils." (*D. G. Fairchild.*)

3357. ARISTOTELIA MACQUL.**Maqui.**

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 170), July, 1899.

The *Maqui* of commerce, with which most of the Chilean red wines and some French wines are colored. The seeds should be started in a seed bed. The plant is a rapidly growing shrub, with handsome foliage. Will stand slight frosts and poor

soil. The bark is of great value for binding twine and grafting purposes. It belongs to the family *Elæocarpaceæ*; by some it has been referred to the *Tiliaceæ* or basswood family.

3358. CUCURBITA MAXIMA.

Squash.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 186), June, 1899.

Hagitos. The native squashes are quite mixed as to varieties. Many sorts are of superior quality, often being used for fritters, etc. The following numbers, 3369 to 3372, are different varieties without native names.

3359. OPUNTIA GEISSEL.

Prickly pear.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 169), July, 1899.

"It often does not rain for a whole year where this plant grows, at an altitude of 6,000 to 10,000 feet. The plants are about 6 feet high; flowers yellow; fruit 2 to 4 inches long, oval, yellow when ripe; the flesh wine colored; very juicy; used for lemonades, being quite sour. Plants very productive, habit bushy; fruits closely resemble the joints. Grows where heavy snows fall in winter. A new species, not yet known in Europe. For Arizona and California." (*D. G. Fairchild.*)

3360. QUILLAJA SAPONARIA.

Soapbark.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 166), July, 1899.

"A rosaceous tree, native of Chile. The bark is used as a soap for washing woolens. It is unsuited for cottons, as it turns them yellow. In 1895, the export of the Quillaja or 'Cascara de Quillaja,' as it is called, amounted to 53,478 pesos; in 1896, 43,996 pesos worth were exported. The average price is 5 Chilean centavos per kilo (2.2 pounds) of bark.

"The inner bark contains a saponaceous substance. The bark is broken into pieces, dropped in boiling water and stirred, when it gives up its soap. This soapy water after cooling is rubbed on the grease spot with a brush. It is not necessary to wash out the Quillaja afterwards, as it leaves no spot. This bark is the favorite grease remover in Chile, both among Chileans and Europeans. As a hair wash it is said to be excellent. It is highly prized by wool manufacturers. Of late years the demand has become so great that the trees are being rapidly destroyed. This plant is worthy serious attention. Small forests of soap bark should be started in southern California. The seed must be sown in seed beds, or better, in shallow boxes. It grows rapidly." (*D. G. Fairchild.*)

3361. GREIGIA SPHACELATA.

Chupon.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 168), June 1899.

"Leaves used in the manufacture of *Chupayas*, or native hats. Bases of flowers edible, sweet, and very juicy. A species little known outside of botanic gardens in Europe. Flowers showy. Valuable for breeding purposes. Seeds should be sown and cared for just like those of pineapple." (*D. G. Fairchild.*)

3362. GOMORTIGA NITIDA.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 167), July, 1899.

"A laurel, with fruits as large as a plum, used in Chile for preserves. The nuts must be soaked for several weeks before planting, as they germinate with difficulty. Should be planted in Florida and Louisiana. A good soil is necessary. Light frosts do not injure it." (*D. G. Fairchild.*)

3363 to 3366. CUCUMIS MELO.

Muskmelon.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (Nos. 182 to 185), June, 1899.

"The following four numbers were grown by Mr. Izquierdo, who has tested various European and American sorts of muskmelons here and found the above sorts of

Chilean origination better. They are very large and uninviting looking, squash-like in appearance. Many are deliciously sweet." (*D. G. Fairchild.*)

3363. Selected, but not named. (L. & F., No. 185.)

3364. *Escrita.* (L. & F., No. 182.)

3365. *Tuna.* (L. & F., No. 183.)

3366. *Muscatel.* (L. & F., No. 184.)

3367. CITRULLUS VULGARIS.

Watermelon.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 180), July, 1899.

Pepa negra (black-seeded). "The watermelons of Chile are said to be better than those of North America. Mr. S. Izquierdo tested in Santiago 30 varieties of the North American and European sorts of melons and found them inferior to the Chilean." (*D. G. Fairchild.*)

3368. CITRULLUS VULGARIS.

Watermelon.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 181), July, 1899.

Pepa muja, or light-seeded. The light-seeded melons are considered the best in Chile. (See No. 3367.)

3369. CUCURBITA MAXIMA.

Squash.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 188), June, 1899. (See No. 3358.)

3370. CUCURBITA MAXIMA.

Squash.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 190), June, 1899. (See No. 3358.)

3371. CUCURBITA MAXIMA.

Squash.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 191), June, 1899. (See No. 3358.)

3372. CUCURBITA MAXIMA.

Squash.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 189), June, 1899. (See No. 3358.)

3373. CITRULLUS VULGARIS.

Watermelon.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 192), July, 1899.

Selected by J. Soehrens for its superior sweetness. No varietal name is known.

3374. CAESALPINIA BREVIFOLIA.

Algarobillo.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 165), July, 1899.

"The so-called *Algarobillo* of commerce, a desert shrub from the region about Huasco, growing where no rains fall, often for a whole year. The shrub produces an abundance of small pods which are remarkably rich in tannin. The industry of their export has been a very profitable one in Huasco, and the proposition has been made of cultivating the shrub in other sections of Chile. At present only wild plants furnish the pods of commerce. This is a shrub eminently suited to Californian desert conditions, and should be tested in Arizona as well. It may be expected to bear fruit in four years. The seed should be taken from the pods and carefully sown in the open ground, covered with about three-fourths inch of soil. Care should be exercised to give them only a little water. The plants could be potted and transplanted, but the better way would be to try a few in the open ground. This is a most promising plant for desert plantings (providing the market for the tanning material has not disappeared), and is worthy serious attention. The amount of tannin borne by the pods is very great, and it is said that they contain a valuable coloring matter as well." (*D. G. Fairchild.*)

3375 to 3383. PHASEOLUS VULGARIS.**Bean.**

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 172), July, 1899.

"The Chilean beans are the best South American frijoles. They are certainly superior to many of our own, and ought to be tested in comparison with them." They are as follows:

- 3375. *Burros.*
- 3376. *Gansos.*
- 3377. *Mantecas.*
- 3378. *Caballeros.*
- 3379. *Bayos grandes.*
- 3380. *Bayos chicos.*
- 3381. *Cascarones.*
- 3382. *Triguítos.*
- 3383. *Huerteros.*

3384. JUGLANS NIGRA BOLIVIENSIS.**Walnut.**

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 163), July, 1899.

"A shade and nut-bearing tree often planted in Santiago. Thought to be quite a different species from the North American black walnut, and the same as the walnut sold in Peru as coming from Bolivia. For the Southern States." (*D. G. Fairchild.*)

3385. BELOTIA MIERSII.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 164), July, 1899.

See No. 4392 for description.

3386. BERBERIS ACTINACANTHA.**Barberry.**

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 158), July, 1899.

"A handsome Chilean barberry. All Chilean species have showy blue berries. Suitable for California especially." (*D. G. Fairchild.*)

3387. POPULUS PYRAMIDALIS SEMPERVIRENS.**Poplar.**

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 161), July, 1899.

An evergreen lombardy poplar which originated in Chile. It looks like any other variety, except that it does not shed its leaves in the winter. Desirable for any of the frost-free regions of Florida, California, and Arizona.

3388. NICOTIANA TABACUM.**Tobacco.**

From Florida. Received July, 1899.

The first generation from imported Sumatra seed.

3389. ZEA MAYS.**Corn.**

From Virginia. Grown by Mr. Anatol, Rockcastle, Va. Received, 1899.

Cook's Prolific.

3390. PERSEA GRATISSIMA.**Avocado pear.**

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 193), June, 1899.

"Said to be very hardy, standing a temperature of -5° C. Even snows have not injured it. By some it is said to be indigenous to Chile, but it is certain that until 1874 it was quite unknown as a fruit here. This is a black-fruited, hardy variety. Some of the fruits are stringy, while others are of fine quality. Scions of this variety sell in France for from \$1 to \$1.25 each." (*D. G. Fairchild.*)

3391. QUILLAJA SAPONARIA.**Soapbark.**

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 156), July, 1899.

For description see No. 3360.

3392. BELOTIA MIERSII.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 162), July, 1899.

"A very beautiful shade tree for avenues, with shining dark-green leaves. Requires a good soil. Not a desert plant. Hardy in Santiago, where the temperature falls to -5° C. Should be planted in California and Florida." (*D. G. Fairchild.*) (See No. 3385.)

3393. PERSEA LINGUE.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 152), July, 1899.

"A rapidly growing, frost-hardy street tree of great beauty. Suited to moist, even-temperate climates, and good strong soils. The bark is used for tanning purposes and said to be of superior quality. Large, spiny, dark leaves and clean, green-gray bark." (*D. G. Fairchild.*) For California, Florida, and Louisiana.

3394. MAYTENUS BOARIA.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 155), July, 1899.

"An ornamental, celastraceous tree with weeping habit, small gray-green leaves, and orange fruits. Resembles the pepper tree (*Schinus molle*) superficially. It thrives as far north as San Francisco and should be exploited as a shade tree for dry regions. The young branches are much relished by cattle." (*D. G. Fairchild.*)

3395. BERBERIS BUXIFOLIA.**Barberry.**

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 159), July, 1899.

"A very pretty Chilean species of barberry, suitable for California. The berries are blue instead of red." (*D. G. Fairchild.*)

3396. EUGENIA APICULATA.

From Santiago, Chile. Received through Messrs. Lathrop and Fairchild (No. 157), July, 1899.

"A shrub bearing small fruits (one-fifth inch in diameter) of a refreshing taste. Suitable for any strong soil. Stands slight frosts. Should be planted in Florida and southern California." (*D. G. Fairchild.*)

3397.

From Peru. Received through Messrs. Lathrop and Fairchild, July, 1899.

A grass, without name or data.

3398.

From Peru. Received through Messrs. Lathrop and Fairchild, 1899. Donated by Mr. Edouardo Fowkes, Païta, Peru.

A grass, without name or data.

3399. MEDICAGO SATIVA.**Alfalfa.**

From Peru. Received through Messrs. Lathrop and Fairchild, July, 1899.

3400. CERATONIA SILIQUA.**Carob bean.**

From Peru. Received through Messrs. Lathrop and Fairchild, July, 1899.

Pods, without data.

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Morgan

Mr. Hartan

S. P. I. 20.

U. S. DEPARTMENT OF AGRICULTURE.
SECTION OF SEED AND PLANT INTRODUCTION.

—————
INVENTORY NO. 8.
—————

SEEDS AND PLANTS,

IMPORTED FOR DISTRIBUTION IN COOPERATION WITH THE
AGRICULTURAL EXPERIMENT STATIONS.

—————
NUMBERS 3401-4350.

Mr. Harlan.

INVENTORY OF FOREIGN SEEDS AND PLANTS.

INTRODUCTORY STATEMENT.

This inventory or catalogue of seeds and plants includes a number of exceptionally valuable items collected by the Agricultural Explorers of the Section of Seed and Plant Introduction. There is an interesting and valuable series of economic plants of the most varied uses procured by the Hon. Barbour Lathrop, of Chicago, assisted by Mr. David G. Fairchild. Mr. W. T. Swingle has continued his work in Algeria, Sicily, and Turkey, and this list contains many of his importations. There are also a number of donations from various sources, and a few seeds purchased directly from the growers.

The following importations represent perhaps the most valuable of the many interesting novelties here described: Mr. Swingle's collection of improved varieties of the date palm, procured in Algeria; a collection of spineless cacti from the Argentine Republic secured by Messrs. Lathrop and Fairchild, which may become valuable forage plants in the arid Southwest; genge clover, a leguminous forage crop and green manure which is grown in the rice fields of Japan as a winter soil cover and fertilizer; a collection of broad beans from England, this vegetable being practically unknown in the United States, although extensively used in Europe and on the Continent; a new seedless raisin grape from Italy for the raisin growers of California and Arizona; a little sample of wheat from Peru, donated by Dr. Cisneros, Secretary of the National Agricultural Society of Lima, a variety which was grown at an altitude of over 11,000 feet in the Andes, and which may prove both interesting and valuable in some locality in the Rocky Mountains; a large number of desert forage plants and saltbushes from an extremely arid region in the Northern Territory of South Australia; the Kirkagatch muskmelon, said to be one of the finest sorts grown in Asia Minor; Jannovitch cotton, a new Egyptian strain, secured in sufficient quantity for an extensive distribution; and the Khiva winter muskmelon, which was grown in Utah from seed originally imported from Khiva by Prof. N. E. Hansen.

Other collections of interest are: A new macaroni wheat from Chili; Mr. Swingle's extensive collections of economic plants from Algeria,

and of edible cacti from Sicily; a new blood orange from Sicily; yams from Venezuela for our tropical possessions; some native forage plants from Brazil; new rices from Egypt; shade trees for semiarid regions from the Argentine Republic; cashew nuts from Jamaica; vegetables and flowers from Smyrna and Turkey; olives from Greece; mangoes from Trinidad; a miscellaneous collection from Manila; vegetables from Italy, Bulgaria, and Peru; the algarroba bean from Peru, similar to the mesquite bean of Texas, and to the algarroba of the Hawaiian Islands, an exceptionally fine forage plant for arid regions; a collection of millets and beans from China; sugar beets from France, Germany, and Russia; Egyptian clover and horse beans, which supply practically all of the forage grown in the valley of the Nile; a wild potato from Mexico, said to possess superior flavor; a new vetch from Algeria, perhaps superior in many points to the hairy vetch; a collection of nearly all the native legumes of Italy; a new blackberry from Mexico; a grass for shaded lawns from France.

The publication of this list has been considerably belated, and many of the numbers are entirely exhausted. Nevertheless, the notes in regard to such will undoubtedly prove an assistance to agricultural experimenters in many lines. Records are kept of the source and origin of each item listed. It will therefore be possible, in most instances, to obtain an additional quantity at least for the use of workers at the agricultural experiment stations, provided there is sufficient and justifiable demand for another importation.

Many of the forms and varieties are not, strictly speaking, new introductions. However, these are often desirable for special purposes; for example, for the use of plant breeders in creating new strains by crossing and selection, or for students of particular groups, who require a large number of species, varieties, and forms in their work on the improvement of cultivated plants. Wherever possible, the first choice will be extended to the coworkers in the various divisions of the Department of Agriculture and in the experiment stations. The quantities of seeds and plants secured are usually small and are entirely insufficient for indiscriminate distribution. In cases where an importation proves of value after trial, a larger quantity may be secured for more general distribution, through the agency of the experiment stations, in the region in which the plant has shown marked improvement over existing varieties. But where a new crop is once established, and has become so well-known that it is amply handled by the trade, no further importations for free distribution, at least in that region, will be made.

The expense for exploration in foreign countries in search of varieties of cultivated crops better than those already established in the United States properly devolves upon the Department of Agriculture. It may also sometimes prove profitable to reintroduce forms

which have been tried without success in one portion of the land provided new facts as to the method of cultivation and adaptability to soils and climate are determined pointing to the possible success of the crop in special regions possessing the requisite natural environment. In such cases the endeavor to reestablish a decadent farming industry may best be undertaken with the assistance of the trained workers of the experiment stations. If these experimenters report favorably in regard to new or little known vegetables, grains, and field crops, a larger distribution can be made to bring the crop again to the attention of the farmer.

Because of the increasing scope of the work, due to the numerous seeds and plants procured, it is especially important that correspondents retain the original number under which the seed is distributed. The report blanks will bear numbers corresponding to those of the inventory. The information supplied by experimenters will, by following this system, become easily accessible.

The information given in regard to each of the following numbers has been compiled mainly from notes supplied by the explorer or by the person who donated or secured the seeds. We are especially indebted to Mr. W. T. Swingle and Mr. D. G. Fairchild for the very full descriptive notes which accompany their importations.

JARED G. SMITH,

Chief, Section of Seed and Plant Introduction.

WASHINGTON, D. C., *January 1, 1901.*



INVENTORY.

3401. SOLANUM.

From Costa Rica. Received through Mr. C. Werckle, 1899.

"A more or less trailing, annual species, very fertile; fruit about the size of small Chickasaw plums, green, with dark brown stripes (from black green to violet brown); in racemes of from 4 to 8; drops when ripe and keeps for weeks; gets soft; skin semi-transparent. Not edible when raw; makes very good pies that remind one of gooseberry." (*Werckle.*)

3402. PHENIX DACTYLIFERA.

Date.

From Algeria. Received through Mr. W. T. Swingle, June, 1899. Presented by Dr. Trabut.

*Tinnoud de Touat.*¹ Distributed.

3403. TRITICUM DURUM.

Wheat.

From Chili. Received through Messrs. Lathrop and Fairchild, June, 1899.

Trigo Candeal. "Macaroni wheat. This durum wheat is rather commonly grown in Chili and Argentina. It is chiefly valuable for the production of macaroni. It has long, compact, bearded heads and yellowish-white hard grains. It will probably be resistant to drought and orange-leaf rust. Adapted for growing in dry, hot, districts such as west Texas and the drier portions of Colorado, Kansas, and Oklahoma. South of the thirty-fifth parallel it should be grown as a winter wheat, sown October 15 to November 15; north of this line it will probably not stand the winter, and should be sown February 15 to March 1." (*Carleton.*) Distributed.

3404. TRITICUM VULGARE.

Wheat.

From Chili. Received through Messrs. Lathrop and Fairchild, 1899.

Trigo Blanco. Soft wheat. (For the Pacific coast.)

3405. CERATONIA SILIQUA.

Carob bean.

From Algeria. Received through Mr. W. T. Swingle, April, 1899.

Young carob seedlings, for use as stocks on which to graft improved varieties. (See No. 3112, Inventory No. 7.)

3406. PALIURUS ACULEATUS.

Christ's-thorn.

From Algeria. Received through Mr. W. T. Swingle, April, 1899.

"A half hardy, thorny, deciduous shrub or small tree, growing from 15 to 30 feet high, native of southern Europe and western Asia. It belongs to the buck-thorn family (*Rhamnaceæ*), and bears curious buckler-shaped fruits. From its resemblance to a hat, the French call the plant *porte-chapeaux*. Christ's-thorn is abundant in southern France in dry situations. It is particularly abundant in calcareous soils. It is reproduced by suckers." (*Swingle.*) "It grows about the same height as the common thorn on rocky, sterile places. In many parts of Italy hedges are formed of this plant." (*Loudon.*) Distributed.

¹The varietal name where known is *italicized*.

3407. PHYLLOSTACHYS NIGRA.**Bamboo.**

From Algeria. Received through Mr. W. T. Swingle, April, 1899.

"This hardy bamboo from China and Japan reaches a height of from 20 to 30 feet if planted in good soil. The stems are remarkable for their shiny black color, which gives a very striking effect to the group of plants. They are sometimes three-fourths of an inch or more in diameter, and are used in making canes, umbrella handles, etc. It is propagated by division of the tufts. In cold regions these should be started in pots." (*Swingle.*) Distributed.

3408. BAMBUSA MITIS.**Bamboo.**

From Algeria. Received through Mr. W. T. Swingle, April, 1899.

This Chinese bamboo is the largest of the hardy species. It sometimes attains a height of 30 feet and a diameter of from 4 to 5 inches. It is propagated by a division of the tufts, and is hardy in southern France. Distributed.

3409. CITRUS DECUMANA.**Pomelo.**

From Algeria. Received through Mr. W. T. Swingle, April, 1899.

Pamplemousse sans pepins. "This pomelo is of considerable interest, being almost completely seedless. It was of mediocre quality, yet was the best I ever tasted in Europe. It should be used in crossing with the American varieties with the hope of obtaining a good variety free from seeds." (*Swingle.*) Distributed.

3410. DIOSPYROS LOTUS.**Date plum.**

From Algeria. Received through Mr. W. T. Swingle, April, 1899.

This is the best stock on which to graft the Japanese persimmons in Algeria. (See No. 3328, Inventory No. 7.) Distributed.

3411. CERATONIA SILIQUA.**Carob.**

From Algeria. Received through Mr. W. T. Swingle, April, 1899.

Caroubier d'Espagne. "This is one of the improved varieties of the carob, propagated only by grafting. It is commonly grown in the northern and central part of Algeria, around the city of Algiers. (For an account of the carob and its culture see No. 3112, Inventory No. 7.) This variety is dioecious, and branches of the male plant must be grafted on the female trees, or else a certain proportion of the male trees planted in the orchard in order to insure bearing." (*Swingle.*) Distributed.

3412. CITRUS LIMETTA.**Lime.**

From Algeria. Received through Mr. W. T. Swingle, April, 1899.

Citronier d'Amérique sans épine. "A seedless lime resembling the so-called Persian lime grown in Florida and the so-called Imperial lime of California. It is said by M. Himbert to grow half wild near Salamanca, Santo Domingo." (*Swingle.*) Distributed.

3413. CUPRESSUS SEMPERVIRENS, HORIZONTALIS.**Cypress.**

From Algeria. Received through Mr. W. T. Swingle, April, 1899.

This is a spreading variety of the ornamental cypress. It is frequently used in northern Algeria for hedges and wind-breaks for orange plantations. (See No. 3348, Inventory No. 7.) Distributed.

3414. CUPRESSUS SEMPERVIRENS, PYRAMIDALIS.**Cypress.**

From Algeria. Received through Mr. W. T. Swingle, April, 1899.

"This is a pyramidal variety of the oriental cypress, much used for hedges and occasionally for wind-breaks. It is less esteemed than the *horizontalis* variety (No. 3413). Both are very ornamental. This pyramidal form is a striking ornament of the Mohammedan cemeteries. The foliage is dark green and extremely dense. The tree is very slender and in outline resembles somewhat the Lombardy poplar." (*Swingle.*) Distributed.

- 3415. JACARANDA OVALIFOLIA.** **Jacaranda.**
 From Algeria. Received through Mr. W. T. Swingle, April, 1899.
 An ornamental Brazilian tree for the South. (See No. 3180, Inventory No. 7.)
 Distributed.
- 3416. EUCALYPTUS GOMPHOCEPHALA.** **Touart.**
 From Algeria. Donated by Dr. Bourlier, Reghaia, through Mr. W. T. Swingle,
 April, 1899.
 "This Eucalyptus is a native of the southwest coast of Western Australia and is
 there called *Touart*, *Tooart*, *Tewart*, or *White-gum*. It is remarkable for the strength
 of its wood, which is heavy, tough, and almost impossible to split. It is used in ship-
 building and in wheelwright work. It is said to occur always in limestone regions in
 West Australia. It is easily recognized by its flower bud, the operculum of which
 is much larger than the capsule below. It is as yet but little known in Algeria, but is
 recommended very highly by Dr. Trabut for general planting. It has succeeded very
 well in Algeria, wherever planted, and grows very rapidly." (*Swingle.*) Dis-
 tributed.
- 3417. AMBROSINIA BASSII.**
 From Algeria. Received through Mr. W. T. Swingle, April, 1899.
 A native Algerian aroid with most curious flowers which are fertilized by snails.
 Of botanical interest only. Distributed.
- 3418. CERATONIA SILIQUA.** **Carob.**
 From Algeria. Received through Mr. W. T. Swingle, April, 1899.
 Sample pods of the carob, commonly grown around Algiers. (See No. 3112,
 Inventory No. 7.)
- 3419. VITIS VINIFERA.** **Grape.**
 From Jamaica. Received through Messrs. Lathrop and Fairchild, 1899.
Shafston Muscat. Distributed.
- 3420. OPUNTIA GYMNOCARPA.** **Spineless cactus.**
 From La Plata, Argentina. Received through Messrs. Lathrop and Fairchild
 (No. 198), 1899.
 "The plant will withstand heavy frosts. Almost entirely without spines. Fruits
 yellow, edible, sweet. Sugar is made from this fruit, there being a company at Salta
 for that purpose. When refined it is like cane sugar. A sirup called 'arrope' is
 also made from the fruits. The stems are eaten greedily by cattle. It is a good
 fodder." (*Fairchild.*)
 This species furnishes excellent fodder for cattle on the dry plains of northern
 Argentina. It should be carefully tested in the Southwest. It is considered by
 Weber to be a form of *Opuntia ficus-indica*. Distributed.
- 3421. CEREUS JAMACARU.** **Daiacame.**
 From Argentine Republic. Received through Messrs. Lathrop and Fairchild
 (No. 199), 1899.
 "The fruit is sweet, red, the size of a goose egg, and has many very small seeds.
 The fruits are absolutely without spines. The flesh is refreshing. The plant grows
 where it is moist and wet, a light sandy soil being necessary. For Florida and
 Arizona." (*Fairchild.*) Distributed.
- 3422. OPUNTIA QUIMILO.** **Quimilo.**
 From La Plata, Argentina. Received through Messrs. Lathrop and Fairchild
 (No. 196), 1899.
 This species comes from the provinces of Santiago and Cordova. It has long
 spines. "Fruit yellow, with many seeds, very agreeable, sweet. Grows 9 or 10 feet

high, in any soil, and thrives in both dry and moist localities. Hardy here at La Plata, where the thermometer reaches 27° F. in winter. It should be used in crossing with other prickly pears. For California and Arizona." (*Fairchild.*) Distributed.

3423. OPUNTIA ANACANTHA.

Spineless cactus.

From La Plata, Argentina. Received through Messrs. Lathrop and Fairchild (No. 197), 1899.

"From western part of Chaco Province, in very arid, sandy soil. It withstands 27° F. It is almost entirely without spines and is used for forage. The cattle belonging to the Indians of the Chaco eat the stems greedily, and Dr. Spegazzini believes that they live during the summer months principally upon this species. The fruit is red, edible, acid, with many seeds. Should be tested carefully in Arizona and California." (*Fairchild.*) Distributed.

3424. CEREUS CHALYBÆUS.

From La Plata, Argentina. Received through Messrs. Lathrop and Fairchild (No. 203), 1899.

"From the arid portion of the Chaco. The fruits are red, absolutely spineless, the size of goose eggs, with small seeds. The flesh is crisp and cooling. Plants 3 to 4 feet high." (*Fairchild.*) Distributed.

3425. GLYCERRHIZA GLABRA.

Licorice.

From Smyrna, Asia Minor. Received through Mr. W. T. Swingle, June, 1899.

"This plant yields the ordinary licorice of commerce. It is very abundant in the warm regions along the Meander Valley, in Asia Minor, and in the plain of Amouk, near Antioch. The exports from the port of Smyrna amounted to over \$300,000 worth in 1891. A considerable proportion of this licorice is sent to the United States. No definite system of culture is practiced in the Meander Valley, as the plant grows very abundantly in a wild state. The roots are simply dug and dried. It is quite probable that licorice may succeed in some parts of California where the climate and conditions approach those of the Meander Valley. The soil is rather heavy where the best growth of the licorice root is found. This number includes roots obtained near Aidin. It has been suggested that the licorice might be utilized for forage and for green manure." (*Swingle.*) Distributed.

3426-3436. FICUS CARICA.

Smyrna fig and Caprifig.

This collection of cuttings of Smyrna figs and caprifigs from Aidin, Asia Minor, was lost through the delay caused by the running aground on the Manacles of the steamship *Paris*, by which they were being forwarded.

3437-3439. OPUNTIA FICUS-INDICA.

Prickly pear.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle; received May, 1899.

"The prickly pear is one of the most extensively cultivated fruits in Sicily, where it is called *Ficudinnia*. In 1853, 8,822 hectares (21,800 acres) were devoted to the culture of prickly pears. More than three-fourths of this area was exclusively occupied by prickly pears. In other cases the prickly pears were mixed in gardens with other fruit trees. In 1896 Signor Biuso Varvaro estimated that no less than 25,000 hectares, or about 62,000 acres, were planted to prickly pears. For several months of the year it is the principal food of the poorer Sicilians. Frequently the flowers are removed in the month of May. This operation, called *scoccolamento*, is performed by a man armed with a pole and with his hands protected by heavy gloves. The operator removes all the flower buds and also the tender joints. As a result of this operation new flowers appear in July, which produce fruits ripening in late autumn, beginning about October 15, whereas the first crop ripens in August. The fruits of the second crop of the prickly pear are most delicious, and are certainly comparable with the best autumnal fruits which can be grown in subtropical countries. It is a curious fact that these second-crop fruits contain more and at the same time sweeter and richer flavored pulp than fruits of the first crop. The following table, taken

from a report by Mancuso-Lima, shows this striking difference in composition of the pulp of the first and second crop of prickly pears:

Comparison of first and second crop fruits.

	First-crop fruits (Agostani). (100 parts of fruit contain 57.60 parts pulp.)		Second-crop fruits (scoccolati). (100 parts of fruit contain 63.19 parts pulp.)	
	100 parts of fruit contain—	100 parts of pulp contain—	100 parts of fruit contain—	100 parts of pulp contain—
Water.....	53.540	92.951	57.006	90.214
Dry matter.....	4.060	7.049	6.184	9.786
Fat.....	.043	.074	Trace.	Trace.
Sugar.....	2.892	5.020	3.540	5.602
Starch and dextrin.....	.098	.169	1.701	2.692
Total nitrogen.....	.046	.080	.155	.245
Proteid nitrogen.....	.034	.058	.111	.175
Albuminous matter.....	.211	.366	.693	1.097
Ash.....	.146	.253	.209	.331

“This operation of forcing a second crop of prickly pears which are of a superior quality should certainly be tested in this country wherever prickly pears can be grown.

“The following varieties were donated by Professor Borzi, the director of the Botanic Garden at Palermo, and include those most commonly cultivated. In addition to these three varieties there is another of some interest which has no seeds. It is, however, not very fruitful and is very rarely cultivated, for which reason it was not possible to secure plants. Another variety, which has not been named, grows about Adermò on the southwestern slopes of Mt. Ætna. This variety produces a very superior quality of fruit, which may, however, be due to the special character of the volcanic soil in which it grows. This may be the plant obtained from the Botanic Garden of Catania and sent out under the number 3196. All of the improved varieties of prickly pear have spineless pads, and can be used for feeding stock. They may prove of great importance for the arid regions of the Southwest as forage.

“**3437.** *Sanguineo* (*Ficudinnia sanguigna*). This variety has, as its names indicates, red fruits. It ripens later than two following numbers, sometimes so late that it does not mature well about Palermo. (See No. 3190, Inventory No. 7.) Distributed.

“**3438.** *Alba* (*Ficudinnia muscaredda*) is one of the commonly cultivated varieties. It ripens early and is of good flavor. Distributed.

“**3439.** *Ordinario* (*Ficudinnia surfarina?*). This is doubtless the yellow variety which is most commonly cultivated in Sicily. It is considered the best variety of all because it fruits so abundantly, and at the same time bears fruits which are very sweet and of good quality.” (*Swingle.*) Distributed.

3440. OPUNTIA LABOURETIANA.

Prickly pear.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

“This species is also cultivated at Palermo for its edible fruit. There are said to be two varieties of this species—one with white and the other with red fruits. It is not known which was obtained under this number. This is considered by Schumann to be a form of *Opuntia lanceolata* from South America.” (*Swingle.*) Distributed.

3441. OPUNTIA TUNA.

Prickly pear.

From Palermo, Sicily. Received through Mr. W. T. Swingle, May, 1899.

“*Ficudinnia tincurussu*, a very spiny sort widely grown in eastern Sicily. The edible fruits are small and of medium quality, but are produced at all seasons of the

year. This species is cultivated only along the maritime zone in eastern Sicily. It is much smaller than the ordinary prickly pears of Sicily, and is marked by its numerous rigid spines. It is called *Opuntia dillenii* in Sicily." (Swingle.) Distributed.

3442. NOPALEA COCCINELLIFERA.

Cactus.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"A nearly spineless forage cactus. The cochineal insect is said to be cultivated on this plant. It is probably a native of southern Mexico, but is now widely cultivated in tropical countries. It is often referred to the genus *Opuntia*." (Swingle.) Distributed.

3443. OPUNTIA SALMIANA.

From Palermo, Sicily. Donated by Professor Borzi, director of the Palermo Botanic Garden, through Mr. W. T. Swingle, May, 1899.

A slender Brazilian species. Branches develop from the ripe fruits. Distributed.

3444. OPHIOPOGON JAPONICUS.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"This plant makes a very pretty lawn in the Botanic Garden of Palermo, where the climate is similar to that of southern California. It belongs to the lily family, and should be tested in making lawns, both in Florida and in the Southwest." (Swingle.) Distributed.

3445. CHIRANTHODENDRON PLATANOIDES.

Devil's hand.

From Sicily. Received through Mr. W. T. Swingle, May, 1899.

"*Mano di diavolo*." This majestic tree from Mexico has large, red flowers, containing within five bright red stamens in the form of a hand, from which peculiarity it derives its name. It belongs to the family *Sterculiaceæ*. Distributed.

3446. BOSEA YERVAMORA.

From Palermo, Sicily. Donated by Professor Borzi, director of the Palermo Botanic Garden, through Mr. W. T. Swingle, May, 1899.

A very large woody vine, native of the Canary Islands; very useful for shade. Orchids are grown among its branches at the Botanic Garden at Palermo. Distributed.

3447. FICUS LEUCANTHATOMA.

Fig.

From Palermo, Sicily. Donated by Professor Borzi, director of the Palermo Botanic Garden, through Mr. W. T. Swingle, May, 1899.

A Malayan ornamental fig. Distributed.

3448. FICUS MAGNOLIOIDES.

Rubber tree.

From Sicily. Donated by Professor Borzi, director of the Palermo Botanic Garden, through Mr. W. T. Swingle, April, 1899.

"This new species of *Ficus* was received nearly half a century ago at the Palermo Botanic Garden, from southern France, under the name of *Ficus nervosa*. Professor Borzi finds it, however, to be quite different from this species and to constitute a new species of the section *Urostigma*. It is closely related to the rubber tree (*Ficus elastica*), from which it differs principally in having leaves which become rust colored below, causing them to resemble the leaves of *Magnolia grandiflora*. The leaves have longer stalks and the fruits are also different. The tree attains a great size, the oldest specimen in the Palermo Garden covering a space of over 9,000 square feet; that is, a circle nearly 100 feet in diameter. It produces an abundance of aerial roots, which grow directly downwards from the older branches. If these reach the soil they take root and grow rapidly in diameter. This occurs frequently near the trunk, and in consequence the trunk is nearly hidden by the confused mass of these roots. It grows very

rapidly in the semiarid climate of Palermo. Professor Borzi considers it one of the most desirable ornamental plants of Palermo. The rounded crown of this tree is composed of a dense mass of evergreen leaves, russet brown beneath, which give the plant a splendid effect. It will probably succeed in Florida, along the Gulf States, and in California. It has been suggested as a rubber plant for dry situations. Warburg considers this species identical with *F. macrophylla*." (*Swingle*.) (See No. 3494.) Distributed.

3449. FOURCRÆA CUBENSIS.

From Palermo, Sicily. Donated by Professor Borzi, director of the Palermo Botanic Garden, through Mr. W. T. Swingle, May, 1899.

A West Indian fiber plant, growing to enormous proportions. The leaves are yellow margined; the trunks often grow 10 feet high and 2 feet in diameter in the semiarid subtropical climate of Sicily. According to Von Mueller it has been used for fiber and for making hedges. Distributed.

3450. FOURCRÆA ALTISSIMA.

From Palermo, Sicily. Donated by Professor Borzi, director of the Palermo Botanic Garden, through Mr. W. T. Swingle, May, 1899.

Smaller and more graceful than the preceding, No. 3449. A fine ornamental plant for Florida and California. Distributed.

3451. VILLARESIA (?).

From Palermo, Sicily. Donated by Professor Borzi, director of the Palermo Botanic Garden, through Mr. W. T. Swingle, May, 1899.

An ornamental evergreen tree. Labeled "*Echinea citrifolia*." Distributed.

3452. OPUNTIA ROBUSTA.

Cactus.

From Palermo, Sicily. Donated by the chief gardener of the Villa Tasca, through Mr. W. T. Swingle, May, 1899.

"Said to produce edible fruits 4 to 6 inches in diameter. Called *O. piccolominiana* in the garden of the Villa Tasca—a name said by Schumann in his Monograph of *Cactaceæ* to be synonymous with the above." (*Swingle*.) Distributed.

3453. OPUNTIA FICUS-INDICA.

Prickly pear.

From Palermo, Sicily. Donated by the chief gardener of the Villa Tasca, Palermo, through Mr. W. T. Swingle, May, 1899.

A cactus with edible fruits. Distributed.

3454. OPUNTIA.

Prickly pear.

From Palermo, Sicily. Donated by the chief gardener of the Villa Tasca, Palermo, through Mr. W. T. Swingle, May, 1899.

A remarkably fruitful sort. Quality unknown. For use in plant breeding. Distributed.

3455. FICUS RUBIGINOSA.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"A rampant grower. From Australia. Makes a thicket in a few years. This is one of the most hardy species of fig trees, and has been recommended as an evergreen shade tree for planting along roadsides, but from its irregular manner of growth it would seem poorly adapted for this purpose. It makes splendid masses of evergreen foliage in ornamental planting, however, and should be tested in the South and in Arizona and California." (*Swingle*.) Distributed.

3456. FICUS PROCERA, CHANVIERI.

From Palermo, Sicily. Donated by Professor Borzi, director of the Palermo Botanic Garden, through Mr. W. T. Swingle, May, 1899.

A pretty ornamental from Java, with yellow fruits about 1 inch in diameter. Distributed.

- 3457. CORYNOCARPUS LÆVIGATUS. Karaka.**
 From Palermo, Sicily. Donated by Professor Borzi, director of the Palermo Botanic Garden, through Mr. W. T. Swingle, May, 1899.
 "The principal forest tree of the Chatham Islands, the *karaka* of New Zealand, attaining a height of 60 feet. The pulpy fruit is edible. A fine tree for avenues in rich irrigated soils. It belongs to the family *Corynocarpaceæ*, of which it is the only representative." (*Swingle*.) Distributed.
- 3458. OPUNTIA FICUS-INDICA. Prickly pear.**
 From Rocca, near Palermo, Sicily. Received through Mr. W. T. Swingle, May, 1899.
Ficudinnia. With edible fruits. Distributed.
- 3459. OPUNTIA FICUS-INDICA. Prickly pear.**
 From Carthage, near Tunis, Africa. Received through Mr. W. T. Swingle, May, 1899.
 A spineless form, growing in a hedge composed, except for this plant, of the spiny form. Distributed.
- 3460. VITIS ANTARCTICA. Grape.**
 From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.
 "An ornamental Australian vine. The leaves are of some botanical interest because of the small cavities in the leaf inhabited by mites. Professor Borzi has worked out this interesting peculiarity of the plant and published his studies in his *Contribuzioni alla Biologia Vegetale*." (*Swingle*.)
- 3461. PISTACIA LENTISCUS. Mastic tree.**
 From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.
 An evergreen or small tree, very common about the Mediterranean. In the island of Chios, Turkey, an improved variety of this plant yields mastic gum. The leaves are used as a substitute for tanner's sumac. (See No. 3140.)
- 3462. PISTACIA TEREBINTHUS. Terebinth.**
 From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.
 Larger than No. 3461 and deciduous. It yields the Cyprian turpentine. It is the principal stock on which to graft the pistache. (See No. 3149.)
- 3463. PISTACIA VERA, TEREBINTHUS. Pistache.**
 From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.
 "A hybrid of the true pistache with the terebinth, to be tested for stocks on which to graft the pistache." (*Swingle*.)
- 3464. DIOSPYROS EBENUM. Ebony.**
 From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden at Palermo, through Mr. W. T. Swingle, May, 1899.
 A native of Ceylon, where this tree is the source of the best quality of ebony. It grows up to 5,000 feet altitude.
- 3465. CICER ARIETINUM, NIGER (?). Garbanzos.**
 From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.
 A black-seeded chick-pea. (See No. 2139, Inventory No. 5.) Distributed.

3466. ERYTHRINA CRISTA-GALLI, SPECIOSA. Coral tree.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"This fine variety of the Brazilian coral tree attains the size of a large tree in the south of Europe. It produces large racemes of brilliant red flowers on the ends of the branches. This and the three following numbers should be tested in Porto Rico and Hawaii for coffee shade trees." (*Swingle.*)

3467. ERYTHRINA INSIGNIS. Coral tree.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

A common deciduous shade tree in Sicily. The flowers appear before the leaves. This tree was in bloom at the end of March, 1899, in western Sicily.

3468. ERYTHRINA VIARUM.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

This species was first found in the Botanic Garden of Palermo. Its native country is not known.

3469. ERYTHRINA VIARUM, PICTA.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899. (See No. 3468.)

3470. SCHOTIA LATIFOLIA.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"An evergreen leguminous shade tree from South Africa. It is hardy, with heavy white wood, which is, however, little used. The young seeds are eaten by the Hottentots and Kafirs. This plant is called *Theodora latifolia* by Taubert." (*Swingle.*) Distributed.

3471. MELIA ARGUTA.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

An ornamental shade tree for the South. Native of the Moluccas. Distributed.

3472. MELIA AZADIRACHTA. Neem tree.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"An ornamental shade tree with blue flowers, called the *Neem* or *Margosa* tree in India. Almost all parts of the tree are employed as medicine. The seeds, according to Murray, yield an acrid, bitter oil, deep yellow in color and of a strong and disagreeable flavor. It is exported to Ceylon, where it is used medicinally and for burning in lamps. The leaves are sometimes cooked with vegetables in form of a curry or simply parched and eaten. They impart a bitter taste to the food, and this seems to be liked by the natives. The tree enters into a great variety of uses in India and is held sacred by the Hindus, being used in many of their ceremonies." (*Swingle.*)

3473. MELIA AZEDARACH, SEMPERVIRENS. China berry.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

An evergreen form of the Pride of India or China Berry, commonly grown throughout the Southern States.

3474. OLEA CRYSOPHYLLA.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"This species is closely related to the olive. It is said to be a native of the islands of Mauritius and Bourbon, and of Abyssinia. It should be tested as an ornamental in the South and Southwest, and also a stock on which to graft the olive." (*Swingle.*)

3475. PLATANUS ORIENTALIS, MACROPHYLLA.**Plane-tree.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

A large-leaved variety of the ornamental plane-tree, which is native from Italy eastward to the Himalayas. (See No. 2186, inventory No. 5.)

3476. GREVILLEA HILLIANA.**Silky oak.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

An Australian ornamental tree. "Timber hard, durable, and beautifully grained. Used for coopers' work, cabinet work, veneers, etc." (*Maiden.*)

3477. CITRUS AURANTIUM.**Orange.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

Maroccana. This orange, said to have originated in Morocco, is considered a very good sort in Sicily. Distributed.

3478. CITRUS AURANTIUM.**Orange.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

Sanguinea. A red-pulped variety of the orange. Distributed.

3479. CITRUS AURANTIUM.**Orange.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

Maroccana, forma sanguinea. A red-pulped form of the *Maroccana* orange. Distributed.

3480. CITRUS VOLKAMERIANA.**Orange.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

A bitter orange, the native country of which is not known.

3481. CLAUSENA EXCAVATA (?).

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

An evergreen tree from the East Indies, not uncommon in greenhouses, where it is called *Cookia punctata*. The flowers are fragrant and the fruit, a small berry, is sometimes eaten. It is related to the orange.

3482. SAPINDUS MUKOROSI.**Soap berry.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"This tree, native of China and Japan, has been recommended as a possible source of saponin for use in the manufacture of toilet soaps. The Algerian variety of this species, *S. mucorossi*, *carinatus*, the *S. utilis* of Trabut, has fruits frequently of large size, yielding as high as 38 per cent of *saponin*, while the Panama wood contains only from 8 to 9 per cent." (*Swingle.*)

3483. SAPINDUS MARGINATUS.**Soap-berry.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

It is a native of the low lands of Florida, where it forms a medium-sized tree, bearing bunches of yellow fruit which are about one-half inch in diameter. It may also prove to be a source of saponin, like No. 3482. Distributed.

3484. ARBUTUS ANDRACHNE.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"An ornamental from the eastern Mediterranean region, related to the strawberry tree, *Arbutus unedo* (No. 2657, inventory No. 5). It is a native of Greece and Asia Minor, is taller than the strawberry tree, attaining a height of from 20 to 30 feet, and has larger fruits, borne singly. This species, as well as the *Arbutus canariensis* (see No. 815, inventory No. 1, and No. 3485), should be hybridized with the common strawberry tree in the hope of originating a new fruit. No fruit is more beautiful than that of the strawberry tree, but unfortunately the flavor is rather insipid. This species is hardy in England if protected when young by being grown in pots until 2 or 3 feet high. There are several native species of *Arbutus* in the southwestern United States, where most of them are called Madroña. Some of these bear edible fruits and should also be utilized by plant breeders." (*Swingle.*)

3485. ARBUTUS CANARIENSIS.**Madroño.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"A beautiful evergreen tree attaining a height of 40 feet. It is, as the name indicates, a native of the Canary Islands. It has pretty, rose-colored flowers in racemes, followed by orange-colored fruits about 1 inch in diameter, which are very beautiful as seen against the shining green foliage. The fruits are sweeter and more pulpy than those of the strawberry tree, and are considered very good by the natives in spite of their rather numerous seeds. The bark is smooth and very thin, the wood rose-colored and useful in cabinet-making. This, as well as the preceding number, should be used by plant breeders in hybridizing with the strawberry tree." (*Swingle.*)

3486. DURANTA BRACHYPODA.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"This small tree is a species described from the Botanic Garden of Palermo, although doubtless native in South or Central America, as are the other species of the genus. This as well as the common *Duranta plumieri* (No. 3487) is a handsome ornamental, bearing a profusion of blue or violet flowers in racemes at the end of the branches. These two are the most handsome species grown in the Botanic Garden of Palermo." (*Swingle.*) Distributed.

3487. DURANTA PLUMIERI.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

Labeled *D. microphylla*, a name given as synonymous with *D. plumieri* in the Kew Index. This spiny Mexican shrub is the best-known species of the genus. It bears abundant violet flowers in racemes at the ends of the branches, and, later, numerous yellow fruits, which are rather ornamental. It is commonly grown in Florida. Distributed.

3488. DURANTA TURBINATA.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

This species has purplish or violet flowers and is not so handsome as Nos. 3486 and 3487. It is not known where this species is native. Distributed.

3489. DURANTA PLUMIERI.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

Labeled *D. ellisii*, a white form of the common *Duranta plumieri*. This is the only white-flowered form in the collection in the Palermo Garden.

3490. ARGANIA SIDEROXYLON.

From Morocco, Africa. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"A spiny, small-leaved tree from Morocco belonging to the *Sapotaceæ*. It is a much-branched evergreen tree, attaining a height of from 20 to 30 feet. The fruits, the size of an olive, are used for feeding stock. From the small kernels, after roasting and grinding, an oil is extracted of an irritating and harsh taste, but which is, nevertheless, used in Morocco for food, and also for light. It makes good soap. The tree will grow in the driest soil, and bears in 4 years. It is said not to be in full bearing, however, until 15 years old. It replaces the olive to a considerable extent in the southwestern part of Morocco, where it is said to form forests. The seeds are known as 'grains d'argans.' This plant should be tested in the arid regions of the Southwest." (*Swingle.*) Distributed.

3491. ASPARAGUS ACUTIFOLIUS.

From Palermo, Sicily. Received through Mr. W. T. Swingle, May, 1899.

A wild asparagus, native in the Mediterranean region. It is edible, but not commonly used. (See No. 3285, inventory No. 7.) Distributed.

3492. LUPINUS DIGITATUS.**Hairy lupin.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

The *Lupinus hirsutus* of Linnæus. "Annual; reddish-hairy; flowers blue; seeds somewhat flattened, grayish-brown, smooth. Native of the northern shores of the Mediterranean from Spain to Asia Minor. Cultivated extensively in Germany as an ornamental plant. It has also been tried as forage, and it is said that cattle prefer both the green parts and the seeds to either the small blue or the yellow lupin. It has a disadvantage in that it does not flower till July (in Germany), and the seeds ripen late. The pods open too easily, making it difficult to collect the seed. It requires a good soil, and apparently will not thrive on the poor sandy soils on which the yellow lupin does so well." (*J. Burt Davy.*)

3493. CITRUS AURANTIUM.**Orange.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

Seeds of the common orange of Sicily. Distributed.

3494. FICUS MACROPHYLLA.**Moreton Bay fig.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"This species, a native of northern New South Wales and Queensland, Australia, is one of the largest and most rapidly growing figs that have been tested in Algeria. It is said by Riviere to be the most vigorous, to present the finest developments of aerial roots, and to yield the most latex of any that have been tried in the Jardin d'Essai, at Algiers. Maiden says of this species that the milky sap or latex of this tree yields a very fine caoutchouc. Girard finds the latex of the Algerian tree to contain 37 per cent of rubber, but of a very inferior quality, being resinous, dry, and brittle. However, *Ficus elastica*, considered by Van Rombourgh to be the best rubber tree for culture in Java, is said by Rivière to produce gum of equally inferior quality at Algiers. At any rate, *Ficus macrophylla* is worth testing in hot climates, where it may yield rubber of a better quality than at Algiers. One of the most valuable properties of *Ficus macrophylla*, according to Rivière, is the fact that large branches,

many feet in length and 8 or 10 inches in diameter, may be planted as cuttings. Such branches have at their base aerial roots, which at once develop into soil roots when planted. This, he claims, leads to a saving of time amounting to many years in starting new plantations. "The wood is very difficult to season; is of a pale brown color, with a beautiful wavy fiber on a dark brown. This wood is so very handsome when properly selected that it is a pity it does not have other properties to recommend it." (*Maiden*.) The fibers of the root are very durable, and are used by the Australian blacks in making fish nets. Warburg considers Borzi's *F. Magnolioides* (No. 3448) to be identical with this species." (*Swingle*.) Distributed.

3495. STERCVLIA ACERIFOLIA.**Flame-tree.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

There are two species bearing this name, one native of Mexico and one of Australia. It can not be decided at present which is included in this number. Distributed.

3496. PLATANUS ORIENTALIS.**Plane-tree.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899.

"This handsome tree, much used for park and street planting in Europe and America, is native from Italy to the Himalayas. It is one of the largest trees in southeastern Europe and western Asia. It grows rather more slowly than the American plane tree or sycamore, but is more graceful, and is probably less injured by the smoke in cities. It does not require so moist a soil as the American plane tree. The fruits are borne in chains of two or four instead of singly, as in the common American species. The wood is close-grained and takes a high polish." (*Swingle*.)

3497. FICUS MAGNOLIODES.**Rubber tree.**

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899. (Same as No. 3448.) Distributed.

3498. DURANTA PLUMIERI.

From Palermo, Sicily. Donated by Professor Borzi, director of the Botanic Garden of Palermo, through Mr. W. T. Swingle, May, 1899. (See No. 3487.)

3499. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, May, 1899.

M'Kentichi degla or *M'Ch' degla*. "A late, dry date of superior quality and keeping a year or more. Said by Arabs near Biskra to be much better than *M'Kentichi*, which was said by M. Yahia to be a poor sort also in *M'Zab*. This is placed at the head of the list of dry dates at Biskra. Specimens from Chetma, near Biskra, were $\frac{3}{4}$ by $1\frac{1}{2}$ inches, yellow, free from fiber, and very good flavor." (*Swingle*.) Distributed.

3500. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, May, 1899.

Uima (The orphan). "A soft date highly esteemed in Ziban, very sweet, probably one of the very best sorts. Specimens from Filiache, near Biskra, were of the color of *deglet nour* dates, 1 by $1\frac{3}{4}$ inches, very soft and exceedingly sweet." (*Swingle*.)

"The palm is of medium size and bears from 12 to 13 fruit clusters. The dates are cream colored, large, and very good." (Reboisement Division d'Alger.) Distributed.

3501. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, May, 1899.

Hamraïa or *Hamaraïa* (The red). "A large, red, half-dry early date of superior quality, very common in the markets of Biskra; keeps six months. Palm of medium size, bearing 10 to 12 fruit clusters." Specimens from Filiache, near Biskra, were $\frac{3}{4}$ by 2 inches. (*Swingle*.) Distributed.

3502. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, May, 1899.

Deglet el beida. A dry date, well known throughout the western Sahara. (See No. 3202.) Distributed.

3503. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, May, 1899.

Bisraheloua. "A medium-sized date about an inch long and three-fourths of an inch in diameter. Colored like the *deglet nour*, and resembles it except that it is a little smaller and has a blunter seed. It is of good flavor." (*Swingle.*) Distributed.

3504. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, May, 1899.

Dokar (male). "Fruits from a tree which was said by the Arabs to have been male until after having the top cut off to make palm wine. The new top which grew out is female." (*Swingle.*) Distributed.

3505. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, May, 1899.

El Helloua or *Helouaia* (The sweet). "A soft or half-dry date $\frac{3}{4}$ by $1\frac{1}{4}$ inches; of good quality; medium size; keeps six months. Specimens of this date obtained at Chetna, near Biskra, were very sweet. The flesh had very little fiber and was sometimes perfectly dry, but in other specimens only half dry. The palm is tall and slender and bears about 12 fruit clusters, which ripen in October." (*Swingle.*) Distributed.

3506. PHOENIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. W. T. Swingle, May, 1899.

Retbet regaia. "A medium sized, very soft date of value. Specimens obtained at the oasis of Cora were about an inch long and three-quarters of an inch thick. The flesh was mushy and adherent to the stone. Very sweet and nearly free from fiber; rich red in color." (*Swingle.*) Distributed.

3507. MEDICAGO SATIVA.**Alfalfa.**

From Buenos Aires, Argentine Republic. Received through Messrs. Lathrop and Fairchild (No. 195), 1899.

Bonaerense. "Alfalfa seed from Buenos Aires province. Said to yield a heavier crop of hay than that from Mendoza (see No. 3508), and hence considered superior for baling. The temperature never reaches freezing here." (*Fairchild.*)

3508. MEDICAGO SATIVA.**Alfalfa.**

From Buenos Aires, Argentine Republic. Received through Messrs. Lathrop and Fairchild (No. 194), 1899.

Mendoza. (See No. 3507.)

3509. OPUNTIA.**Prickly pear.**

From Palermo, Sicily. Received through Mr. W. T. Swingle, May, 1899.

Three fruits were sent under this number. They arrived fresh and in good condition. Distributed.

3510. DIOSCOREA TRIFIDA.**Red Cush-cush.**

From Caracas, Venezuela. Donated by Prof. A. Ernst, through Messrs. Lathrop and Fairchild, June, 1899.

"The tubers are planted just like potatoes, in rich soil, and produce in about six months a tolerably abundant crop in a warm climate." (*Ernst.*)

"This yam is extensively known in Venezuela by the name of *Mapuey morado.*"

The tuberous roots are short and thick. Their starchy matter is mealy and savory. Eaten like bread." (*de Tourneil*.) According to Dr. Paul Sagot this species is cultivated in Guiana, Brazil, and the West Indies. "The tuberous roots are numerous, ovoid or rounded, covered with a black cracked bark. It is an excellent species." Pailieux and Bois, to whom this species was particularly recommended by Professor Ernst, say that it produces a large number of elongated or fusiform roots, like those of the Jerusalem artichoke. They are much superior to the other yams in value. They also say that it has finer tubers than the *Maupeny branco*. Its flavor is excellent, and in texture so starchy that it breaks down when merely touched. This species does not succeed in the climate of Paris and doubtless can only be grown in warmer regions. Distributed.

3511. ARRACACHA ESCULENTA.

Arracacha.

From Caracas, Venezuela. Donated by Prof. A. Ernst, through Messrs. Lathrop and Fairchild, June, 1899.

"The *Arracacha* does not like a hot climate, but as the root needs about nine to ten months for full development, the temperature must be rather equable all this time—say about 60° to 68°. The root when ripe and in good condition contains a large amount of starch and a sweet yellowish sap, from which a fermented liquor is sometimes prepared. But generally the root is boiled and eaten like potatoes, being superior to the best variety of the latter. The plant grows in Venezuela under the name of 'Apio,' on account of the great similarity of its leaves with those of the true Apio or celery." (*Ernst*.) Distributed.

3512. TIBOUCHINA HOLOSERICEA.

Tiger ear.

From São Paulo, Brazil. Received through Messrs. Lathrop and Fairchild (No. 215), June, 1898.

"A species of *Melastomiaceae*, which is without doubt one of the showiest-flowered plants in Brazil. The purple flowers are very large and are produced in great number all the year round. It is about 5 feet high. A moist sandy soil is necessary; will stand very slight frost. The native name is 'Tiger ear,' because of its leaves." (*Fairchild*.) Distributed.

3513. CROTALARIA PAULINA.

From São Paulo, Brazil. Received through Messrs. Lathrop and Fairchild (No. 216), June, 1899.

"Recommended by Dr. Pereira Barreto as a forage plant. It is a native of São Paulo; from quite dry localities and on poor soil. The roots have long slender tubercles of moderate size. The stems seem to be rather woody for fodder. For California and Florida." (*Fairchild*.)

3514. TRISTACHYA CHRYSOTHRIX.

From São Paulo, Brazil. Received through Messrs. Lathrop and Fairchild (No. 217), June, 1899.

"This is said to be an important fodder grass. It grows on dry prairies in Moca and on the high plateau of the interior. It will stand drought well. For California, Arizona, and Florida." (*Fairchild*.) It belongs to the tribe *Aveneae*, which includes oats and many other useful grasses. (See No. 3516.)

3515. DESMODIUM LEIOCARPUM.

Beggar-weed.

From São Paulo, Brazil. Received through Messrs. Lathrop and Fairchild (No. 218), June, 1899.

"This species has not been fully tested for fodder. It is recommended by Dr. Barreto, a Brazilian agriculturist. It is found in the scrub everywhere about São Paulo; 8 to 10 feet high; generally without branches." (*Fairchild*.) It is a leguminous plant, presumably able to assimilate free nitrogen from the air.

3516. TRISTACHYA LEIOSTACHYA.

From São Paulo, Brazil. Received through Messrs. Lathrop and Fairchild, June, 1899. (See No. 3514.) Distributed.

3517. ORBIGNIA MARTIANA.**Palm.**

From São Paulo, Brazil. Received through Messrs. Lathrop and Fairchild (No. 221), June, 1899.

"A beautiful pinnatifid-leaved palm, native of Brazil. For southern Florida and California. From Alberto Löfgren, director of the botanic garden, São Paulo." (*Fairchild.*) Distributed.

3518.**Carrá.**

From Petropolis, Brazil. Received through Messrs. Lathrop and Fairchild, June, 1899.

Smilacaceæ. "Aerial tubers edible and large as a cocoanut." (*Fairchild.*)

3519. DIOSCOREA DIVARICATA.**Yam.**

From Peru. Received through Messrs. Lathrop and Fairchild, April, 1899.

"One of the best varieties of yams. Donated by Madame Prado, of São Paulo." (*Fairchild.*) A native of the Philippine Islands, now widely cultivated in the tropics. (See No. 3716.) Distributed.

3520 to 3523. ORYZA SATIVA.**Rice.**

These constitute a collection of rices grown in the Nile Valley, in Egypt. Presented by Mr. Alfred Dale, of Mansoura, July, 1899.

3524. ENTEROLOBIUM TIMBOUVA.**Timbo.**

From Buenos Aires, Argentina. Received through Messrs. Lathrop and Fairchild (No. 204), July, 1899.

"The so-called *Timbo*, a handsome shade tree for avenues. Donated by the Director of the Botanic Gardens." (*Fairchild.*) This tree, a member of the family *Leguminosæ*, grows also in Brazil and the West Indies, and is said to have a bark rich in tannin and to yield timber used for construction. The flowers resemble those of an *Acacia* in appearance. The pods are flattened and much curved. Distributed.

3525. COCOS AUSTRALIS.**Palm.**

From Buenos Aires, Argentina. Received through Messrs. Lathrop and Fairchild (No. 210), July, 1899.

"This is said by Dr. Franceschi to be probably *C. eriospatha*, and if so is one of the hardiest of palms. Should grow well in California and Florida." (*Fairchild.*)

3526. PHYTOLACCA DIOICA.**Bella sombra.**

From Buenos Aires, Argentina. Received through Messrs. Lathrop and Fairchild (No. 211), July, 1899.

"A shade tree 60 feet high with spreading, drooping branches. One of the finest native Argentine trees. An addition to every landscape. Requires water and does best in a good rich soil. For Florida and California." (*Fairchild.*) (See No. 1912.) Distributed.

3527. TIPUANA SPECIOSA.

From Buenos Aires, Argentina. Received through Messrs. Lathrop and Fairchild (No. 212), July, 1899.

"A leguminous shade tree from the Salta, of great value for avenues. It grows in very dry localities in the Chaco. Will stand 25° F. Branches a trifle unruly. Recommended for avenues in Florida. A very rapid grower. Good soil and moisture are required." (*Fairchild.*) Distributed.

3528. ACACIA FARNESIANA.**Cassie.**

From Buenos Aires, Argentina. Received through Messrs. Lathrop and Fairchild (No. 213), July, 1899.

"A very beautiful shrub or small tree with light gray-green foliage, spreading to a weeping habit. Grows in good soil and withstands frost well to 28° F." (*Fairchild.*) Received as *A. cavenia*. The flowers are used for perfumery in France and Algeria. (See No. 3349.) Distributed.

3529. GRABOWSKIA GLAUCA.

From Buenos Aires, Argentina. Received through Messrs. Lathrop and Fairchild (No. 214), July, 1899.

Thorny shrub with clumps of flowers in the axils of the leaves. It belongs to the family *Solanaceæ* and should be tested as an ornamental and for hedges. Distributed.

3530. CÆSALPINIA GILLESII.

From Buenos Aires, Argentina. Received through Messrs. Lathrop and Fairchild (No. 205), July, 1899.

"A very fragrant species with acacia-like habit, from Chubut, southern Patagonia. Will stand moderately cold weather, not below 19° F., I believe." (*Fairchild.*) (See No. 1913, Inventory No. 5.) Distributed.

3531. DAUBENTONIA TRIPETII.

From Buenos Aires, Argentina. Received through Messrs. Lathrop and Fairchild (No. 209), July, 1899.

A leguminous plant now considered a species of *Sesbania*. Distributed.

3532. PIPTADENIA CEBIL.**Cebil.**

From Buenos Aires, Argentina. Received through Messrs. Lathrop and Fairchild (No. 206), July, 1899.

"A very beautiful shrub, with remarkably vigorous growth, resembling the *Acacia farnesiana* in habit. A showy plant for park groups. Will stand 28° F. Called 'Cebil colorado' by natives here. For California and Florida." (*Fairchild.*) Distributed.

3533. TECOMA STANS.**Bow wood.**

From Buenos Aires, Argentina. Received through Messrs. Lathrop and Fairchild (No. 207), June, 1899.

A handsome bignoniaceous shrub, with showy flowers, native in southern North America, and is called "*Palo del arco*" in Mexico, southern Texas, and southern Arizona. "It is shrubby, not a climber; a magnificent bloomer; flowers golden yellow, trumpet shaped, delightfully fragrant." (*Franceschi.*) Distributed.

3534. CARICA QUERCIFOLIA.

From Buenos Aires, Argentina. Received through Messrs. Lathrop and Fairchild (No. 208), June, 1899.

"A hardy species, with small edible fruit. Could be grown successfully in Colorado or California." (*Fairchild.*)

It belongs to the *Caricaceæ* and is related to the well-known pawpaw of tropical countries. Distributed.

3535. CAJANUS INDICUS.**Dâl.**

From Botanic Garden, Kingston, Jamaica. Received through Messrs. Lathrop and Fairchild (No. 34), July 7, 1899.

"A leguminous shrub or small tree from India, where it is extensively cultivated. The pods resemble those of beans, but are much smaller. The plant commonly lives three years, and in good soil may attain a height of 15 to 20 feet, and is very productive. It is half hardy; has been cultivated in southern France. It is said to produce

enormous yields in Egypt, on good soils as high as 2½ tons of peas per acre." (*Naudin and von Mueller.*) In India this pea is very highly esteemed by the natives. It is frequently sold in the form of split peas or pea flour. It is sown there at the commencement of the rainy season, in March or April. It is sometimes sown with other crops, such as cotton, and is often cultivated as a dry-weather crop in rice fields. There are several varieties known in India. It is wholesome and nutritious when properly freed from the husk. It is commonly called the pigeon pea in India, but is an entirely different plant from the pigeon pea of southern Florida.

3536. CAJANUS INDICUS.

Dâl.

From Kingston, Jamaica, Botanic Garden. Received through Messrs. Lathrop and Fairchild, July 7, 1899. (See No. 3335.)

3537. ANACARDIUM OCCIDENTALE.

Cashew nut.

From Kingston, Jamaica. Donated by Mr. William Fawcett, director of the Hope Botanic Garden, through Messrs. Lathrop and Fairchild, July, 1899.

The cashew nut finally becomes a tree 30 or 40 feet high. The bark may be used for tanning. The juice from incisions in the bark is sometimes used in making indelible ink. The bark also yields a yellowish gum, which is obnoxious to insects. The outer covering of the fruit yields a poisonous, astringent, blistering oil, used by oriental people for preserving fishing lines and nets against the action of sea water. The kernels yield about 40 per cent of very fine quality of oil, considered superior to olive oil and the equal of almond oil. The roasted kernels are of very superior flavor, being similar to burnt almonds. The nuts are occasionally exported from India to Europe under the name of "Cassia nuts." The ripe, fleshy stalk of the fruit is eaten in Brazil and other South American countries, and is also made into candies. The juice pressed from the swollen stems is made into cashew wine, much used as a refreshing summer beverage. Distributed.

3538. PHENIX DACTYLIFERA.

Date.

From Figig, eastern Morocco. Donated by Dr. Trabut through Mr. W. T. Swingle. Received July, 1899.

"Excellent dry date from Figig." (*Dr. Trabut.*) A medium sized date (1½ by three-fourths inches), clear reddish-yellow. Flesh dry, sweet, and almost destitute of fiber. Seed irregular, flattened, and ribbed. Distributed.

3539-3570.

This collection of seed was purchased from a Greek gardener at Smyrna (the same who sold the collection of flower seeds Nos. 3573-3606), his entire stock being secured. It includes most of the vegetables commonly grown about Smyrna. See also Nos. 3606-3623. (*Swingle.*)

3539. CICER ARIETINUM.

Garbanzos.

Bizel Araka. Brown peas. (See No. 2139, Inventory No. 5.)

3540. CICER ARIETINUM.

Garbanzos.

Araka. Yellow peas.

3541. PEUCEDANUM GRAVEOLENS.

Dill.

Anithos. Used for salad seasoning (leaves cut up fine). (See Nos. 3621, 3701.)

3542. CARUM PETROSELINUM.

Parsley.

Madano.

3543. CUCURBITA PEPO.

Vegetable marrow.

Kolokythia kitrina. (See No. 3607.)

3544. CUCURBITA PEPO.

Vegetable marrow.

Kolokythia proima (Greek), *Kabak* (Turkish). Edible gourds.

3539-3570—Continued.

3545. CUCURBITA PEPO. Vegetable marrow.
Kolokythia retchéli. Long gourd, used for sweetmeats.
3546. APIUM GRAVEOLENS. Celery.
Seleno. Turkish celery.
3547. LEPIDIUM SATIVUM? Cardamine.
Karthamo téré. Used for salad and seasoning.
3548. BRASSICA. Pickles.
Vogili.
3549. BETA VULGARIS. Chard.
Pazi. Leaves used for cooking and seasoning.
3550. LYCOPERSICUM ESCULENTUM. Tomato.
3551. CUCURBITA MAXIMA. Pumpkin or squash.
Meghala kolokythia. Large pumpkin or squash.
3552. ZEA MAYS. Corn.
Dari.
3553. CUCUMIS SATIVUS. Cucumber.
Adjour. Very large, white Turkish cucumber. The small ones are pickled, the large, eaten in salads.
3554. CUCUMIS SATIVUS. Cucumber.
Aguria (Greek), *Khiar* (Turkish). A large sort.
3555. CITRULLUS VULGARIS. Watermelon.
Karpouzi.
3556. LACTUCA SATIVA. Lettuce.
Frago maroula. French lettuce.
3557. LACTUCA SATIVA. Lettuce.
Maruli proima. Early lettuce.
3558. PHASEOLUS VULGARIS. Bean.
Proima fassoulia. Early beans.
3559. RAPHANUS SATIVUS. Radish.
Rapanaki yerli kokino. Red local radish.
3560. RAPHANUS SATIVUS. Radish.
Rapanaki frantzesko.
3561. RAPHANUS SATIVUS. Radish.
Rapanaki yerli aspro. White radish.
3562. CAPSICUM ANNUM. Pepper.
Piperiez. Sweet pepper.
3563. SOLANUM MELONGENA. Egg plant.
Meljanas.
3564. LYCOPERSICUM ESCULENTUM. Tomato.
Large tomato, ribbed. Presented by Salih, kavass at the United States consulate.
3565. HIBISCUS ESCULENTUS. Okra.
Bamia.
3566. PHASEOLUS VULGARIS. Bean.
Frago fassoula.
3567. CUCUMIS MELO. Muskmelon.
Poponni.
3568. RAPHANUS (?). Roka.
Roka; a bitter salad. Distributed.

3539-3570—Continued.

3569. CICHORIUM INTYBUS. Chicory.
Ardithia. Distributed.

3570. PORTULACA OLERACEA. Purslane.
Semisotu (Turkish), *Glistridha* (Greek). Used in salads with cucumbers.

3571. SESAMUM INDICUM. Sesame.

From Smyrna. Received through Mr. Walter T. Swingle (No. 33), July, 1899.
Black. Seeds bought of a wholesale druggist at Smyrna.

3572. CUMINUM CYMINUM. Cumin.

From Smyrna. Received through Mr. W. T. Swingle (No. 34), July, 1899.
Kimion. Used for seasoning minced meat; also used in curing hams, etc. Seed bought of a wholesale druggist at Smyrna.

3573-3577. FLOWER SEEDS.

From Smyrna. Received through Mr. W. T. Swingle (No. 36), July, 1899.

The following numbers constitute a collection of flower seeds purchased from a Greek gardener at Smyrna, the same who sold the collection of vegetable seeds Nos. 3539-3570. His entire stock was purchased and the collection probably includes the more common flowers grown in the vicinity of Smyrna. It was impossible to obtain anything but the local Greek name of these plants and they are consequently entered under these names in the following list. See also Nos. 3583-3589 and 3591-3596 and 3598-8605. (*Swingle*.)

3573. KARABASH CHICHÉGI.

3574. VASILIKO.

3575. ZIBA DUYMÉSI.

3576. KUFFÉ CHICHÉGI.

3577. LOULADHÉS. Distributed.

3578. CUCURBITA MAXIMA. Squash.

From Smyrna. Received through Mr. W. T. Swingle (No. 36), July, 1899.
Kolokithia.

3579. CUCURBITA PEPO. Squash.

From Smyrna. Received through Mr. W. T. Swingle (No. 36), July, 1899.
Kolokithia.

3580, 3581. LAGENARIA VULGARIS. Ornamental gourd.

From Smyrna. Received through Mr. W. T. Swingle (No. 36), July, 1899.

3580. KOLOKITHIA.

3581. KOLOKITHIA.

3582. PHASEOLUS VULGARIS. Bean.

From Smyrna. Received through Mr. W. T. Swingle (No. 36), July, 1899.
Sarmashikia.

3583-3589. FLOWER SEEDS.

From Smyrna. Received through Mr. W. T. Swingle (No. 36), July, 1899.

A collection of flower seeds purchased from a Greek gardener at Smyrna. It was impossible to obtain anything but the local Greek name of these plants and they

are consequently entered under these names in the following list. (See Nos. 3573-3577, 3591-3596, and 3598-3605.)

- 3583. GUMIASH CHICHÉGI.
- 3584. STATHORIA.
- 3585. AMBERIA.
- 3586. SARMASHIKIA.
- 3587. FOUSES.
- 3588. BALSAMOS.
- 3589. YENI DUNNIA.

3590, 3590a. HELIANTHUS ANNUUS. Sunflower.

From Smyrna. Received through Mr. W. T. Swingle (No. 36), July, 1899.

- 3590. GUNÉ BAKAN.
- 3590a. GUNÉ BAKAN.

3591-3596. FLOWER SEEDS.

From Smyrna. Received through Mr. W. T. Swingle (No. 36), July, 1899.

A collection of flower seeds purchased from a Greek gardener at Smyrna. It was impossible to obtain anything but the local Greek name of these plants, and they are consequently entered under these names in the following list. (See Nos. 3573-3577, 3583-3589, and 3598-3605):

- 3591. MARGHARITA.
- 3592. IPEK CHICHEGI.
- 3593. GHALAZIA.
- 3594. HEDJÉ YASEMIN. Night jasmine.
- 3595. THIPLESE AMELOYÉS.
- 3596. HANOUM LULESI.

3597. PHASEOLUS VULGARIS. Bean.

From Smyrna. Received through Mr. W. T. Swingle (No. 36), July, 1899.

Saliakakia.

3598-3605. FLOWER SEEDS.

From Smyrna. Received through Mr. W. T. Swingle (No. 36), July, 1899.

A collection of flower seeds purchased from a Greek gardener at Smyrna. It was impossible to obtain anything but the local Greek name of these plants, and they are consequently entered under these names in the following list. (See Nos. 3573-3577, 3583-3589, and 3591-3596):

- 3598. MYONETTE.
- 3599. ROOBIE.
- 3600. FRENK BIBERI.
- 3601. KADIFFÉ.
- 3602. MANTH.
- 3603. STATHORIA.
- 3604. GÜL BRISHIMI.
- 3605. FÉSÉNTIA.

3606-3623. VEGETABLES.

This collection comprises seeds of seventeen kinds of vegetables grown about Smyrna, Asiatic Turkey. The seeds were purchased in Smyrna of a local Greek gardener, for the most part in small quantity for preliminary trials. (See Nos. 3539-3570.)

3606. KALOKERIANA PATIA.

3607. CUCURBITA PEPO.

Vegetable marrow.

Kolokythia saravana.

3608. CUCURBITA PEPO.

Squash.

Bal-kabak. Gourd for sweetmeats.

3606-3623. VEGETABLES—Continued.

3609. CITRULLUS VULGARIS. Watermelon.
Karbouzia.
3610. VIGNA CATJANG. Cowpea.
Turco fasoulia.
3611. PHASEOLUS VULGARIS. Bean.
Fasoulia kathista. A dwarf variety.
3612. LACTUCA SATIVA. Lettuce.
Yerli marouli.
3613. LACTUCA SATIVA. Red lettuce.
Kokino marouli.
3614. LACTUCA SATIVA. Lettuce.
Marouli frantzesko mavro. Black French lettuce.
3615. RAPHANUS SATIVUS. Radish.
Boudjali rapania. Distributed.
3616. BRASSICA OLERACEA BOTRYTIS. Cauliflower.
Kounoufithi.
3617. CAPSICUM ANNUM. Sweet pepper.
Piperia.
3618. SOLANUM MELONGENA. Eggplant.
Meldjana.
3619. SPINACIA SPINOSA. Spinach.
Spanake.
3620. HIBISCUS ESCULENTUS. Okra.
Bamia.
3621. PEUCEDANUM GRAVEOLENS. Dill.
Anitho. For seasoning salad. (See Nos. 3541 and 3701.)
3622. OCIMUM BASILICUM. Basil.
Vasiliko.
3623. LYCOPERSICUM ESCULENTUM. Tomato.
Tomati.
- 3624-3626. TRITICUM VULGARE. Wheat.
- Samples of wheats secured from the Smyrna Exchange. Received through Mr. W. T. Swingle (Nos. 86-88), July, 1899.
- The wheat crop about Smyrna was a failure in 1898, and in consequence the fine local wheats were not on sale.
3624. Wheat from Salonika, European Turkey. Distributed.
3625. Wheat from Turbali (30 miles south of Smyrna). Distributed.
3626. Wheat from Angora, Asia Minor. Distributed.
3627. VIGNA CATJANG. Cowpea.
From Alashehr (Philadelphia), Asia Minor. Received through Mr. W. T. Swingle (No. 89), July, 1899.
Samples secured from the Smyrna Exchange.
3628. VICIA FABA. Broad bean.
From Alashehr (Philadelphia), Asia Minor. Received through Mr. W. T. Swingle (No. 90), July, 1899.
Samples secured from the Smyrna Exchange.

- 3629. SESAMUM INDICUM.** **Sesame.**
 From Smyrna. Received through Mr. W. T. Swingle (No. 91), July, 1899.
 Samples secured from the Smyrna Exchange. "In Greece and here in Asia Minor the seeds of sesame are sprinkled over the outside of small loaves before they are baked. They adhere and in baking are roasted, giving an agreeable nutty flavor to the crust. Inferior oil for salads is also made from the seeds." (*Swingle.*)
- 3630. CUCUMIS MELO.** **Muskmelon.**
 From Kassaba, near Smyrna. Received through Mr. W. T. Swingle (No. 92), July, 1899.
Altinbach (gold head). Vegetable seeds obtained by M. Balabanian.
- 3631. CUCUMIS MELO.** **Muskmelon.**
 From Kassaba, near Smyrna. Received through Mr. W. T. Swingle (No. 93), July, 1899.
Topan (round). Vegetable seeds obtained by M. Balabanian. Distributed.
- 3632. HIBISCUS ESCULENTUS.** **Okra.**
 From Kassaba, near Smyrna. Received through Mr. W. T. Swingle (No. 94), July, 1899.
Sultanie. Seeds obtained by M. Balabanian. "Okra is considered a very important vegetable in Asia Minor."
- 3633. CUCUMIS MELO.** **Muskmelon.**
 From Kirkagatch, Asia Minor. Received through Mr. W. T. Swingle (No. 95), July, 1899. Obtained by M. Balabanian.
 A celebrated muskmelon known as the Kirkagatch, from the name of the place where it was obtained. An American missionary who had recently returned home on a visit, stated to Mr. Swingle that he had been unable to eat American muskmelons on account of their inferiority to the Turkish varieties to which he had become accustomed. Of course, this would probably be true only of our ordinary sorts, for the finest Rocky Ford melons are doubtless as good as any in the world, still it will be desirable to try the Kirkagatch sort in all our melon-growing regions. Only a very small quantity of the seed was obtained, enough, however, for a fair test in the hands of careful experimenters.
- 3634. CUCUMIS MELO.** **Muskmelon.**
 From Aidin. Received through Mr. W. T. Swingle (No. 96), July, 1899.
- 3635. CITRULLUS VULGARIS.** **Watermelon.**
 From Aidin. Received through Mr. W. T. Swingle (No. 97), July, 1899.
- 3636. HIBISCUS ESCULENTUS.** **Okra.**
 From Aidin. Received through Mr. W. T. Swingle (No. 98), July, 1899.
- 3637. CUCURBITA PEPO.** **Vegetable marrow.**
 From Aidin. Received through Mr. W. T. Swingle (No. 99), July, 1899.
 Donated by M. Magnesales, of Aidin.
- 3638. LACTUCA SATIVA.** **Lettuce.**
 From Aidin. Received through Mr. W. T. Swingle (No. 100), July, 1899.
 Donated by M. Magnesales, of Aidin.

3639. GOSSYPIUM HERBACEUM?**Cotton.**

From Aidin. Donated by M. Mercurian, of Aidin, through Mr. W. T. Swingle (No. 101), July, 1899.

"The cotton of the region about Smyrna is celebrated for its whiteness of fiber. It makes beautiful fabrics." (*W. T. Swingle.*) Distributed.

3640. SCHINUS MOLLE.**Pepper tree.**

From Palermo, Sicily. Received through Mr. W. T. Swingle, July, 1899.

A Brazilian tree much used in street planting in Tunis. It is said to be much superior to the ordinary pepper tree for this purpose. The leaves are larger and a darker green. Should be tried in the South and in California. (See No. 1760, Inventory No. 2.)

3641. RHUS.

From Palermo, Sicily. Received through Mr. W. T. Swingle (No. 103), July, 1899. From the Botanic Garden.

A large and graceful tree growing in the garden labeled *Rhus pendula*, a name which can not be traced. Distributed.

3642. RESEDA ?

From the Sahara desert near Biskra. Received through Mr. W. T. Swingle (No. 104), July, 1899. Distributed.

3643. OPUNTIA FICUS-INDICA.**Prickly pear.**

From village near Catania. Received through Mr. W. T. Swingle (No. 105), July, 1899.

A very good prickly pear.

3644. CHIMONANTHUS FRAGRANS.**Japanese allspice.**

From Greece. Donated by Professor Miliarakis, director of the Athens Botanic Gardens, through Mr. W. T. Swingle (No. 106), July, 1899.

A Japanese shrub, from 4 to 10 feet high, with shiny green leaves; fragrant yellowish-white flowers in winter. It belongs to the spicebush family.

3645. PANCRATIUM MARITIMUM.

From Greece. Donated by Professor Miliarakis, director of the Athens Botanic Gardens, through Mr. W. T. Swingle (No. 107), July, 1899.

A pretty flowering plant of the Amaryllis family, having long lanceolate leaves and numerous white, odorous flowers. The bulbs should be taken out in September and replanted in October. It prefers sandy soils. These seeds came from Phalarus, Greece.

3646. PASSIFLORA ?**Passion flower.**

From Athens. Donated by Professor Miliarakis, director of the Athens Botanic Gardens, through Mr. W. T. Swingle (No. 108), July, 1899.

Received as "*Passiflora minima*," a species which can not be traced with certainty. Distributed.

3647. OLEA EUROPÆA.**Olive.**

From Athens, Greece. Received through Mr. W. T. Swingle (No. 109), July, 1899.

"Under this number are included a few cuttings from some of the very old olive trees growing south of Athens. Some of these are of an enormous age, having been estimated by some to be 2,000 years old. The trunks are frequently from 6 to 8 feet in diameter and are not very tall, probably having been pruned when young." (*Swingle.*)

3648. EUCALYPTUS.

From Naples, Italy. Donated by Mr. Strickland, Villa Sans Souci, near Naples, through Mr. W. T. Swingle (No. 110), July, 1899.

This species bears large flowers and may prove of some value as an ornamental. Distributed.

3649. FICUS CARICA.**Caprifig.**

From Old Biskra, Sahara, Algeria. Received through Mr. W. T. Swingle, July, 1899.

3650. HALLERIA LUCIDA.

From Catania, Italy. Received through W. T. Swingle (No. 112), July, 1899. From the Botanic Garden.

A small South African tree with smooth, shiny leaves, and scarlet flowers. It belongs to the family *Scrophulariaceae*.

3651. MEDICAGO.**Medic.**

From Athens, Greece. Received through Mr. W. T. Swingle, July, 1899.

Yellow-flowered medic growing on the very dry Parthenon hill at Athens.

3652. CORYLUS AVELLANA.**Filbert.**

From Corfu. Received through Mr. W. T. Swingle, July, 1899.

A sample of the filberts bought in the market of Corfu.

3653. CORYLUS AVELLANA.**Filbert.**

From Catania, Italy. Received through Mr. W. T. Swingle, July, 1899.

A sample of the filberts produced about Catania, Italy.

3654. PISTACIA VERA.**Pistache.**

From Palermo, Sicily. Received through Mr. W. T. Swingle, July, 1899.

Samples of pistaches produced at Palermo, Sicily. (See No. 3135, Inventory No. 7.)

3655.

From Algeria. Received through Mr. W. T. Swingle, July, 1899. Procured at market at Sidi Okaba, near Biskra.

Ganta. The root dried and used for flavoring, something like pepper. The botanical name of this plant could not be learned.

3656. LAWSONIA ALBA.**Henna.**

From Tunis. Received through Mr. W. T. Swingle (No. 118), July, 1899.

"A powder is made from the leaves. This powder, rubbed up with milk of lime, is used by the Mohammedans for staining the finger nails. The palms of the hands are said to be dyed by simply rubbing the leaves over them. This practice is very old among Eastern people, and it is said to have been practiced by the ancient Egyptians. The plant is cultivated all through the East, and has a sweet-scented flower. It is sometimes employed as a hedge plant." (*Swingle*.)

3657. PHOENIX DACTYLIFERA.**Date.**

From Patras, Greece. Received through Mr. W. T. Swingle, July, 1899.

A large date sold in the markets of Patras. Distributed.

3658. LENS ESCULENTA.**Lentil.**

From Smyrna. Received through Mr. W. T. Swingle (No. 128), July, 1899.

Merginek.

- 3659. PHASEOLUS VULGARIS.** **Bean.**
From Smyrna. Received through Mr. W. T. Swingle (No. 129), July, 1899.
Russian.
- 3660. PHASEOLUS VULGARIS.** **Bean.**
From Smyrna. Received through Mr. W. T. Swingle (No. 130), July, 1899.
Russian.
- 3661. PISUM ARVENSE.** **Pea.**
From Smyrna. Received through Mr. W. T. Swingle (No. 131), July, 1899.
Russian.
- 3662. PHASEOLUS VULGARIS.** **Bean.**
From Smyrna. Received through Mr. W. T. Swingle (No. 130a), July, 1899.
Russian.
- 3663. TRITICUM VULGARE.** **Wheat.**
From Samsun, on the Black Sea, Asia Minor. Received through Mr. W. T. Swingle (No. 133), July, 1899. Distributed.
- 3664. TRITICUM VULGARE.** **Wheat.**
From Irga? Received through Mr. W. T. Swingle (No. 132), July, 1899.
Russian wheat. Said to make very white flour; cheaper than Samsun wheat. Distributed.
- 3665. PANICUM MILIACEUM.** **Millet.**
From Adabazar, Asia Minor. Received through Mr. W. T. Swingle (No. 134), July, 1899.
- 3666. PHALARIS CANARIENSIS.** **Canary Seed.**
From Adrianople. Received through Mr. W. T. Swingle (No. 135), July, 1899.
An annual grass largely cultivated for bird seed.
- 3667. CANNABIS SATIVA.** **Hemp.**
From Constantinople. Received through Mr. W. T. Swingle (No. 136), July, 1899.
- 3668. CARTHAMUS TINCTORIUS.** **Safflower.**
From Arabia. Received through Mr. W. T. Swingle (No. 137), July, 1899.
Asper.
- 3669. PHASEOLUS VULGARIS.** **Bean.**
From Trebizond. Received through Mr. W. T. Swingle (No. 138), July, 1899.
Small white beans.
- 3670. VIGNA CATJANG.** **Cowpea.**
From Smyrna. Received through Mr. W. T. Swingle (No. 139), July, 1899.
Small gray beans.
- 3671. PHASEOLUS VULGARIS.** **Bean.**
From Roumania. Received through Mr. W. T. Swingle (No. 140), July, 1899.
Long white beans.

- 3672. PHASEOLUS VULGARIS.** **Bean.**
From Roumania. Received through Mr. W. T. Swingle (No. 141), July, 1899.
Haricots de Galatia? Broad white beans. Distributed.
- 3673. SESAMUM INDICUM.** **Sesame.**
From Constantinople. Received through Mr. W. T. Swingle (No. 142), July, 1899.
Black sesame. Distributed.
- 3674. CORIANDRUM SATIVUM.** **Coriander.**
From Constantinople. Received through Mr. W. T. Swingle (No. 143), July, 1899.
Coleander. The seeds used for seasoning bread and cakes. Distributed.
- 3675. CUMINUM CYMINUM.** **Cumin.**
From Constantinople. Received through Mr. W. T. Swingle (No. 144), July, 1899.
Kimion. An annual herb grown for the seeds, which are used in confectionery and in the manufacture of an essential oil. Distributed.
- 3676. AVENA SATIVA.** **Oat.**
From Mikhalovich. Received through Mr. W. T. Swingle (No. 150), July, 1899.
Distributed.
- 3677. HORDEUM VULGARE.** **Barley.**
From Yenidje, near Brusa. Received through Mr. W. T. Swingle (No. 151), July, 1899. Distributed.
- 3678. PANICUM MILIACEUM.** **Millet.**
From Mikhalovich. Received through Mr. W. T. Swingle (No. 152), July, 1899.
Distributed.
- 3679. PHASEOLUS VULGARIS.** **Bean.**
From Adernas. Received through Mr. W. T. Swingle (No. 153), July, 1899.
- 3680. CITRULLUS VULGARIS.** **Watermelon.**
From Russia. Received through Mr. W. T. Swingle (No. 154), July, 1899.
White.
- 3681. CITRULLUS VULGARIS.** **Watermelon.**
From Mikhalovich. Received through Mr. W. T. Swingle (No. 155), July, 1899.
- 3682. CUCUMIS MELO.** **Muskmelon.**
From Mitlar. Received through Mr. W. T. Swingle (No. 156), July, 1899.
- 3683. CUCUMIS MELO.** **Muskmelon.**
From Panar, near Mikhalovich. Received through Mr. W. T. Swingle (No. 157), July, 1899.
- 3684. CUCUMIS MELO.** **Muskmelon.**
From Balikissar. Received through Mr. W. T. Swingle (No. 158), July, 1899.
A large, sweet muskmelon.

3685. CUCURBITA PEPO.**Vegetable marrow.**

From Constantinople, Turkey. Received through Mr. W. T. Swingle (No. 159), July, 1899.

Adjer Kabak (Turkish).

3686-3692.

The following seven numbers comprise seeds purchased of a Turkish seed peddler at Brousa, in northern Asia Minor. The names are probably Turkish, and may not be correct in some cases.

3686. DAUCUS CAROTA. Carrot.

Mygdon. Distributed.

3687. LACTUCA SATIVA. Cos lettuce.

3688. PHASEOLUS VULGARIS. Bean.

3689. PORTULACA OLERACEA. Purslane.

Kurivi.

3690. LAGENARIA VULGARIS (?). Long gourd.

Uzan or *Uzun-kabak.*

3691. NICOTIANA TABACCOM. Tobacco.

3692. HIBISCUS ESCULENTUS. Okra.

Bamia. Distributed.

3693. LACTUCA SATIVA.**Cos lettuce.**

From Constantinople. Received through Mr. W. T. Swingle, July, 1899.

Verte marâchere de Yédi-Koulé. "Very hardy for winter culture." (*Argyriadis.*) "The large varieties of cos lettuce are much used in Constantinople for eating from the hand. The heads are peddled on the streets and along the wharves, and one frequently sees workmen eating simply bread and lettuce. Some of the varieties are delicious." (*Swingle.*)

3694. CITRULLUS VULGARIS.**Watermelon.**

From Constantinople. Received through Mr. W. T. Swingle, July, 1899.

Yalova. This is a very early Turkish variety of the watermelon.

3695. CITRULLUS VULGARIS.**Watermelon.**

From Constantinople. Received through Mr. W. T. Swingle, July, 1899.

3696. CUCUMIS SATIVA.**Cucumber.**

From Constantinople. Received through Mr. W. T. Swingle, July, 1899.

Très long de Bourgas. Very long Bourgas.

3697. CUCUMIS SATIVA.**Cucumber.**

From Constantinople. Received through Mr. W. T. Swingle, July, 1899.

Vert long de Vlanga. Long green Vlanga.

3698. CUCURBITA PEPO.**Vegetable marrow.**

From Constantinople. Received through Mr. W. T. Swingle, July, 1899.

Sakiz kabak.

- 3699. PHYSALIS PUBESCENS.** **Strawberry tomato.**
 From Constantinople. Received through Mr. W. T. Swingle, July, 1899.
Alkekenge jaune doux. Sweet yellow. (See No. 2001, Inventory No. 5.)
- 3700. PHYSALIS.**
 From Constantinople. Received through Mr. W. T. Swingle, July, 1899.
Alkekenge du Pays. A Turkish strawberry tomato. Distributed.
- 3701. ANETHUM GRAVEOLENS.** **Anis.**
 From Constantinople. Received through Mr. W. T. Swingle, July, 1899.
Aneth. An annual herb. An essential oil, used in perfumery and for scenting soap, is extracted from the seeds. Large quantities of oil are exported from China, Japan, and India. The seeds are used in all Oriental countries in cooking, and for flavoring pickles in France. (See Nos. 3621 and 3541.)
- 3702. CUCURBITA PEPO.** **Vegetable marrow.**
 From Constantinople. Received through Mr. W. T. Swingle, July, 1899.
Asma kabak. A Turkish variety which has a tall climbing vine. (See Nos. 3171, 3299, Inventory No. 7, and 3690.)
- 3703. CUCUMIS MELO.** **Muskmelon.**
 From Constantinople. Received through Mr. W. T. Swingle, July, 1899.
Top Atan. A Turkish muskmelon.
- 3704. IPOMAEA IMPERIALIS.** **Ipomaea.**
 From Hope Botanic Gardens, Kingston, Jamaica. Received through Messrs. Lathrop and Fairchild, July, 1899. Distributed.
- 3705. MANGIFERA INDICA.** **Mango.**
 From the Botanic Garden of Trinidad, British West Indies. Received through Messrs. Lathrop and Fairchild (No. 69), July 20, 1899.
Gordon. "Five potted plants of the Gordon mango, named supposedly after Sir Arthur Gordon, once governor of Trinidad. Large, yellow-skinned, oval fruit; skin thick; flesh soft and melting, of a fine acid flavor, similar to that of an apple. Excellent for tarts, when green; tree large and crops fairly regular." (*Fairchild.*) Distributed.
- 3706. MANGIFERA INDICA.** **Mango.**
 From the Botanic Garden of Trinidad, British West Indies. Received through Messrs. Lathrop and Fairchild (No. 68), 1899.
Peters No. 1. "Five potted plants of the Peters No. 1 mango, reputed by Mr. J. H. Hart to be the finest flavored of all the mangoes; green skinned, rosy purple bluish, and mottled with small yellow dots. Skin thick, flesh pulpy, juicy, high-flavored. Ripens best in dry climate of Jamaica; good and regular cropper; tree medium size, healthy grower; weight of fruit, 12 to 16 ounces; size, 3½ by 3½ inches." (*Fairchild.*) Distributed.
- 3707. MANGIFERA INDICA.** **Mango.**
 From the Botanic Garden, Trinidad, B. W. I. Received through Messrs. Lathrop and Fairchild (No. 70), July, 1899.
Père Louis. "Five potted plants of Père Louis mango, considered by Mr. J. H. Hart to be one of the best introduced East Indian mangoes. It is medium sized, 3½ by 3½ inches." (*Fairchild.*) Distributed.

3708. THEOBROMA BICOLOR.**Cacao.**

From Botanic Garden of Trinidad, British West Indies. Received through Messrs. Lathrop and Fairchild (No. 71), July, 1899.

“Three plants in pots; for use in crossing with other species in breeding experiments.

“This species is native in Colombia and along the Rio Negro. It is characterized by its many-flowered, lateral inflorescences. It is said to be one of the species which yields the cacao of commerce.” (*Schumann.*) Distributed.

3709. HIBISCUS ROSA-SINENSIS.**Hibiscus.**

From Trinidad, British West Indies. Received through Messrs. Lathrop and Fairchild (No. 74), 1899.

“A collection—five of a kind—of the three most showy varieties of *Hibiscus*, including only those originated in Trinidad.” (*Fairchild.*)

This *Hibiscus* is probably a native of the East Indies, and attains a height of from 6 to 15 feet, and is half hardy. There are many varieties cultivated in the gardens. Some of them have double flowers. It is reported as popular in southern California, where it is grown in the open. Distributed.

3710. HIBISCUS SCHIZOPETALUS.**Hibiscus.**

From Hope Botanic Garden, Trinidad, British West Indies. Received through Messrs. Lathrop and Fairchild (No. 74), July, 1899. (See No. 3709.) Distributed.

3711. HIBISCUS ROSA-SINENSIS.**Hibiscus.**

From Hope Botanic Garden, Trinidad, British West Indies. Received through Messrs. Lathrop and Fairchild (No. 74), July, 1899. (See No. 3709.) Distributed.

3712. CITRUS AURANTIUM.**Orange.**

From Trinidad, British West Indies. Received through Messrs. Lathrop and Fairchild, July, 1899.

“This variety resembles, more or less closely, a very large mandarin, in that the skin is very loosely attached to the flesh. The texture of the flesh is good and the flavor excellent.” (*Fairchild.*) Distributed.

3713. CITRUS LIMETTA.**Lime.**

From the Hope Botanic Garden of Trinidad, British West Indies. Received through Mr. D. G. Fairchild (No. 75), July, 1899.

Trinidadine. “Ten potted plants of ‘*Trinidadine*’ lime, a chance seedling in the gardens, unusually large. Largest fruits seen were $8\frac{3}{8}$ by $9\frac{1}{8}$ in. circ. Mr. Hart, the director, says they grow twice that size. Tree a vigorous grower and good producer. Will be an acquisition for Florida and California.” (*Fairchild.*) Distributed.

3714. CARYOCAR NUCIFERUM.**Butternut.**

From Trinidad, British West Indies. Received through Messrs. Lathrop and Fairchild, July, 1899.

“This is a native of Demerara, South America, said to bear a very delicious nut; sometimes shipped to London markets. A forest tree; nuts kidney shaped, flattened, hard, woody shell, red brown. Kernel large and white. Excellent for table use.” (*Fairchild.*) Distributed.

3715-3723. DIOSCOREA DIVARICATA.**Yams.**

From Botanic Garden of Trinidad, British West Indies. Received through Messrs. Lathrop and Fairchild (No. 72), July, 1899.

This and the following eight numbers comprise a collection of samples of the best varieties of yams in the West Indies. They will be retained at the Department of

Agriculture to serve for identifying other West Indian yams to be sent later for general distribution. (See No. 3519.)

3715. WHITE. Distributed.
 3716. RED. Distributed.
 3717. ST. LUCIA. Distributed.
 3718. NEGRO. Distributed.
 3719. YELLOW. Distributed.
 3720. ST. HILL SEEDLING. Distributed.
 3721. CHINESE. Distributed.
 3722. HORN. Distributed.
 3723. CUSH-CUSH. Distributed.

3724. ABERIA CAFFRA.

Kei apple.

From Cape Colony, South Africa. Received from Prof. Peter MacOwan, through the Division of Agrostology, July 20, 1899.

Professor MacOwan says: "A fine strong hedge plant, equal to the European holly. The fruit is 1 inch in diameter, very acid, at length luscious, with a strong scent like apples. It is called *Wilde abrikoos* by the Dutch. The plants are monœcious. It is found only in the Kei River Valley in South Africa." (See No. 3230, Inventory No. 7.)

3725. ASTRAGALUS SINICUS.

Genge clover.

From Japan. Received through Suzuki and Iida, New York, N. Y., July 21, 1899.

"A clover, very largely grown in some parts of Japan; used for feeding cattle and as a fertilizer for rice fields. The plants resemble the American red clover." (*Suzuki and Iida.*)

"The Genge or Rengeso has always been grown in all parts of Japan as a green manure for rice fields. It is sown broadcast in September at the rate of 3 deciliters (about 1½ pecks) per acre; it is plowed under in place the following spring at flowering time, or cut for putting on other rice fields. It is sometimes used for forage." (Cat. Japanese Dept. Agric., Paris Exp., 1900.)

The genge is described in botanical works as a prostrate annual plant having slender pinnate leaves with 5 to 11 leaflets and pinkish flowers clustered densely at the end of an upright stalk. The leaves are said to have a grateful scent, somewhat like that of fresh apples. From the statement quoted above, as well as from Mr. Barr's note (see No. 3923), it is evident that genge is a winter crop suited particularly for rice fields, where it should be given a trial in the South.

3726-3732. ORYZA SATIVA.

Rice.

From Lisbon, Portugal. Donated by the "Sociedade de Geographia de Lisboa" through Messrs. Lathrop and Fairchild (No. 230), July 22, 1899. This collection of rice was selected, because of the short blunt form of the grains, for trial in Louisiana, and also for plant breeding. It comprises varieties of the following numbers all from Portuguese India:

3726. ARROS COM CASCA, from Goa. (L. & F., No. 230.) Distributed.
 3727. BATE DE BILAR, from Sanguem. (L. & F., 230, and No. 5009.) Distributed.
 3728. BABRY CANACONA (L. & F., 230e and No. 5003). Distributed.
 3729. BATE TAMBIDIPATTONIM, from Guepem. (L. & F., No. 230d, No. 5200.) Distributed.
 3730. ARROS COM CASCA, from Prov. of Salseti. (L. & F., . 230c, No. 1279.) Distributed.
 3731. BATE DE CONCHRO, from Sanguem. (L. & F., 230b.) Distributed.
 3732. ARROS COM CASCA, from Prov. of Salseti. (L. & F., 230a, No. 1276.) Distributed.

3733. CAPSICUM ANNUM.**Pepper.**

From Petropolis, Brazil. Received through Messrs. Lathrop and Fairchild (No. 225), July, 1899.

“A variety of chili pepper, reported to be of unusual excellence, from the United States legation in Petropolis. No native name was known.” (*Fairchild.*)

3734. PHYSALIS CURASSAVICA.

From the Botanic Gardens, Buenos Ayres, Argentina. Received through Messrs. Lathrop and Fairchild (No. 216), July, 1899.

“Cultivated like ordinary *Physalis*; will stand slight frost; said to be edible.” (*Fairchild.*) Distributed.

3735. CAPSICUM ANNUM.**Pepper.**

From the Botanic Gardens, Buenos Ayres, Argentina. Received through Messrs. Lathrop and Fairchild (No. 227), July, 1899.

“*Gindiga*. A very strong, tomato-shaped variety, dark red, one-half to three-fourths inch in diameter.” (*Fairchild.*)

3736. SOLANUM GLAUCUM.

From the Botanic Gardens, Buenos Ayres, Argentina. Received through Messrs. Lathrop and Fairchild (No. 229), July, 1899.

“A shrubby-poisonous species of *Solanum*, for breeding purposes; may be of value.” (*Fairchild.*) Distributed.

3737. CAPSICUM ANNUM.**Pepper.**

From Pernambuco, Brazil. Received through Messrs. Lathrop and Fairchild (No. 239), July, 1899.

“The hottest variety of red pepper. No native name known.” (*Fairchild.*)

3738. PASSIFLORA.**Passion fruit.**

From Sao Paulo, Brazil. Received through Messrs. Lathrop and Fairchild (No. 240), July, 1899.

“Seeds from a large, very thick-rinded species of passion fruit of excellent flavor. Native name not known. For Florida and southern California.” (*Fairchild.*)

3739. CASSIA.

From the Quesada of Salte, Vina del Mar, near Valparaiso, Chile. Received through Messrs. Lathrop and Fairchild, April, 1899.

“A species of *Genista* with showy yellow flowers. It grows in moist soils.” (*Fairchild.*)

3740. CHUSQUEA QUILA.**Bamboo.**

From Osorno, Chile. Received through Messrs. Lathrop and Fairchild, 1899. (See No. 3355.) Distributed.

3741. CAPSICUM ANNUM.**Pepper.**

From Valparaiso. Received through Messrs. Lathrop and Fairchild, April, 1899.

“A variety of sweet pepper 4 inches long and 3 inches in diameter; bright scarlet; very showy.” (*Fairchild.*)

3742. ORYZA SATIVA.**Rice.**

From Pacosmayo, Peru. Received through Messrs. Lathrop and Fairchild, April, 1899.

Peruvian rice. Distributed.

- 3743. PASSIFLORA.** **Passion fruit.**
 From Mollendo, Peru. Received through Messrs. Lathrop and Fairchild, June, 1899.
 Possibly introduced from Bolivia. Grown only by irrigation.
- 3744. CORTADERIA ARGENTEA.** **Pampas grass.**
 From Santiago, Chile. Received through Messrs. Lathrop and Fairchild, 1899.
 Grown in the gardens at Santiago. It may differ from ours in vigor. The external appearance is the same. Distributed.
- 3745. PHASEOLUS VULGARIS.** **Bean.**
 From Cerro Azul, Peru. Received through Messrs. Lathrop and Fairchild, 1899.
Frijoles. Distributed.
- 3746. PHASEOLUS VULGARIS.** **Bean.**
 From Cerro Azul, Peru. Received through Messrs. Lathrop and Fairchild, June, 1899.
Blanco pintada. Distributed.
- 3747. APHELANDRA AURANTIACA.**
 From France. Received through Mr. W. T. Swingle, July, 1899.
 "Belongs to the family *Acanthaceæ*. A small, ornamental shrub, native of Mexico. This form, sometimes known as *Aphelandra rozeliï*, has leaves showing silvery white veins on the clear green ground. The inflorescences are terminal. The flowers are orange red. Plants of this are said to have bloomed the first year from cuttings at St. Petersburg." (*Vilmorin.*) Distributed.
- 3748. RUBUS.** **Blackberry.**
 From Cuernavaca, Mexico. Received through Dr. J. N. Rose, July, 1899.
 "It has the stems and solid fruit of a blackberry, but the foliage and taste of a black raspberry." (*Rose.*)
- 3749. SOLANUM MURICATUM.** **Chili pepino.**
 From Cuernavaca, Mexico. Received through Dr. J. N. Rose, July, 1899.
 Very pungent and burning; the hottest of peppers. From Peru or Chili.
- 3750. CLINOSTIGMA MOORIANUM.** **Palm.**
 From France. Received through Mr. W. T. Swingle, July, 1899.
 A pinnatifid-leaved palm from New South Wales and Lord Howe's Island. This graceful palm resembles *Howea Fosteriana* somewhat in habit of growth, but its arching leaves spread wider. Its stems are dark purplish and its pinnae are tough and leathery. The palm is free and clean in growth. Distributed.
- 3751 to 3758. VICIA FABA.** **Broad bean.**
 From England. A collection of broad beans received through Messrs. Lathrop and Fairchild (Nos. 231 to 238), July, 1899.
 "The English broad bean, so well known on the Continent as a vegetable, is pronounced by connoisseurs one of the most delicious vegetables. Mr. Lathrop declares them to be as delicate as asparagus. Although well known in England for many years, they are almost entirely strange to American markets. They are offered for sale by American seedsmen, but are very seldom planted. Boiled with breakfast bacon, they are served on the tables of the most fastidious, either for breakfast or dinner. Like green peas, they are picked when young. A special attempt should be made to introduce this vegetable into popular use, or at least to discover why it does not appear on our tables. There are a number of varieties in England and on the Conti-

ment. Some possess disagreeable flavors; others are as delicate as green peas. Some varieties may be planted in autumn, others in early spring. Slight frosts do not injure them. Deep, strong, loamy soil, the richer the better, will suit them." (*Fairchild.*)

The collection comprises the following eight varieties of the English broad bean:

- 3751. BARR'S MONSTROUS LONG POD. Said to be the finest of English varieties.
- 3752. BARR'S IMPROVED WHITE WINDSOR. Distributed.
- 3753. BARR'S IMPROVED GREEN WINDSOR. Distributed.
- 3754. SELECTED EARLY LONG POD. Distributed.
- 3755. EARLY MAZAGAN. A variety planted in warm sheltered spots in November and January. Distributed.
- 3756. MASTERPIECE GREEN LONG POD. Distributed.
- 3757. TOM THUMB. A dwarf variety. Distributed.
- 3758. TOM THUMB. A green dwarf variety. Distributed.

3759. PASSIFLORA LAURIFOLIA. Water-lemon.

From the Hope Botanic Gardens, Jamaica. Received through Messrs. Lathrop and Fairchild (No. 45), July 27, 1899.

Pomme d'Or. A vine, native from Jamaica to Brazil. Bears an excellent fruit.

3760. PRUNUS OCCIDENTALIS. Plum.

From Jamaica. Received through Messrs. Lathrop and Fairchild (No. 49), July 27, 1899.

This plum is a tall tree growing in the mountains of Cuba and Jamaica. The fruit is of very fine flavor. Distributed.

3761. ZEA MAYS. Corn.

From Tundja Valley, East Roumelia, Bulgaria. Received through Mr. W. T. Swingle, August 5, 1899.

"Yellow flint corn, remarkable for uniform color and well-filled ears. This corn may represent the type first introduced into Europe, since in many parts of western Europe corn was for a long time known as Turkish wheat; and it is not impossible that corn may have been introduced into the west of Europe from Turkey." (*Swingle.*)

3762. POPULUS. Poplar.

From Brusa, Asia Minor. Received through Mr. W. T. Swingle, 1899.

"A poplar planted along roadsides, near Brusa. A remarkably beautiful tree like Lombardy poplar, except that it is not pointed at the top, but cylindrical. The top is never diseased." (*Swingle.*) Distributed.

3763. CUCUMIS MELO. Muskmelon.

From Constantinople, Turkey. Donated by A. O. Eram, effendi, president of the section of agriculture, ministry of agriculture, forests and mines, through Mr. W. T. Swingle. Received August 5, 1899.

Ousoun keupru.

3764. CITRULLUS VULGARIS. Watermelon.

From Constantinople, Turkey. Donated by A. O. Eram, effendi, president of the section of agriculture, ministry of agriculture, forests and mines, through Mr. W. T. Swingle. Received August 5, 1899.

Ousoun keupru.

3765, 3766. CUCUMIS MELO.**Muskmelon.**

From Constantinople, Turkey. Donated by A. O. Eram, effendi, president of the section of agriculture, ministry of agriculture, forests and mines, through Mr. W. T. Swingle. Received August 5, 1899.

3765. CASSABA OR ALTOURE TOBE.**3766.** CHAGNETIC.**3767. CUPRESSUS SEMPERVIRENS.**

From Brusa, Asia Minor. Received through Mr. W. T. Swingle, 1899.

Seed from a particularly fine pyramidal tree in the Mohammedan cemetery at Brusa. For the Southern States.

3768. CUCUMIS MELO.**Muskmelon.**

From Smyrna, Asiatic Turkey. Received through Mr. W. T. Swingle, September, 1899.

*Altoune Bache.***3769. VICIA VILLOSA.****Hairy vetch.**

From France. Received September, 1899. Five tons of seed imported for cooperative field experiments conducted by the Mississippi Agricultural Experiment Station. (See Circ. Agros. No. 6.) Distributed.

3770-3772.

From Sydney, New South Wales, Australia. Presented by Prof. J. H. Maiden, director of the Botanic Gardens, Sydney.

A collection of seeds of the following Australian species of Eucalyptus:

3770. EUCALYPTUS PUNCTATA, GRANDIFLORA.**3771.** EUCALYPTUS SALUBRIS.**3772.** EUCALYPTUS SALMONOPHLOIA.**3773. POA NEMORALIS.****Wood meadow grass.**

From New York. Received September, 1899.

"The larger forms of this are hardly to be distinguished from *Poa serotina*, and have a similar range. It will, however, grow in a drier soil, excessive moisture being harmful to it. In Montana this species ascends to an altitude of 9,000 feet. At this elevation it is dwarfed in habit, but at lower elevations it becomes taller and affords excellent forage. There are several varieties of this grass in the Rocky Mountains and the Northwest, some of them growing upon the dry foothills and bench lands. The larger forms are well adapted for hay. It is less productive than many others, and its cultivation is not recommended excepting in shady lawns, and then only in the Northern and Middle States." (*Scribner.*) Distributed.

3774. CUCUMIS SATIVUS.**Cucumber.**

From Vienna, Austria. Received through Messrs. Lathrop and Fairchild (No. 256), September 18, 1899.

Moravian, a variety used extensively in Vienna for the manufacture of the *Salzgurken* or salt cucumbers, which are a specialty of Vienna, being made to perfection there. The fruits when full size, but before ripening, are picked and packed in kegs. The skin is left intact and the cucumbers are laid in layers with salt and wild cherry or some other aromatic leaves. A heavy weight is placed on the cucumbers and they are left to ferment fourteen days, after which they are ready for the table. After peeling they are served as a side dish. They are consumed in great quantities in Germany and Austria. These salt cucumbers are also made and used in America, and growers will find this variety valuable for this purpose. (Reprinted from Inventory No. 6.)

3775. PROSOPIS HORRIDA.**Algaroba.**

From Paita, Peru. Received through Mr. Eduardo Fowkes.

A tree of Peru belonging to the locust family which produces twice a year crops of yellow pods resembling those of honey locust. It grows to a height of 50 to 60 feet and 1 to 4 feet in diameter. It grows from the coast to an altitude of 2,000 feet above sea level. It needs a good and moist soil. It is propagated from seed, or, better, by means of root cuttings; the small trees must be given plenty of water until the strong taproot sinks deep into the soil. They are usually planted 4 feet apart. The tree itself makes good fuel and the pods make excellent food for stock. They fall to the ground and are gathered and stored in air-tight adobe rooms to keep out insects. As a food for mules and horses they are superior to corn, and a hard-working mule will eat 25 pounds daily and keep in good condition; they are fed to horses with grass, as they are too strong to feed alone. Suitable for growing in southern California. Distributed.

3776. CUCUMIS SATIVUS.**Cucumber.**

From Tetschen, Bohemia. Received through Messrs. Lathrop and Fairchild (No. 242), September, 1899.

Langer walzen. Considered the best cucumber of Bohemia. Many thousand pounds are shipped into Berlin and Dresden from this region, where the cucumbers are used for salads and fermented to make *Sauer gurken*. (Reprinted from Inventory No. 6.)

3777. SOLANUM TUBEROSUM.**Potato.**

From Tetschen, Bohemia. Received through Messrs. Lathrop and Fairchild (No. 241), September, 1899.

Black salad potato. Said by the owner to have been imported seven years ago from some place in Africa by Mr. Joseph Wenzel, the gardener of the agricultural college at Tetschen, a breeder of potatoes, who imported six tubers. He has been reproducing it and finds it very productive. The potato is dark purple both inside and out, somewhat marbled, but very showy as a salad potato. The quality is said to be very good and it is considered valuable as a novelty. (*Distributed.*) (Reprinted from Inventory No. 6.)

3778. COCHLEARIA ARMORACEA.**Horse-radish.**

From Tetschen, Bohemia. Received through Messrs. Lathrop and Fairchild (No. 250), September, 1899.

The variety of horse-radish known in Germany and Austria as the *Maliner* or *Maliner kren* is considered superior to any other. It is grown to perfection in Kuttenberg, a small village southeast of Kolin, in Bohemia, whence large quantities are exported. It is distinguished by its unusually sharp, penetrating taste, uniform shape, and excellent keeping qualities.

A deep, loose, strong soil with plenty of moisture is best suited to the culture of horse-radish. In autumn the soil is forked over to a depth of 2 or 2½ feet and well-rotted barnyard manure is thoroughly worked in to the depth of a foot or more. A narrow bed, 3 feet wide, is prepared, and in late March or early April the horse-radish cuttings are planted along both edges, alternating so that they are not opposite each other across the bed. The cuttings are 12 inches long and are set out 18 inches apart. Instead of being placed vertically in the ground, they are planted in an obliquely horizontal position, with the upper, larger end covered by only three-quarters to 1 inch of earth, while the lower lies 3 to 4 inches deep. As a consequence of this slanting position, the new roots thrown out from the lower side of the cutting, striking vertically downward, make almost a right angle with the main stem, and it is these slender roots from which the new cuttings for the next season's planting are made.

During the summer the ground is kept free from weeds and the surface of the soil lightly stirred. Toward the end of June the bed is gone over carefully and each cutting uncovered separately and slightly raised out of the soil by hand. Care is taken not to injure the perpendicular roots which have formed at its lower end. All small rootlets are rubbed off from the body of the root with a woolen cloth; those that are too large to be removed in this manner being cut close with a sharp knife. A small

quantity of powdered charcoal is scattered over the cut surfaces to prevent decay. The cutting is again covered with earth as before.

The roots are allowed to continue growth until the end of September, at which time the harvest begins. The cuttings which have been two seasons in the ground, the first year as vertical roots and the second in an oblique position, are by this time large enough for market. In digging the horse-radish a long-bladed mattock or spade is used, which enables the digger to remove not only the obliquely planted cutting, which is the marketable product, but also the new roots from its lower side, of which the cuttings for the next year are to be made.

A more extended account of this culture has been published in Circular No. 20 of the Division of Botany. (*Distributed.*) (Reprinted from Inventory No. 6.)

3779-3819.

From Manila, P. I. A collection of seeds collected by Lieut. A. P. Hayne, California Heavy Artillery, U. S. V., and Mr. Jeremiah Rebmann, private, Company B, First Nebraska Volunteers, while serving under an honorary commission from the Secretary of Agriculture, during the period from January 7, 1899, to July 1, 1899. The seeds were received in September, 1899. They are as follows:

3779. ERYTHRINA CANNA FLACCIDA (?).

Collected in the Botanic Garden at Manila, April 15, 1899. Flowers yellow. Tagal name, *Cacuentasan*.

3780. TAMARINDUS INDICUS.

Tamarind.

Collected at Manila, April, 1899. Tagal name, *Sampaloc*.

"Leaves opposite, abruptly pinnate. Leaflets 12 or more pairs, linear, tapering at apex, entire and smooth. Flowers racemed, blossoming in May. The roots of this tree are esteemed by carpenters as good, or even better, than ebony. Rosaries are made from them. The pulp of the fruit is refreshing; it is also a purgative, taken in doses of 1 or 2 ounces, and is a useful remedy in bilious fevers and in smallpox." (*Blanco; translated by Mrs. Alice Carter Cook.*)

3781. ACACIA FARNESIANA.

Cassie.

Collected at Tondo, May, 1899. Local name, *Aroma*.

"Trunk with small, callous points and very long spines. Leaves twice pinnate. The flowers, which appear in January, are yellow, axillary, more than 50 in the globose, long peduncled heads. From each axil two peduncles arise. Tree small, 9 to 12 feet, common in the mountains of Guadalupe, in the province of Batangas, and in many other places. It exudes a transparent, straw-colored gum, said to have medicinal value, and by some is considered equal to gum arabic. The pulp of the fruit is fragrant, but the odor of the cut wood is intolerable. The legumes, when chewed, are very disagreeable. The chief value of the pods is to make a black dye and to make ink. It is said that the bark of the tree is used as a mordant. The flowers also yield a yellow dye. Ink is obtained by sprinkling a little water over the macerated pods and adding a little 'alcaparrosa.' The pulp of the pods is excellent to cure ulcerated eyes, a common and very obstinate complaint, called by the natives 'colitun.'" (*Blanco; translated by Mrs. Alice Carter Cook.*)

3782. POINCIANA REGIA.

Royal poinciana.

Collected at Manila, January, 1899. Tagal name, *Arbol de fuego*. (See No. 1915, Inventory No. 5.)

3783. MIMOSA AFZALIOI (?).

Collected at the Botanic Gardens, Manila, January, 1899. Tagal name, *Epil*.

3784. POINCIANA REGIA.

Royal poinciana.

Collected at Manila, 1899. (See No. 3782.)

3785. CEIBA CASEANA.

Cotton tree.

From Manila. Collected at Calumpit, April, 1899. Tagal name, *Bubac* or *Butac ordmuto*.

"Branches black spotted. A well-known tree 12 to 15 feet high, sometimes living many years. The fruit is smaller than that of the upland cotton. The thread and the cloth made from it are much stronger and more lustrous. It

3779-3819—Continued.

was formerly planted by the natives, but was abandoned because of the small yield of cotton, and to-day is not used for cloth making. A species brought to Manila from Mauritius and said to be very fine is found to be identical with this." (*Blanco; translated by Mrs. Alice Carter Cook.*)

3786. *SESBANIA GRANDIFLORA.*

Collected at Manila, May, 1899. Tagal name, *Caturai*.

"A tree of Pasig and Patura, 15 to 18 feet high, with conspicuous flowers. Its bark is used to rub fishing lines to prevent their becoming water-soaked. The natives sometimes cultivate it for the sake of the flowers, which are cooked and eaten. They are large and white, and the tree at first sight resembles *Moringa*. It is said that the leaves, placed under the pillow, induce sleep." (*Blanco; translated by Mrs. Alice Carter Cook.*)

3787. *ERYTHRINA CANNA.*

From Manila. Collected at the Botanic Gardens, April 25, 1899.

Flowers red. (See No. 3779.)

3788. *MIMOSA ACLE.*

Collected at Paco, May, 1899. Tagal name, *Acle*.

Flowers yellow, in a raceme.

"Tree without spines or thorns, very well known in the vicinity of Manila. The natives esteem it in the building of their houses, for which the wood is very valuable. The leaves are not small, as commonly among *Mimosas*, but 8 to 9 inches long and 3 inches broad. The bark is used for washing, but is not so good as that of the species known to the natives as 'gogo.' The seeds are one-half inch long, marked with an elevated line parallel to the curve of the pod, which is a characteristic of the genus. They are eaten when young. The leaves have an indistinct gland at the base. The size of the leaf agrees with that of *Mimosa scutifera*, but the fruit is different. The native name is given to the species until more careful study establishes its true identity." (*Blanco; translated by Mrs. Alice Carter Cook.*)

3789. *MIMOSA.*

Collected at Paco, May 1, 1899.

A fine, large tree.

3790. *CORYPHA MINOR.*

Palm.

From Manila. Collected at Botanic Gardens. Tagal name, *Anahao*.

"A tree as high as the cocoanut or betel palm. Trunk erect; wood very hard, containing a soft pith. The young seed is edible but very astringent. It is not much liked. The wood is used to make stockades, aqueducts, etc., being very durable. The leaves are used to thatch houses." (*Blanco; translated by Mrs. Alice Carter Cook.*)

3791. *CEIBA CASEARIA.*

Cotton tree.

Collected between Manila and Calumpit, April, 1899. Tagal name, *Bulac*. (See No. 3785.)

3792. *INGA LANCEOLATA.*

Collected at Manila, May, 1899. Tagal name, *Camachiles*.

3793. *CANANGA ODORATA.*

Ilang-ilang.

Collected at Juan del Monte, April 15, 1899.

"A tall tree, with leaves 6 inches long and very odorous flowers, which can not be kept in a sleeping room over night without causing severe headache to the occupant. Fruit not fragrant. Uses unknown." (*Blanco; translated by Mrs. Alice Carter Cook.*)

3794. *MIMOSA.*

Collected at Malate, February, 1899. Tagal name, *Aroma*.

Flowers in white spikes.

3795. *ERYTHRINA.*

Collected at Paco, May 21, 1899. Tagal name, *Dup-dap*.

3779—3819—Continued.

3796. TAMARINDUS INDICUS.

Tamarind.

Collected at Manila, April, 1899. Tagal name, *Sampaloc*. (See No. 3780.)

3797. SYZYGium SABULANUM.

Collected at Paco, May 20, 1899. Tagal name, *Lomboy*.

3798.

(Seed without name or data.)

3799 to 3801. ARECA CATECHU.

Betel palm.

Collected at Manila, December, 1898. Tagal name, *Banga*.

"A well-known palm which grows nearly as high as the cocoanut. Its trunk is not as thick as a man's thigh, very straight, and with many rings formed by the bases of the petioles. The fruit is the celebrated betel nut or buyo. When the natives can not obtain this they use as substitute the bark of *Aretocarpus* or Guaba. The compound of betel, piper, and lime makes the saliva red, but this does not happen if either of the ingredients is omitted. The natives sprinkle betel with macerated pepper for infants, to relieve them of colic or wind. *Areca* may perhaps serve as a basis for a red dye and it is very probable that it is used in India, perhaps in the stead of more valuable ingredients. With copperas it forms a black ink much inferior to that of *Aroma*. The lower part of the leaf petiole, called talupac, is very clean, broad, white, and flexible, and serves very well for wrapping bundles, and for this and similar purposes it is sold by the natives. The terminal bud is eaten as a salad, and its flavor is moderately good, but its removal, of course, kills the tree. Flowers in April." (*Blanco; translated by Mrs. Alice Carter Cook.*)

3802. TERMINALIA LATIFOLIA.

Collected at Manila, May, 1899. Tagal name, *Talisay*.

"This tree ranges from 20 to 24 feet high. The mature leaves are mulberry colored and were formerly used by the natives to dye cotton garments. The nut is too hard to serve as food. The seed has the flavor of almonds and yields a similar oil. With the sap of the tender leaves and the oil of the seeds an ointment is made which is used for leprosy and other skin diseases. In Manila many of these trees have been planted on the public roads, the horizontal growth of the branches and the breadth of the leaves affording much shade. The name 'pila' is sometimes wrongly given to this tree and should be only applied to the tree known to the natives as 'Pilavi,' which yields white resin, or pisa." (*Blanco; translated by Mrs. Alice Carter Cook.*)

3803. ERYTHRINA CARNEA.

Collected at Paco, May 21, 1899. Local name, *Dap-dap*.

A large handsome tree, with reddish flowers.

"This common tree reaches a height of 20 feet or more and is very thick. Its wood is light and soft. It is used instead of cork for fishing nets. Shields are also made of it. The tree much resembles the species *coralodendron*, of which it may be a variety. An infusion of its leaves and bark is used in treating asthma. A drachm of leaves and bark cooked in four bottles of water until this is half boiled away, and sweetened with honey, should be drunk during the illness to facilitate expectoration. The natives apply the bark as a poultice to tumors. The flowers are large, purple, and abundant. The legumes attain a length of 6 inches. Flowers in February." (*Blanco; translated by Mrs. Alice Carter Cook.*)

3804. STERCULIA HELICTERES.

Collected in the Botanic Gardens, Manila, April 26, 1899. Tagal name, *Dungan*.

3805. COCOS MANILLARIS.

Collected at Paco, March, 1899. Tagal name, *Adiavan*.

3806. ANACARDIUM OCCIDENTALE.

Cashew nut.

Collected at Manila, April, 1899. Tagal name, *Casai*. (See No. 3537.)

3807. STERCULIA HELICTERES.

Collected at the Botanic Gardens, Manila, April 28, 1899. Tagal name, *Dungan*. (See No. 3804.)

3779-3819—Continued.

3808 to 3811. CALOPHYLLUM INOPHYLLUM.

Collected at the Botanic Gardens, Manila, April and June, 1899. Local name, *Palo maria*.

"A well-known tree, often not erect and with rather a low trunk. Its wood is much prized for boat building. The fruit contains an abundance of oil, which is extracted by the natives to anoint and harden the hoofs of horses. It is also sometimes used in lamps, but gives a poor light. From the wounded bark exudes a fragrant resin, greenish in color, which many prefer to that of Peru or Copaiba. When mixed with wax and applied to the chest is said to be good for asthma. This resin is much sought after by ants and by a small bee, known to the natives as 'locot.' Some declare that taken internally it is beneficial in lung trouble. The wood, both fresh and burned, yields a very pleasant odor. The tree is very common near the seashore." (*Blanco; translated by Mrs. Alice Carter Cook.*)

3812. SPONDIAS DULCIS.

Ciruela.

Collected between San Pedro Macati and Guadalupe, May and June, 1899.

"Fruit mulberry colored with straw-colored flesh; edible, and, though astringent, not disagreeable; useful in dysentery, though the nut is said to be poisonous. The wood is hard and the tree roots easily although it may be poorly nourished. Early in January I put in the earth a branch as thick as the arm, and at the end of the month it bore flowers and fruit. Into these trees I have grafted branches of Mango (Manga) which have lived more than a month. They might, perhaps, have succeeded with better care." (*Blanco; translated by Mrs. Alice Carter Cook.*) (See No. 3080.)

3813. DIOSPYROS DISCOLOR.

Collected at Paco, Manila, January 25, 1899. Tagal name, *Mabolo*.

3814. (?)

A leguminous tree in Manila.

3815. (?)

A leguminous tree in Manila.

3816. ABRUS PRECATORIUS.

Collected at San Juan del Monte, Manila, January 25, 1899. Tagal name, *Saga*, or *Sagamanium*, or *Baugati*.

"A widely disseminated, well-known climber. Leaves one-half inch long and 2 inches broad. When chewed they taste like licorice, for which they serve as a substitute. The root does not taste as well as the leaves, and some say that it is injurious. Linnæus gave the specific name to this plant because of the resemblance of the seeds to the beads of a rosary. Ground and mixed with water or wine they are very beneficial in cases of epilepsy or heart trouble. But the Spanish translation of Linnæus declares the fruit to be poisonous. Flowers in December." (*Blanco; translated by Mrs. Alice Carter Cook.*) (See No. 4523.)

3817. CAJANUS BICOLOR.

Collected at the Botanic Gardens, Manila, April 28, 1899. Tagal name, *Cagnios*. (See No. 3535.)

An Indian bean extensively grown in subtropical regions for food.

3818. (?)

A climbing vine bearing red fruits the size of an orange.

3819. MANGIFERA INDICA.

Mango.

From Manila.

"A very common tree, which some think was introduced from India. I believe that some varieties may have been brought from there, but not all. The leaves are sometimes 10 inches long; height more than 30 feet; delays fruiting, I believe, until the tenth year, and to hasten it the natives make many incisions in the trunk. They also put fire below the tree in order to obtain by the heat and the smoke early mangoes, which bring high prices. From January (or even

3779-3819—Continued.

earlier) until June the trees bear numerous fragrant flowers. The majority of these fall, and much of the fruit also afterwards perishes, especially if there is copious rain. On this account the Filipinos say that if the harvest of mangoes is good rice will be scarce and vice versa. Also, when mangoes are abundant diseases are many, because of the scarcity of rain. Though very savory, the mango of the Philippines is considered much inferior to some fruits grown in Spain. The recently arrived Spaniards declare that the mangoes have a slight odor of bugs or of onions, but it is in reality that of pitch. It is, nevertheless, the first of the fruits of the country and very healthful. The sap of the mango is caustic. Its leaves, bruised between the fingers, yield a grateful perfume. The leaves, when yellow, are steeped in water and taste like tea. White cloth may be dyed black with the bark of the mango. The roots, steeped in water, yield a straw-color dye, which becomes more pronounced upon the addition of lye. Some, without reason given, believe the fruit of mango to be heating. It certainly induces sleep. The too free use of mangoes is said to cause slight skin eruptions like those that follow the excessive use of oranges and lemons in tropical countries." (*Blanco; translated by Mrs. Alice Carter Cook.*)

3820. SAPIUM BIGLANDULOSUM.**Tolima rubber.**

From Colombia. Presented by Mr. Charles Pitan, through Mr. Pierre Mali, Belgian consul at New York, September, 1899.

White Virgin Rubber of the Andes. "A new rubber plant from the province of Tolima, Colombia. As this tree grows in the Colombian Andes at an elevation of 6,000 to 8,000 feet, it is quite possible that it may be adapted for cultivation in the subtropical zone of the United States; that is, in those States where orange trees will flourish." (*Pitau.*)

The Tolima rubber achieved quite a reputation as a first-class article during the few years it was placed on the market. The tree is apparently quite local in its distribution, and the supply was soon exhausted after the discovery that it was the source of a commercial article. The Tolima rubber is said to be equal in value to the best Para rubber from Brazil. Distributed.

3821 to 3824. TRITICUM VULGARE.**Wheat.**

From Budapest, Hungary. Received through Mr. W. T. Swingle, September 20, 1899.

This shipment comprises four of the best-known of the Hungarian hard winter wheats. These wheats are the qualities from which the higher grades of flour are made at Budapest. Hungary is about the only European country which exports flour, and therefore comes into competition with America in this commodity. Experts on the stock exchange at Budapest claim that some of the Hungarian hard winter wheats produce a better grade of flour than do the best American wheats. This, however, is doubtful. These varieties are worthy of careful trial wherever the winters are mild enough to permit of the growth of winter wheats. Of the varieties included in this shipment the *Banat* (No. 3822) and *Theiss* (No. 3823) are the best known. Both varieties have a large quantity of gluten of a high quality. It is doubtful whether the names applied to Hungarian wheats, such as *Theiss* and *Banat*, really represent distinct varieties of wheats. They are rather to be considered as indicating the locality from which the wheat was obtained, and these numbers may consist of a mixture of varieties. They probably differ somewhat in different localities.

3821. WEISSENBURG. Distributed.**3822. BANAT.** Distributed.**3823. THEISS.** Distributed.**3824. PESTER BODEN.** Distributed.**3825. VICIA FULGENS.****Scarlet vetch.**

From France. Purchased from Vilmorin-Andrieux & Co., Paris, September, 1899.

This new vetch is one of the most promising of the native forage plants of north Africa which have been introduced into culture and tested by Dr. Trabut, government botanist of Algeria.

"This vetch, which grows wild from Alma to Barnal in Algeria, flowers abundantly and seeds well if sown in autumn, but loses its seeds if the sirocco comes when the pods are ripe. This defect renders a special culture necessary for the production of the seed, which is rather high priced.

"Mixed with Abruzzes oats (*Avoine des Abruzes*) it yielded, in 1896, on a large plot of good soil at the experiment station at Rouïba, more than a hundred quintals per hectare of excellent forage." (*Trabut.*)

This plant is usually grown in winter in Algeria, sown shortly before the first rains in autumn, either alone or with winter oats. It is probable that it may be grown as a winter crop in the South and on the Pacific slope, and may prove useful as a summer crop in some regions. It is an exceedingly vigorous plant deserving the most careful trial, and if some region can be found where the seed will ripen without being lost because of the hot winds, it is probable that this will become a most important plant. (See Nos. 4336 and 5574.)

3826. ANANAS SATIVUS.

Pineapple.

From Guayaquil, Ecuador. Received through Messrs. Lathrop and Fairchild, April 7, 1899.

"The pineapples of Peru, Panama, and Trinidad often have many seeds in them." (*Fairchild.*) Distributed.

3827. ANANAS SATIVUS.

Pineapple.

From Paita, Peru. Received through Messrs. Lathrop and Fairchild, April 7, 1899. Distributed.

3828 to 3829. TRITICUM VULGARE.

Wheat.

From Tiflis, Caucasus, Russia. Received through Prof. N. E. Hansen, June 4, 1898.

These two varieties, which consist of small packages weighing about 30 pounds, were discovered in September, 1899, hidden in a large bale of grass seeds. There is no further data concerning them. Distributed.

3830 to 3833.

From Tiflis, Caucasus. A collection of seeds received through Prof. N. E. Hansen, September, 1899.

3830. CUCUMIS MELO.

Muskmelon.

Tiflis No. 1.

3831. CUCUMIS MELO. Distributed.

Muskmelon.

Tiflis No. 2.

3832. CUCUMIS MELO.

Muskmelon.

Tiflis No. 3.

3833. CUCUMIS SATIVUS.

Cucumber.

3834-3852. VEGETABLE SEEDS.

The following nineteen numbers comprise a collection of small quantities of vegetable seeds purchased by Mr. W. T. Swingle of a seed peddler at Sophia, Bulgaria. The peddler was in attendance at the weekly market, and samples were secured of all the seeds he had.

3834. CUCUMIS MELO.

Muskmelon.

3835. LACTUCA SATIVA.

Lettuce.

3836. LACTUCA SATIVA.

Lettuce.

3837. BETA VULGARIS.

Beet.

3838. CITRULLUS VULGARIS.

Watermelon.

3839. CITRULLUS VULGARIS.

Watermelon.

3840. CITRULLUS VULGARIS.

Watermelon.

3841. CUCUMIS SATIVUS.

Cucumber.

3834-3852. VEGETABLE SEEDS—Continued.

3842.	SPINACIA OLERACEA.	Spinach.
3843.	ALLIUM CEPA.	Onion.
3844.	ALLIUM CEPA.	Onion.
3845.	PASTINACA SATIVA.	Parsnip.
3846.	BRASSICA.	
3847.	HELIANTHUS ANNUUS. Distributed.	Sunflower.
3848.	CUCURBITA PEPO.	Squash.
3849.	CUCURBITA PEPO.	Squash.
3850.	CUCURBITA.	
3851.		

Mixed seeds. Distributed.

3852.	CUCUMIS.	Melons.
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Mixed melon seeds. Distributed.

3853. SOLANUM TUBEROSUM. Potato.

From Zacatecas, Mexico. Grown by Dr. Edward Palmer, 1899, from tubers from the wild plant. Distributed.

3854. BYRSONIMA COTINIFOLIA.

From Colima, Mexico. Received through Dr. Edward Palmer, 1897.

Large shrub to small tree, flowers yellow. The fruits are yellow and much eaten; have the flavor of overripe cheese. Sold in the markets of Acapulco and Colima. Grows on hillsides. Distributed.

3855.

From Colima, Mexico. Received through Dr. Edward Palmer, 1897.

Fruit edible and medicinal. This fruit has a watery taste with slight smoky tang and is black in color. The fruit and leaves are boiled in water and used as an astringent. Distributed.

3856-3859. THEOBROMA CACAO. Cacao.

These four numbers comprise a collection of samples of as many commercial grades of the roasted seeds. Further data in regard to them lacking.

3860. CUCUMIS? "Manila pie fruit."

From Oneida, N. Y. Received from Mr. Robert Albert, 1899.

It is not known where the seed of this plant originally came from, but Mr. Albert found it growing where general garden seeds had been planted. The plant is much like some of our melons and grows best on a sandy soil. The fruit is elliptical in shape, about the size of a large lemon, and has a thin, hard shell, which turns from green to yellow as it ripens. The flesh is milky white and resembles that of the apple in appearance. In a raw state the fruit is not particularly delicious, but as pie material or as a sauce it is very good.

3861. DIOSCOREA. Yam.

From Barbados. Received from Mr. A. A. Evelyln, through Messrs. Lathrop and Fairchild (No. 65), 1898.

"The so-called *Chinese* yam, said to be an excellent variety, but not so well thought of as some others. Should be planted like sweet potatoes and cooked or boiled exactly as potatoes are. They are excellent vegetables." (*Fairchild.*) Distributed.

- 3852. CUCUMIS SATIVUS.** **Cucumber.**
From Saaz, Bohemia. Received through Messrs. Lathrop and Fairchild (No. 229), September, 1899.
Sauer Gurken or *salt pickle cucumber*. A native, medium long, very tough-rinded sort, suited especially for shipping purposes. Hundreds of tons are shipped from Saaz to points in Germany every year. It requires a clay loam and a mild climate. (Reprinted from Inventory No. 6.)
- 3863. SORGHUM VULGARE ?** **Sorghum.**
From China. Received through Dr. H. W. Wiley, of the Division of Chemistry, September, 1899.
Kao Liang. Ten to 15 feet in height; growth similar to corn; stalk used for fuel and hedges; leaves stripped for fodder; grain extensively used for food and in the manufacture of alcohol.
- 3864. SESAMUM INDICUM.** **Sesame.**
From China. Received through Dr. H. W. Wiley, September, 1899.
Chih ma. Seed extensively used on bread and cakes; also pressed into "chiang" for salad dressing or for use in cooking. Sesame oil, called "fragrant oil," is very commonly used in foods. The refuse left after oil extraction is used as a fertilizer.
- 3865. CHAETOCLOA ITALICA.** **Millet.**
From China. Received through Dr. H. W. Wiley, September, 1899.
"One of the most common food materials of the region. Used most frequently as a thin porridge." Distributed.
- 3866. ZEA MAYS.** **Corn.**
From China. Received through Dr. H. W. Wiley, September, 1899.
- 3867. PANICUM MILIACEUM.** **Millet.**
From China. Received through Dr. H. W. Wiley, September, 1899.
Used as food, mostly in a thin porridge. Distributed.
- 3868. PHASEOLUS MUNGO.** **Mung.**
From China. Received through Dr. H. W. Wiley, September, 1899.
- 3869. GLYCINE HISPIDA.** **Soy bean.**
From China. Received through Dr. H. W. Wiley, September, 1899.
Black.
- 3870. GLYCINE HISPIDA.** **Soy bean.**
From China. Received through Dr. H. W. Wiley, September, 1899. Distributed.
- 3871. PHENIX DACTYLIFERA.** **Date.**
From Algeria. Received through Mr. Walter T. Swingle, October 10, 1899.
Distributed.
- 3872. PHENIX DACTYLIFERA.** **Date.**
From Algeria. Received through Mr. Walter T. Swingle, October 10, 1899.
Distributed.
- 3873. PHENIX DACTYLIFERA.** **Date.**
From Algeria. Received through Mr. Walter T. Swingle, October 10, 1899.
Distributed.

3874. PHŒNIX DACTYLIFERA.**Date.**

From Algeria. Received through Mr. Walter T. Swingle, October 10, 1899.

3875. VIOLA TRICOLOR.**Pansy.**

From New York. Presented by Mr. M. Beaulieu, of Woodhaven, N. Y., January 23, 1900.

Madame Perret. A new strain of giant pansy.

3876. RAPHANUS SATIVUS.**Radish.**

From Sakurajima, Japan. Received through the kindness of Mr. T. Okohira, secretary of the Japanese legation, Washington, D. C., October 11, 1899.

Daikon. A very choice and carefully selected winter radish, extensively used for food in Japan. This variety reaches perfection only in the extreme southern part of the country; it may accordingly be of use as a fall or winter crop in the Southern States. In Japan many methods of cooking and preserving are known, and if the vegetable is found to thrive in the South an account of these may be printed later and a larger amount of seed imported for distribution.

The following notes were furnished by Mr. Okohira regarding the methods of cultivation followed in Japan:

"This kind of radish grows in a small volcanic island named 'Sakurajima,' or 'Island of Cherry Blossoms,' in Kagoshima Bay, Kiushu, Japan. The climate there is generally warm and the soil is remarkably fertile, much like that of Florida and Georgia. Roots 3 feet in circumference are frequently produced, and the radish is noted for its excellent flavor. The seeds are planted about the end of September. The ground is carefully and deeply plowed, making the beds about 3 feet wide, while five or six seeds are planted together in spots 1 foot apart. In a garden containing one-fortieth of an acre it is practicable to apply a mixture of 200 to 300 pounds of artificial manures, and in a month after the vegetables sprout diluted night soil is used once or twice. The weak and sickly plants should be removed, thus leaving the finest one alone at each spot, and before they grow too large the ground should be hoed over a few times. The harvest usually takes place after a few frosts have occurred."

3877.**Palm.**

From Greytown, Nicaragua. Received through Mr. E. P. Alexander, October 17, 1899.

Coyal. Distributed.

3878.**Palm.**

From Greytown, Nicaragua. Received through Mr. E. P. Alexander, October 17, 1899.

Loillo. Distributed.

3879. GINKGO BILOBA.**Ginkgo.**

Seeds collected on the grounds of the United States Department of Agriculture, Washington, D. C., October, 1899. Introduced into this country from China or Japan seventy-five or eighty years ago.

This splendid deciduous tree attains a height of 60 to 70 feet. It has a straight trunk with a pyramidal head. The leaves are in tufts of four or five, surrounding a scaly terminal bud. They are fan shaped, leathery, with notched ends, and have numerous closely set forking veins like those of the maidenhair ferns. When ripe the seed has an outer fleshy covering, and a thin shell surrounding a somewhat gelatinous, oily kernel.

The seed may be planted in autumn in drills, and protected during the winter by a light covering. It is preferable, however, to plant in spring in like manner, the seed being kept over winter in a cool, dry place. The seedlings should be grown in the nursery row for two or three years and then planted permanently.

The ginkgo or maidenhair tree, as it is commonly called, is one of the cleanest and best for avenue planting. It makes a good shade, holds its foliage well, is less affected

by smoke than most trees, and thus far has been free from the ravages of insects. It seems to be perfectly hardy and is to be recommended especially for bordering avenues and for planting in parks.

3880. ELYMUS CONDENSATUS.

Rye grass.

Data in regard to this number missing.

3881. PSORALEA DOUGLASII.

From Berkeley, Cal. Received through Prof. Charles H. Shinn, 1899.

"Formerly confused with *P. macrostachya*. A common perennial species of moist places in the coast ranges of middle California. The stems are woody, straight, and tall, attaining a height of 8 to 10 feet and yielding a bast fiber which may prove of value for some purposes." (*Shinn.*)

3882. PSORALEA MACROSTACHYA.

From Berkeley, Cal. Received through Prof. Charles H. Shinn, 1899.

"A common species in the Sierra Nevada, much like *P. Douglasii*, but differing chiefly in the pubescence of the rachis. It produces long, straight shoots and yields a tenacious bast fiber." (*Shinn.*)

3883. CITRULLUS VULGARIS.

Watermelon.

From Orlando, Fla. Received through Capt. E. A. Wilson, 1899.

Eureka. "Rich and sweet as sugar; the meat red clear out to the rind, and of a grainy, ice-cream consistency; the rind very thin with variegated stripes; the smallest melons are inclined to be round, while larger ones are oblong. The seeds are of a dark-brown color, and in size and shape precisely like an apple seed; no larger." (*Wilson.*)

3884 to 3889.

From Honolulu, Oahu, H. Ty. A collection of seeds originally from China, presented by Hon. Byron O. Clark, of Wahiawa, Oahu, October, 1899.

3884. GLYCINE HISPIDA. Distributed. **Soy bean.**

Yellow.

3885. GLYCINE HISPIDA. Distributed. **Soy bean.**

Black.

3886. GLYCINE HISPIDA. Distributed. **Soy bean.**

Green.

3887. VICIA FABA? **Horse bean?**

Isando.

3888. VIGNA CATJANG. Distributed. **Cowpea.**

Blue bean.

3889. VIGNA CATJANG. Distributed. **Cowpea.**

Red bean.

3890. TRITICUM COMPACTUM.

Wheat.

From Oregon. Received through Mr. J. E. David, of Croy, Gilliam County.

Little Club. A variety extensively grown in the Northwest. Distributed.

3891. ANDROPOGON RUFUS.

Jaragua.

From Brazil. Presented by the Brazilian Minister, Dr. J. F. De Assis-Brasil, October 25, 1899.

"A perennial grass, native of the State of Matto Grosso. Now cultivated in Minas, São Paulo, and Rio. It quickly chokes out all other vegetation, including the per-

sistent *Sape*. It reproduces itself readily, both by seeds and creeping rhizomes. The stems grow to a height of 12 feet at the time of flowering. As the stems are at that time rather hard, it is best to pasture the meadow occasionally in order to keep down the flowering stalks. An analysis made by Dr. Travassos indicates a higher percentage of protein and carbohydrates than in the best leguminous forage plants, but for the purposes of this note it is sufficient to say that this indigenous grass produces an extremely rich forage." (*De Assis-Brasil; Cultura dos Compos, p. 340.*)

3892. PHYSALIS.

From Mexico. Received through Dr. Edward Palmer, October 15, 1899.

3893. FICUS CARICA.

Caprifig.

From Loomis, Cal. Received through Mr. W. T. Swingle, October, 1899.

"Seems the most promising variety out of a hundred or more grown from seeds of Smyrna figs by Mr. Maslin, since in October it showed young figs still forming, and very possibly would carry many of these through the winter if the *Blastophaga* were present to cause the gall flowers to develop." (*Swingle.*) Distributed.

3894. DIOSCOREA.

Yam.

From Chinatown, San Francisco, Cal. Received through Mr. W. T. Swingle, November, 1899.

Tsamtsi. Distributed.

3895. CRYPTOMERIA JAPONICA.

Cryptomeria.

From the United States Botanic Garden, Washington, D. C. Received through Mr. William R. Smith, November 8, 1899.

A beautiful ornamental evergreen from Japan. Distributed.

3896. HEVEA GUIANENSIS.

Para rubber.

From the United States Botanic Garden, Washington, D. C. Received through Mr. William R. Smith, November 8, 1899.

A tall euphorbiaceous tree native of the Amazon Valley, in Brazil. It is the source of the Para rubber of commerce. Distributed.

3897. CANANGA ODORATA.

Ilang-ilang.

From the United States Botanic Garden, Washington, D. C. Received through Mr. William R. Smith, November 8, 1899.

A tree native of the Philippine Islands. An essential oil used in perfumery is distilled from the flowers. Distributed.

3898. QUERCUS CERRIS.

English mossy-cup oak.

Collected on the grounds of the Botanic Garden, Washington, D. C., November 8, 1899.

A splendid tree for park and street planting south of the latitude of Washington, D. C. Distributed.

3899. GOSSYPIUM BARBADENSE.

Cotton.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 278), November 13, 1899. Seeds submitted to Mr. H. J. Webber for experiments in crossing cotton varieties.

"*Stamm's No. 1.* "Variety of Egyptian white cotton, selected by Christian Stamm; prized very highly by originator and predicted as a great success. Not yet in the market and only a few hundred seed existing." (*Distributed.*) (Reprinted from Inventory No. 6.)

3900. GOSSYPIUM BARBADENSE.**Cotton.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 279), November 13, 1899. Seeds submitted to Mr. H. J. Webber for experiments in crossing cotton varieties.

Stamm's No. 2. "Variety of Egyptian white cotton, selected by Christian Stamm; prized very highly by the originator and predicted as a great success. Not yet in the market and only a few hundred seed existing." (*Distributed.*) (Reprinted from Inventory No. 6.)

3901. GOSSYPIUM BARBADENSE.**Cotton.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 280), November 13, 1899. Seeds submitted to Mr. H. J. Webber for experiments in crossing cotton varieties.

Stamm's No. 3. "Variety of Egyptian white cotton, selected by Christian Stamm; prized very highly by the originator and predicted as a great success. Not yet in the market and only a few hundred seed existing." (*Distributed.*) (Reprinted from Inventory No. 6.)

3902. CUCURBITA PEPO.**Squash.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 258), November 14, 1899.

Barrucca. "The so-called 'Zucca,' a kind of squash grown to perfection in Venice and forming a favorite dish of the people. It is baked like the Hubbard squash in America, and eaten without even salt or pepper." (Reprinted from Inventory No. 6.)

3903. CUCURBITA PEPO (?)**Squash.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 259), November 14, 1899.

"Sample seeds of a variety of squash or Zucca called 'Santa.' A long, slender, very large variety, shaped much like a sausage, and sometimes 5 feet long. This is considered best for making puddings and preserves. It is sweeter than the variety Barrucca. Both of these varieties are said to deteriorate rapidly when grown outside of Venice." (*Distributed.*) (Reprinted from Inventory No. 6.)

3904. CAPSICUM ANNUM.**Sweet pepper.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 260), November 14, 1899.

Peperone dolce quadrato. "Italian sweet pepper from the lagoon island of Lido in Venice. A medium-sized red pepper of truncated pyramidal shape, 1½ inches in diameter." (*Distributed.*) (Reprinted from Inventory No. 6.)

3905. CAPSICUM ANNUM.**Sweet pepper.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 261), November 14, 1899.

"Italian sweet pepper from the lagoon island of Lido in Venice. Large, 2 inches in diameter, orange-yellow, persimmon-shaped, sweet pepper. No varietal name." (*Distributed.*) (Reprinted from Inventory No. 6.)

3906. HIBISCUS ESCULENTUS.**Okra.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 262), November 14, 1899.

"Grown from seed imported from Constantinople into Venice; from the monastery of San Lazare. To test in comparison with ordinary okra in Louisiana." (*Distributed.*) (Reprinted from Inventory No. 6.)

3907. CAPSICUM ANNUM.**Red pepper.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 263), November 14, 1899.

"Long dark-red variety, the common one in Venice, from the monastery of San Lazare." (*Distributed.*) (Reprinted from Inventory No. 6.)

3908. BRASSICA OLERACEA.**Cauliflower.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 264), November 14, 1899.

"Seed of a noted cauliflower grown on the Giudecca, an island in Venice; bought from a peasant." (*Distributed.*) (Reprinted from Inventory No. 6.)

3909. BRASSICA OLERACEA.**Cabbage.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 265), November 14, 1899.

"Seed of a famous cabbage grown on the island of Giudecca in Venice. Bought from a peasant." (*Distributed.*) (Reprinted from Inventory No. 6.)

3910. ALLIUM CEPA.**Onion.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 266), November 14, 1899.

"Seed of an excellent variety of onion 3 inches in diameter. Similar to the *Tripoli* onion of Vilmorin's Vegetable Garden." (Reprinted from Inventory No. 6.) *Distributed.*

3911. CUCURBITA PEPO.**Vegetable marrow.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 267), November 14, 1899.

Zuccini. "Seed of a variety of gourd or vegetable marrow, grown to especial perfection in Venice. The fruits are picked when only 2 inches long and cooked in various ways; fried in oil and tomatoes, fried with eggs, etc., much as egg plants are treated. Said to be of very delicate flavor. The culture is the same as for cucumbers. The young fruit alone being removed, the plant flowers for a long time." (Reprinted from Inventory No. 6.)

3912. PRUNUS PERSICA.**Peach.**

From Venice, Italy. Received through Messrs. Lathrop and Fairchild (No. 268), November 14, 1899.

"Peach pits from the noted Venetian peaches which are shipped to Vienna in large numbers every year. From trees grown on the island of Giudecca. The fruits are of very good form, color, and taste; are freestones with white flesh. Trees grow well on rich shallow soil of the island. For breeding, may be useful." (*Fairchild.*) *Distributed.*

3913. SOLANUM MURICATUM.**Chili pepino.**

From Los Angeles, Cal. Presented by Mr. Elmer Stearns, November, 1899.

3914. FICUS CARICA.**Caprifig.**

From Keggir, Calabria. Presented by C. Sprenger, through W. T. Swingle, Italy, November, 1899.

Seeds from wild caprifig trees. *Distributed.*

3915. SOLANUM TORVUM.

From Italy. Presented by Commodore T. Hanbury, of La Mortola, Ventimiglia.

3916. SOLANUM BETACEUM.

From Italy. Presented by Commodore T. Hanbury, of La Mortola, Ventimiglia.

3917. VIOLA GLABELLA.**Violet.**

From Botanic Gardens, Berkeley, Cal. Received through Messrs. Lathrop and Fairchild (No. 1), December 3, 1898.

A native of California, said to be very beautiful. Distributed.

3918. ISOMERIS ARBOREA, GLOBOSA.

From Botanic Gardens, Berkeley, Cal. Received through Messrs. Lathrop and Fairchild (No. 2), December 3, 1898.

A caper from the region of Death Valley; a curious and rather decorative shrub suitable for gardens in Florida and other frost-proof regions.

3919. SOLANUM LACINIATUM.

From Botanic Gardens, Berkeley, Cal. Received through Messrs. Lathrop and Fairchild (No. 3), December 3, 1898.

Purple-flowered Solanum with small globular edible fruit; small shrub. Introduced from New Zealand. Distributed.

3920. TACSONIA MOLLISSIMA.

From Botanic Gardens, Berkeley, Cal. Received through Messrs. Lathrop and Fairchild, December 3, 1898.

Fruit edible; a reasonably hardy and vigorous vine, growing wherever Eucalyptus trees do in California. This is a promising species, and should be grown in Florida.

3921. VITIS VINIFERA.**Grape.**

From Italy. Received through Messrs. Lathrop and Fairchild (No. 269), November 18, 1899.

The *Sultanina rosea*, seedless raisin grape, was procured at Saonara, near Padua.

"This grape, though a fairly good table sort, and worthy of cultivation for this purpose, is primarily for raisin production, and will meet with the keenest appreciation from raisin growers. The story of the mother plant from which these were taken is that a certain Signor Santonetti, a wealthy Roman gentleman, formerly major-domo of the Pope, gave a friend several plants ten years ago, taken from specimens in the gardens of the Vatican. The truth of this story I do not vouch for, and think it more probable that the grape was introduced from Smyrna by the Armenian monks, who have a large monastery near Saonara, and are constantly going and coming between Asia Minor and Italy. My attention was called to the grape by Father Giacomo Issanerdeus, an Armenian monk of San Lazare. The grape is a vigorous grower, and a moderately heavy producer, I am told. Like certain Riessling varieties, it often flowers two or three times a year. On the old mother plant I saw at Saonara there were blossoms, young grapes, and matured bunches. The bunches are 12 to 16 inches long, loose, with ovate or elliptical, rose-colored berries, which are seedless so far as my observation goes, only occasional rudimentary seeds being met with. Regarding the flavor, I can report from hearsay that it is excellent, very sweet and juicy. From personal experience with *unripe* bunches, it does not appear to be superior to many other sorts. The fruit ripens here in September, and by the 20th all the ripe bunches had been picked, and only a few green ones in the deep shade were obtainable. The young plants sent are grafted on resistant American stocks, and when seen in the nursery were not in a rapidly growing condition, too large grafting wood having been taken. This grape should be given the most serious attention, both by raisin growers and breeders of new varieties, as it has remarkable possibilities. That it has not become more generally known in Italy may be explained by the fact that no raisins to speak of are made in this part of the country and the Italian vine grower is bound by tradition and will plant no new sorts. The Sultanina vines thrive in rich, sandy soil, receive only stable manure, resist drought very well, and are pruned and trimmed in the ordinary ways. An abundance of sunlight is required." (Fairchild.) (Distributed.) (Reprinted from Inventory No. 6.)

3922. ATRIPLEX SEMIBACCATA. Australian saltbush.

From California. Grown by the California Experiment Station, Berkeley, Cal., season of 1899. Received November 20, 1899. (See F. B. No. 108.) Distributed.

3923. ASTRAGALUS SINICUS. Genge clover.

From Japan. Presented by Mr. Peter Barr, of London, England. Received November 23, 1899.

"This is a clover-like plant with red and white flowers. Seeds are sown in October in the fields on which rice has been grown. It flowers in April and May and is turned under as green manure. It is a great nitrogen catcher, the roots being covered with nodules. It may be cut three times in the season for hay." (Barr.) (See No. 3725.) Distributed.

3924. GOSSYPIUM HERBACEUM. Cotton.

From China. Presented by Mr. G. D. Brill, of Wuchang, China. Collected by Mr. A. W. Danforth, of Shanghai. Received November 23, 1899. A yellow cotton grown along the coast south of Shanghai.

3925. ATRIPLEX HALIMOIDES. Gray saltbush.

From California. Received November 27, 1899. Seed grown under the direction of Professor Shinn, of the California Agricultural Experiment Station, during the season of 1899. (See F. B. No. 108.) Distributed.

3926. ATRIPLEX LEPTOCARPA. Slender saltbush.

From California. Received November 27, 1899. Seed grown under the direction of Professor Shinn, of the California Agricultural Experiment Station, during the season of 1899. (See F. B. No. 108.) Distributed.

3927. EDWARDSIA GRANDIFLORA.

From Berkeley, Cal. Received through Mr. C. H. Shinn, November 27, 1899. Presented by the California Experiment Station.

"This is a very beautiful New Zealand tree, often classed as *Sophora tetraptera grandiflora*. It is a deciduous, free-flowering, small tree with attractive and characteristic pinnate foliage. The flowers are golden green, tubular, about 2 inches long, appearing in pendulous racemes. It is one of the best of the *Sophora* group. Introduced into California by Dr. S. M. Curl, of New Zealand. Half-hardy; does not need much water. A fine sidewalk tree, and probably long-lived." (Shinn.)

3928. MAYTENUS BOARIA.

From Berkeley, Cal. Received through Mr. C. H. Shinn, November 27, 1899. Presented by the California Experiment Station.

"This is a small-leaved evergreen tree, native of Chile, graceful in appearance and having fragrant white flowers. Altogether a charming tree for lawn or garden." (Shinn.)

3929. CRYPTOCARYA MIERSII.

From Berkeley, Cal. Received through Mr. C. H. Shinn, November 27, 1899. Presented by the California Experiment Station.

"This is a rare and beautiful broad-leaved evergreen belonging to the laurel family. It is an attractive and rather fast-growing lawn tree, fruiting when 15 feet or so in height, and probably not becoming more than 30 feet high. The fragrance of the leaves, though peculiar, is to most people very attractive. The large nuts contain starch and saponin in such quantities that if the tree were common it might possibly have a distinct commercial value. The seeds offered are from a tree grown at Niles, Cal., from Chilean seed obtained through Mr. G. P. Rixford, of San Francisco. They seem to sprout as easily as a buckeye." (Shinn.)

3930. PHASEOLUS.**Bean.**

From Berkeley, Cal. Received through Mr. C. H. Shinn, November 27, 1899.
Presented by the California Experiment Station.

"*Irvine's Hybrid Perennial Bean.* This is a cross between Painted Lady and Melde's Perennial, made on the experiment station grounds. In California the roots have remained for ten years, and are still thriving. Shoots come up every year from these large, fleshy roots and cover a trellis. The bean is of high quality, and has proved very popular in southern California for garden purposes. If the roots were heavily protected with earth and straw they should endure a northern winter." (*Shinn.*)

3931. PYRETHRUM ROSEUM.**Pyrethrum.**

From Berkeley, Cal. Received through Mr. C. H. Shinn, November 27, 1899.
Presented by the California Experiment Station.

"This is the red-flowered Persian insect powder plant." (*Shinn.*)

3932. PYRETHRUM CINERARIFOLIUM.**Pyrethrum.**

From Berkeley, Cal. Received through Mr. C. H. Shinn, November 27, 1889.
Presented by the California Experiment Station.

"This is the species known as 'Buhach' in California, and is the Dalmatian variety, the seed of which is quite difficult to obtain. It appears in few catalogues, and sold last year at \$5 or \$6 a pound." (*Shinn.*)

3933. LINUM USITATISSIMUM.**Flax.**

From Berkeley, Cal. Received through Mr. C. H. Shinn, November 27, 1899.
Presented by the California Experiment Station.

"California flax (large flowered). This is a fine, showy variety, grown locally for seed alone, and considered distinct from any imported sort." (*Shinn.*)

3934. ATRIPLEX HORTENSIS.**Orach.**

From Berkeley, Cal. Received through Mr. C. H. Shinn, November 27, 1899.
Grown by the California Experiment Station, 1899.

"This is a giant form of the common 'Orach,' the seed of which was sent to California from the Algerian Experiment Station, Algiers. It has not proved as valuable as the Australian perennial species for fodder purposes, but it has made an immense growth, is very hardy, and doubtless will be useful as a vegetable." (*Shinn.*)

3935. LUPINUS ANGUSTIFOLIUS, CÆRULEUS.**Blue lupin.**

From Berkeley, Cal. Received through Mr. C. H. Shinn, November 27, 1899.
Presented by the California Experiment Station.

"This lupin, the common European blue, was grown at the Pomona substation, and proved absolutely free from the fungoid disease that last season destroyed many of the plants from imported seed." (*Shinn.*)

3936. IRIS PABULARIA.

From Berkeley, Cal. Received through Mr. C. H. Shinn, November 27, 1899.
Presented by the California Experiment Station.

"This plant comes from central Asia and was recommended for fodder by the late Baron von Mueller. It seems to stand much drought; seeds very readily." (*Shinn.*)

3937. FICUS CARICA.**Caprifig.**

From Reggio, Italy. Received through Mr. W. T. Swingle, November 28, 1899.
Presented by Mr. C. Sprenger.

Green; very late variety. This number comprises seeds, which are rare in caprifigs. Distributed.

3938. PANAX QUINQUEFOLIUM.**Ginseng.**

From Apulia Station, New York. Received December 1, 1899.

Ginseng seeds are said to require eighteen months for germination, and must be kept moist during the entire period. The roots are exported in great quantities into China, where they are used for medicinal purposes. Distributed.

3939. NICOTIANA TABACCUM.**Tobacco.**

From Cuba. Presented by Dr. William Trelease, Director of the Missouri Botanical Gardens, St. Louis, Mo., November, 1899.

This seed is a part of a supply obtained by the British Government in Cuba for use in Jamaica, and sent to Dr. Trelease by William Fawcett, Director of the Botanic Gardens in Jamaica. Distributed.

3940.**Orchid.**

From Porto Rico. Received through Mr. O. F. Cook, December 1, 1899.

Sent to Henry Pfister, gardener, Executive Mansion, Washington, D. C. Distributed.

3941. BETA VULGARIS.**Sugar beet.**

From France. Received through Messrs. Vilmorin-Andrieux & Co., December, 1899.

White improved (Vilmorin, France). Imported for use in cooperative experiments during 1900, under the direction of the Division of Chemistry, United States Department of Agriculture, Washington, D. C. Distributed.

3942. BETA VULGARIS.**Sugar beet.**

From Germany. Received through Ad. Strandes, December, 1899.

Zehringen (Strandes, Germany). Imported for use in cooperative experiments during 1900, under the direction of the Division of Chemistry, United States Department of Agriculture, Washington, D. C. Distributed.

3943. BETA VULGARIS.**Sugar beet.**

From Russia. Received through Dr. Mrozinski, of Podolien, March, 1900.

Kleinwanzleben (Mrozinski, Russia). Seeds from beets grown on clay soil. Imported for use in cooperative experiments during 1900, under the direction of the Division of Chemistry, United States Department of Agriculture, Washington, D. C. Distributed.

3944. BETA VULGARIS.**Sugar beet.**

From Germany. Received through Dippe Brothers, December, 1899.

Kleinwanzleben (Dippe, Germany). Imported for use in cooperative experiments during 1900, under the direction of the Division of Chemistry, United States Department of Agriculture, Washington, D. C. Distributed.

3945. CUCUMIS MELO.**Winter muskmelon.**

From Utah. Grown from seed No. 114, imported from Khiva, Turkestan, by Prof. N. E. Hansen.

Khiva. Sow in hills and cultivate like other melons. Irrigate sparingly. After vines have four leaves pull up all but three or four of the healthiest plants in each hill. Allow only one melon to ripen on each vine, pinching off all but the first fruit to set. Cut the melon from the vine just before the autumn frosts, leaving 3 inches of stem attached to the fruit. Handle carefully and store in cool, dry place, but protect from frost until the melon ripens, about Christmas or later. The Khiva melon is shaped like a watermelon, without longitudinal furrows. The melons are 12 to 20 inches long and 8 to 10 inches in diameter, weighing 10 to 25 pounds; dark green at first, later becoming striped with dull lemon yellow. When fully ripe the stem will drop off, showing a yellow spot underneath. Flesh thick, crisp, yellowish green to

rich, creamy yellow, with a fine, characteristic, somewhat aromatic flavor. This melon seems to be well adapted to the dry regions of the West, but has not yet been successfully grown in the East. It is a promising novelty and may find a place in the fruit market. Our correspondents are accordingly advised to save the seed and avoid intermixture with the ordinary muskmelons.

3946. CUCUMIS MELO.

Winter muskmelon.

From Green River, Utah. Presented by Mr. J. F. Brown, December, 1899. American grown seed of No. 116, originally imported from Turkestan by Prof. N. E. Hansen.

Twentieth Century. Larger than the *Khiva*, and with a different flavor. Distributed.

3947. ORYZA SATIVA.

Rice.

From Louisiana. Grown in southwestern Louisiana in 1899, from seed imported from Kiushu, Japan, in 1898.

Kiushu. This is a lowland rice, suitable only for growing under irrigation. The methods of cultivation are the same as for other strains of lowland rice. This variety has a short, hard grain. In Louisiana it has proved to be about 25 per cent more productive than the Honduras rice, and the loss through breakage of the grains in the process of milling was only 14 to 18 per cent as opposed to 40 to 60 per cent in the case of the common field rice.

Reports received from the rice districts along the coast from Georgia to North Carolina indicate that the Kiushu rice requires a longer season for maturity than the common field rices of that region. Hence, it will be advisable to plant this seed at least two weeks earlier than the general crop throughout this section. In South Carolina the Kiushu rice is reported as no better than the Gold Seed. The Kiushu rice, so far as tried, seems to be best adapted to Louisiana and Texas. Distributed.

3948. SAPIUM BIGLANDULOSUM.

Tolima rubber.

From Colombia. Received December 4, 1899.

This rubber is known in commerce as *Colombia virgin*. It has been exported chiefly to the United States, and, next to Para rubber, has realized the best prices in the market. Under cultivation, this tree thrives admirably, growing with great rapidity, averaging about 5 feet a year. Crops are obtainable in from six to eight years, but a tree 5 years old yields as much as 1 pound of rubber. It is a large forest tree, the trunk attaining 6 and 7 feet in circumference. Four arrotas of rubber have been extracted from a single tree, but the average yield is much less. (See No. 3820.) Distributed.

3949. ZEA MAYS.

Corn.

From Haiti. Received through Hon. A. M. Thackara, United States consul at Havre, France.

This Haitian corn from Petit Gouaives is sold in Havre at 63.7 cents per bushel of 56 pounds, duty paid. Consul Thackara states that there is considerable demand for corn of this grade in the French markets. It is a yellow flint corn. Should be tried from North Carolina to Florida.

3950. ORYZA SATIVA.

Rice.

From Illinois. Presented by Dr. N. Robinson, of Canton, Mo. Received December 12, 1899.

An upland rice grown in central Illinois. Prof. S. A. Knapp, of Louisiana, makes the following statements concerning it: "This would not sell, as a milling rice, for enough to pay for production. There is about 20 per cent of immature rice in it. The grains are variable in size, the hulls thick and exceedingly tenacious. After the hull has been removed the kernel is small, and I think you will find its quality differing materially from ordinary rice. The rice we produce in Louisiana, called Providence rice, depending upon rainfall, frequently presents an appearance much like this in the first two points named. I do not believe that there is a 'highland' variety of first quality anywhere in the world, nor can it be made profitable for milling purposes. Rice can be produced as far north as Chicago, provided a variety

can be secured that will mature in ninety days, but cold weather is destructive to rice during the period of bloom and later. I think the north of China, somewhat in the interior, would be the place to secure such seed rice." Distributed.

3951. RHIZOPHORA MANGLE.

Mangrove.

From Florida. Received through Mr. Frank Dean, Miami, Fla., December 13, 1899.

This is the characteristic tree of the coastal swamps and mud flats in southern Florida. Distributed.

3952. VICIA FABA, EQUINA.

Horse bean.

From Algeria. Presented by Dr. L. Trabut, government botanist, Mustapha-Alger; received December 1, 1899.

"The horse bean (called féverole by the French) is frequently cultivated in north Africa both as a forage plant and for green manure. According to Dr. Trabut, the small seeded varieties are much better for forage plants, inasmuch as they produce taller and more leafy plants. In north Africa the horse beans are sown in autumn, and on account of their having stiff stems are often used to support more slender forage plants, such as the climbing Narbonne vetch (*Vicia narbonensis*). When so grown together 1 kilogram of vetch is sown to 4 kilograms of the horse bean. The Fenugrec (*Trigonella fenum-græcum*) is also cultivated in north Africa in connection with the horse beans." (*Swingle.*) Distributed.

3953. PHALARIS NODOSA.

From Algeria. Donated by Dr. L. Trabut, government botanist. Received December, 1899.

A perennial grass which bears swollen root stocks or tubers just below the surface of the ground. It is propagated principally by means of these tubers. The variety *hirtiglumis* has proved to be a valuable forage plant at Rouïba. It should be tested in Washington and other regions where *Phalaris arundinacea* has succeeded. Distributed.

3954. VICIA BENGALENSIS.

Bengal vetch.

From Algeria. Presented by Dr. L. Trabut, government botanist, Mustapha-Alger. Received December 1, 1899.

"A vigorous vetch which does very well at the Rouïba experiment station. It somewhat resembles the native Algerian scarlet vetch." (*Swingle.*)

3955. ALBIZZIA LEBBEK.

Lebbek.

From Egypt. Received through Messrs. Lathrop and Fairchild, December 12, 1899. (See No. 3988; also Div. Bot. Circ. 23.)

3956. MELILOTUS MACROSTACHYS.

Sweet clover.

From Algeria. Presented by Dr. L. Trabut, government botanist of Algeria. Received December, 1899.

"This sweet clover, unlike most of the others of this genus, has no discernible odor and is readily eaten by stock. It is a native north African species, which may be readily cultivated. It grows irregularly, is early, and yields from 16 to 24 tons of green forage to the acre. It grows from 4 to 6 feet high." (*Swingle.*) Distributed.

3957. PENNISETUM RUPELLIANUM.

From Algeria. Presented by Dr. L. Trabut, government botanist, Mustapha-Alger. Received December 1, 1899.

"This grass, recently introduced into north Africa from Abyssinia, grows larger than *Pennisetum villosum* and is a better forage plant. This plant, which does not suffer from drought, yields seed which may prove valuable. It shows a tendency to become wild in north Africa." (*Trabut.*) Distributed.

3958. DALEA ASTRAGALINA.

From Algeria. Presented by Dr. L. Trabut, government botanist, Mustapha-Alger. Received December, 1899. Distributed.

3959. HEDYSARUM CORONARIUM.**Sulla.**

From Algeria. Presented by Dr. L. Trabut, government botanist. Received December, 1899.

"This leguminous plant, used both for forage and green manure, is much prized in Italy. It is a perennial or biennial. It is said to do best on marl lands and succeeds on deep cold soils. The roots penetrate very deeply—6 feet or more.

Dr. Trabut thinks it is best to sow decorticated seeds at the rate of 10 to 15 pounds to the acre. Many have found it difficult to secure a good stand of *sulla* and recommend sowing the seed in the husk on wheat stubble and then burning the stubble. The heat is said to facilitate germination. In Algeria it may be sown in autumn before the first rains, and if it germinates well the plant develops enough to be cut the following May. During the following summer the old plants are allowed to go to seed, and at the end of the first year there is a good stand in part composed of the 1-year-old plants and partly of the young seedlings. When well established *sulla* is said to yield from 40 to 90 tons of green forage to the acre. In Italy it is frequently used in rotations. One which has been successful on the domain of Cologne, near Venice, is a 6-year rotation arranged as follows:

First year, corn with manure; second year, wheat with *sulla*; third year, *sulla* with forage; fourth year, wheat with *sulla*; fifth year, *sulla* with green manure; sixth year, wheat.

In some parts of Italy *sulla* succeeds well on sandy loams containing very little lime, but it is highly probable that it will not succeed in soils which entirely lack lime. Most authors agree that it is necessary to have the land free from weeds and very well prepared in order to get a good stand of *sulla*. In north Africa and in Cyprus it is frequently sown in early spring, which may be found necessary in this country in the cooler regions, where the young plants may be hurt by frosts in winter. It is sensitive to cold and probably will not succeed to the north of the limits of olive and fig culture." (*Swingle.*) Distributed.

3960. ATRIPLEX NUMMULARIA.**Round-leaved saltbush.**

From Algeria. Presented by Dr. L. Trabut, government botanist, Mustapha-Alger; received December 1, 1899. Distributed.

3961. HEDYSARUM PALLIDUM.

From Algeria. Presented by Dr. L. Trabut, government botanist, Mustapha-Alger; received December 1, 1899.

"This is a native north African forage plant which resembles *sulla*. It is not so promising, but, like the other north African species, shows a remarkable root development. It thrives on steep side hills and has been recommended for trial in olive orchards for green manure." (*Swingle.*) Distributed.

3962. PYRETHRUM MYCORIS.**Pyrethrum.**

From Algiers. Presented by Dr. L. Trabut, government botanist, Mustapha-Alger; received December 1, 1899. Distributed.

3964. TRisetum.

From Lima, Peru. Presented by Dr. Carlos Cisneros, December 15, 1899. Distributed.

3965. TRisetum.

From Lima, Peru. Presented by Dr. Carlos Cisneros, December 15, 1899. Distributed.

3966. CALAMAGROSTIS.

From Lima, Peru. Presented by Dr. Carlos Cisneros, December 15, 1899. Distributed.

3967. FESTUCA.

From Lima, Peru. Presented by Dr. Carlos Cisneros, December 15, 1899. Distributed.

3968.

From Lima, Peru. Presented by Dr. Carlos Cisneros, December 15, 1899. Mixture of grass seeds. Distributed.

3969. TRITICUM VULGARE.**Wheat.**

From Lima, Peru. Presented by Dr. Carlos Cisneros, December 15, 1899.

"This wheat is from an altitude of 11,000 feet." (*Cisneros.*) Distributed.

3970. RUMEX HYMENOSEPALUS.**Canaigre.**

From Arizona. Received through Prof. R. H. Forbes, Tucson, Ariz., December 15, 1899. Distributed.

3971. LACTUCA.**Lettuce.**

From Edfu, Egypt. Received through Messrs. Lathrop and Fairchild (No. 290), December 28, 1899.

Arabic Khass. A sample of seed of a lettuce used for the preparation of oil. The culture is extensive in Egypt, and the method of making the oil is quite similar to that for the sesame oil. (See description under No. 3972.) The oil is considered by the natives as inferior to sesame, whether in quality or yield I was unable to make out. Mr. George Bonaparte of the Agricultural College of Cairo says it is an excellent table oil. (Reprinted from Inventory No. 6.)

3972. SESAMUM INDICUM.**Sesame.**

From Edfu, Egypt. Received through Messrs. Lathrop and Fairchild (No. 291), December 28, 1899.

Simsim. The seed is sown in rotation with sorghum, often while the sorghum is ripening, between the rows. The land is irrigated once, immediately after sowing, and a second time when 2 inches high. No more water is then applied to the crop. The plants thrive on poor land. Planted here in November, the crop ripens in four months. The plants are cut green and exposed to the sun until dry. The seed is thrashed with flails, ground fine, and put in collapsable baskets of matting, 1 foot in diameter. These baskets, full of sesame meal, are piled up one on the other under a screw press, and vertical pressure is applied until the oil flows out and is collected in a small pit below the press. The oil sells in Egypt for about \$8.50 per 100 pounds. It is used as a table oil, but is considered inferior to olive oil. (Reprinted from Inventory No. 6.)

3973. CICER ARIETINUM.**Garbanzos.**

From Edfu, Egypt. Received through Messrs. Lathrop and Fairchild (No. 292), December 28, 1899.

This is a red variety. The seeds are roasted and eaten like peanuts by the native farming class. They taste not unlike popcorn. The roasted peas are also used in soups. Roasted in the green state they are said to be the most delicate. The vines are dried and fed to cattle; said also to be an excellent fodder crop; grown extensively in Upper Egypt. Seed planted 5 or 6 inches apart, drilled, or sown broadcast. In places overflowed by the Nile it needs no watering, but is sown after the subsidence of the water and left to take care of itself. On irrigable land it is watered when sown, again when in flower, and a third time when the seeds are being formed. One 'fedan' (about 1.1 acres) yields a profit of \$20, according to the statement of a large land owner of Edfu. About 27 bushels of seed are produced per 'fedan.' (Reprinted from Inventory No. 6.) Distributed.

3974. CUCURBITA PEPO.**Vegetable marrow.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 293), December 28, 1899.

A green variety. In Egypt the seeds are planted $2\frac{1}{2}$ inches deep, 2 seeds in a hill on the sides of an irrigated embankment; the hills 3 by 5 feet apart. A small quantity of pigeon manure is first buried in the hill and the seeds are planted above it. This process is used for winter culture as the pigeon manure is heating. Plants yield fruits beginning with the fortieth to fiftieth day for three and one-half months. The fruits are stuffed with chopped meat and served. (Reprinted from Inventory No. 6.)

3975. CUCURBITA PEPO.**Vegetable marrow.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 294), December 28, 1899.

An excellent white variety. For culture see No. 3974. (Reprinted from Inventory No. 6.)

3976. CAPSICUM ANNUM.**Sweet pepper.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 295), December 28, 1899.

Thin-skinned, indigenous variety of sweet pepper, $2\frac{1}{2}$ inches in diameter, and of excellent flavor. Shape, flattened oblong. Plants 3 feet high, perennial in a warm country; will stand slight frosts. (*Distributed.*) (Reprinted from Inventory No. 6.)

3977. CAPSICUM ANNUM.**Red pepper.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 296), December 28, 1899.

A very hot red pepper, oblong in shape, 3 inches long, and bright red in color. It is perennial, many seeded, and thin skinned. (*Distributed.*) (Reprinted from Inventory No. 6.)

3978. CORCHORUS OLITORIUS.**Edible jute.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 297), December 28, 1899.

Seeds sown and cultivated just like those of jute, broadcasted thick together in beds. It is ready to cut in 40 to 50 days and may be cut twice. The dried leaves are powdered and used for thickening soups, or chopped green, exposed to the sun for a few hours, and then cooked, forming a very thick mucilaginous soup. It forms a favorite dish of the Egyptian peasants, probably because of its cheapness. (Reprinted from Inventory No. 6.)

3979. HIBISCUS ESCULENTUS.**Okra.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 298), December 28, 1899.

A long-fruited, native Egyptian variety. According to Mr. G. Bonaparte, of the Agricultural College of Gizeh, this is a more succulent sort than No. 3980. (Reprinted from Inventory No. 6.)

3980. HIBISCUS ESCULENTUS.**Okra.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 299), December 28, 1899.

"Short-fruited variety." Reported to be a heavier cropper than No. 3979. A French seedsman has just ordered 200 tons of seed of this variety. Preferred by the natives for drying purposes when young; very hardy. The young fruits, one-half to three-quarters of an inch long, are strung on strings and dried. In this state they are kept indefinitely. This variety is reported the best for this purpose. Sow 4 or 5 seeds in hills 1 foot apart, on ridges $2\frac{1}{2}$ to 3 feet apart. Okra is often planted as a mixed crop with cotton. (Reprinted from Inventory No. 6.)

3981. ERUCA SATIVA.**Rocket salad.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 300), December 28, 1899.

Seed broadcasted. Forty days until harvest. Said to be an excellent Egyptian variety.

"A low-growing plant with leaves like those of the radish. Stem erect, smooth, and branching; flowers rather large, white or yellow, veined with violet; seed vessels cylindrical, with three not very prominent ribs on each side; seeds brown, smooth, and somewhat flattened. The seed is sown in the open ground from April to the end of summer, and the leaves may be cut in about six weeks or two months. In spring or autumn fresh leaves are abundantly produced after cutting, but in midsummer the plants run to seed rapidly. Frequent waterings are useful in keeping the leaves tender, and in modifying the flavor, which is very strong and somewhat like that of horse-radish. The young leaves are eaten as salad." (*Vilmorin.*) (Reprinted from Inventory No. 6.)

3982. LUFFA CYLINDRICA (?).**Sponge gourd.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 301), December 28, 1899.

This is a very pretty perennial creeper for trees or trellises. It requires little care and forms a luxuriant foliage. The blossoms are much sought by honey bees. When sown in March in France it yielded fruits in July. When young the fruits are pickled like cucumbers, or fried. The mature fruits contain a tough skeleton of the greatest convenience, when dried and split open, as a scrubbing brush for bath or kitchen. Although a perennial, it is grown as an annual preferably, as the fruits which are grown the first year are larger. It is very profitable as a small crop in Egypt. The plant requires plenty of water and is easily propagated by layering. Most native houses are provided with the skeletons of this gourd for domestic purposes. Hats and various other articles of apparel are manufactured from Luffa fiber. (Reprinted from Inventory No. 6.)

3983. LACTUCA SATIVA.**Lettuce.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 302), December 28, 1899.

Grown in Upper Egypt exclusively for oil production. Sown broadcast in beds and left to seed. Oil is pressed from the ground seed precisely as from cotton seed. The yield of oil is 200 kilos per 4,200 square meters, or from 9 to 11 pounds per bushel of seed. The oil is an excellent substitute for olive oil. (Reprinted from Inventory No. 6.)

3984. BRASSICA RAPA (?).**Strawberry spinach.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 303), December 28, 1899.

Leaves of the Strawberry spinach are used as a salad, especially on account of the green coloring matter, which is easily extracted and gives a brilliant color to vegetable dishes. The seed is sown broadcast. Five to ten cuttings of leaves may be made. The scientific name is doubtful. This is reported as an Egyptian variety. (Reprinted from Inventory No. 6.)

3985. CUCURBITA MAXIMA.**Pumpkin.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 304), December 28, 1899.

A yellow, oblong variety, 1½ feet long. Both this variety and No. 4265 were compared with 15 European sorts grown in Egypt and found superior, both in amount of flesh and in sweetness. The trials were made by Mr. George Bonaparte, Gizeh, near Cairo. (Reprinted from Inventory No. 6.)

3986. CITRULLUS COLOCYNTHIS.**Colocynth.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 305), December 28, 1899.

Cultivated like other gourds. It has medicinal properties, but the reason for introducing it at the present time is as a moth preventive. In Egypt the dried fruits are crushed to powder, mixed in the proportion of 2 to 1 with black pepper, and spread over clothing to prevent moths from eating it. As it has no odor, this preventive is worthy of consideration. The seeds and fruits are extremely bitter and poisonous. (Reprinted from Inventory No. 6.)

3987. VICIA FABA.**Broad bean.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 306), December 28, 1899.

A red-seeded variety of Egyptian origin. Planted here two seeds in a hill, 12 inches apart, in November. It fruits in five months. The young pods and seeds are cooked and eaten. The beans mature dry and are cooked. This variety does better here than the imported European sorts. (Reprinted from Inventory No. 6.) Distributed.

3988. ALBIZZIA LEBBEK.**Lebbek.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 307), December 28, 1899.

The *Lebbek* is altogether the most beautiful shade tree that is extensively planted in Egypt. It was introduced from the East Indies previous to 1807, and hundreds of thousands are now planted along the roadways. As an avenue tree it is not excelled for shade and grace. The seeds are planted in seed beds and when the young plants are 1 year old they are transplanted to nursery rows, where they are allowed to remain three years. They are then "topped" to the desired height and transplanted. The first year after transplanting they need water, later they stand drought exceedingly well. If left in the nursery rows until the trunks are 3 inches through, the three or four new branches formed make a graceful crown. The tree has endured 28° F., or possibly lower. The blossoms are sought by bees. The wood is of good quality. It grows in poor-limestone or rocky soils. This one tree has transformed the roadways about Cairo into most beautiful shady avenues. For southern California and Florida. A more extended account may be found in Circular No. 23 of the Division of Botany. (Reprinted from Inventory No. 6.)

3989. CYPERUS LAEVIGATUS.

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 308), December 28, 1899.

Sedge from which Egyptian mats are made. The plant is used in reclaiming salt marshes and the leaves are utilized for mat manufacture. The seeds are broadcasted in beds, well watered, and after fifty days transplanted 1 foot apart each way. The plants must have their roots always covered with water. It is perennial, 9 to 13 feet high, with stems one-half inch in diameter. There are many cultivated varieties. (Reprinted from Inventory No. 6.)

3990. CUCUMIS CHATE.**Salad cucumber.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 309), December 28, 1899.

Salad cucumber, grown very extensively in Egypt, as it ripens fruit for the table twenty days earlier than the ordinary cucumber and is a heavier producer. The fruits are long, horn-shaped, and of delicate flavor. They are more succulent than ordinary cucumbers, according to Mr. George Bonaparte, of the Gizeh Agricultural College, near Cairo. The young fruits are pickled. (Reprinted from Inventory No. 6.)

3991. GOSSYPIUM BARBADENSE.**Cotton.**

From Alexandria, Egypt. Received through Messrs. Lathrop and Fairchild (No. 310), December 28, 1899.

Jannovitch. This new variety of Egyptian cotton, the *Jannovitch*, was originated as a sport from the *Abbasi* variety and was first brought to notice in 1897. Seed sold last year for \$20 a bushel, later for \$12. It is asserted to be by all means the finest cotton of the white, long-staple class ever produced in Egypt. The fiber is scarcely any shorter than the Sea Island staple and has the characteristic twist. It is snow white and of remarkably fine, silky texture. This season is the first one in which this variety has been cultivated in commercial quantities. The lint from this variety brought in Egypt, where a very small quantity was sold last year, over 50 cents a pound. A rough guess was made by Mr. George Foaden, secretary of the Khedivial Agricultural Society, that not more than 1,000 bales of this cotton will be sold this year in Egypt. For methods of culture in Egypt see Bulletin No. 33 of the Department of Agriculture, Office of Experiment Stations. For breeding purposes this cotton should be of decided value, as its origin can be traced with probability, according to Mr. Foaden, to crosses between the Egyptian cottons and the introduced Sea Island varieties. The Egyptian brown cottons may possibly have sprung from Peruvian varieties which are reported to have been introduced into Egypt early in this century. This *Jannovitch* variety has hence quite possibly strains of both Sea Island and Peruvian stock. The *average* length of the Egyptian cotton, ordinary varieties, is given in Bulletin No. 33 as 35.79 millimeters in comparison with 40.87 for Sea Island. If the fiber of the *Jannovitch*, as claimed, is longer than the ordinary varieties, it will approach very closely that of the Sea Island. It is worthy serious tests in all the cotton-growing districts of America. Its successful culture in the uplands of the United States would increase the profits of cotton growing materially, as the Egyptian cotton brings prices only inferior to those of the Sea Island. (Reprinted from Inventory No. 6.)

3992. GOSSYPIUM BARBADENSE.**Cotton.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 311), December 28, 1899.

Mitafifi. The most commonly known and grown variety of Egyptian cotton until the discovery of the *Jannovitch* (No. 2991). Discovered in 1883. This yields the heaviest of all Egyptian cottons. It is a *brown* fibered variety. For experimental purposes only. It was introduced by the Department three or four years ago. (Reprinted from Inventory No. 6.) Distributed.

3993. GOSSYPIUM BARBADENSE.**Cotton.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 312), December 28, 1899.

A variety resembling No. 3992, from which it was derived. It has been cultivated only six or seven years. Succeeds better on loamy soils than on clays. It is more susceptible to unfavorable climatic conditions and slightly earlier. It has a fine, silky, very long, *white* staple. Gins with more difficulty than No. 3992. For breeding purposes. (Reprinted from Inventory No. 6.) Distributed.

3994. CUCUMIS MELO.**Cantaloupe.**

From Bassousa island in the Nile. Received through Messrs. Lathrop and Fairchild (No. 313), December 28, 1899.

Cantaloupes from Bassousa, where the most noted melons of Egypt are grown. The fruits are oblong, 8 to 10 inches long, many seeded, yellow to pale green in color, and thin skinned. The flesh is pale yellow. For experiments in the South. (Reprinted from Inventory No. 6.) Distributed.

3995. CUCUMIS MELO.**Cantaloupe.**

From Abou-el-rate, Egypt. Received through Messrs. Lathrop and Fairchild (No. 314), December 28, 1899.

Seed from excellent cantaloupes from the most noted melon-growing region in Egypt, except Bassousa. Similar to fruits of No. 3994. A typical Egyptian strain. (Reprinted from Inventory No. 6.)

3996. ALLIUM CEPA.**Onion.**

From islands of Upper Nile, Egypt. Received through Messrs. Lathrop and Fairchild, (No. 315), December 28, 1899.

The onions from the islands of the Upper Nile are exported in very large quantities to England. They are said to be an unusually sweet variety, of medium size and irregular form. They are yellowish pink. For trial in warm, dry regions of the South. Plant in the usual way. Recommended for irrigated Western lands. (Reprinted from Inventory No. 5.)

3997. VICIA FABA.**Horse bean.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 316), December 28, 1899.

Selected seed of the Egyptian fodder bean from 'Saidi' or Upper Egypt. '*This plant produces the principal cattle and horse food of Egypt,*' according to Mr. George Foaden, secretary of the Khedivial Agricultural Society. The seed is sown in November at the rate of 3 bushels per acre, and if on soil which has been overflowed by the Nile, receives no water during the season. If sown on irrigated land, it is watered when sown and once when the crop is half grown. Matures in from five to six months. Harvested with scythe or knife. Stalks dried in field and beans thrashed out; yields 50 bushels per acre. Fed to cattle ground and mixed with chopped straw. A ration is 8 to 10 pounds of beans to 26 pounds of straw per day. (Reprinted from Inventory No. 6.) Distributed.

3998. ZEA MAYS.**Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 317), December 28, 1899.

A variety which yields heavy crops, and from comparison with introduced varieties is a heavier bearer and much preferred by cultivators. According to Mr. George P. Foaden, secretary of the Khedivial Agricultural Society, the yield is often 40 or 50 bushels per acre. Receives five waterings during the season. This is a field variety, said to be superior to any variety grown in Egypt from European seed. (Reprinted from Inventory No. 6.) Distributed.

3999. ZEA MAYS.**Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 318), December 28, 1899.

Used by Europeans and natives for roasting ears. Matures in sixty days from planting. Doubtful if superior to our varieties of sweet corn, but should be tested. Sown in April here as a catch crop. (Reprinted from Inventory No. 6.)

4000. ZEA MAYS.**Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 319), December 18, 1899.

A variety of Egyptian corn used for roasting by the natives. Matures in seventy days. Recommended for the drier regions of the South. (Reprinted from Inventory No. 6.)

4001 to 4136.

The following 136 numbers comprise part of a collection of native North American plants offered for foreign exchange. A descriptive account will be given in a special publication.

4001. VICIA LEAVENWORTHII.**Vetch.**

From Burnet, Tex. Received through Mr. George Stolley, October 10, 1899.

4002. ATRIPLEX PABULARIS.**Saltbush.**

From Laramie, Wyo. Received through Prof. Aven Nelson, November, 1899.

4001 to 4136—Continued.

4003. *SCIRPUS PALUDOSUS*.
From Laramie, Wyo. Received through Prof. Aven Nelson, November, 1899.
4004. *HETEROMELES ARBUTIFOLIA*. Christmas berry.
From Vacaville, Cal. Received through Mr. W. T. Swingle, November, 1899.
4005. *PLATANUS OCCIDENTALIS*. Plane tree, or Sycamore.
From Missouri Botanic Gardens, St. Louis, Mo. Received through Prof. William Trelease, November 8, 1899.
4006. *CLADRASTIS LUTEA*. Yellow wood, or Virgilia.
From Missouri Botanic Gardens, St. Louis, Mo. Received through Prof. William Trelease, November 8, 1899.
4007. *BROMUS HOOKERIANUS*. Hooker's Brome-grass.
From Pullman, Wash. Received November 9, 1899.
4008. *AGROPYRON DIVERGENS*. Bunch Wheat-grass.
From Pullman, Wash. Received November 9, 1899.
4009. *ACER SACCHARUM*. Sugar maple.
From New York. Received through Miss M. C. Mann, November 9, 1899.
4010. *ELYMUS CONDENSATUS*. Bunch grass.
From Washington. Received October, 1899; through Mr. A. B. Leckenby.
4011. *QUERCUS COCCINEA*. Scarlet oak.
From Biltmore, N. C. Received through Mr. C. D. Beadle, November 24, 1899.
4012. *HICORIA VILLOSA*. Hickory.
From Biltmore, N. C. Received through Mr. C. D. Beadle, November 24, 1899.
4013. *HYPERICUM LOBOCARPUM*. St. John's wort.
From Biltmore, N. C. Received through Mr. C. D. Beadle, November 24, 1899.
4014. *HYPERICUM SPHEROCARPUM*. St. John's wort.
From Biltmore, N. C. Received through Mr. C. D. Beadle, November 24, 1899.
4015. *OXYDENDRON ARBOREUM*. Sour-wood.
From Biltmore, N. C. Received through Mr. C. D. Beadle, November 24, 1899.
4016. *EUONYMUS AMERICANUS*. Strawberry bush, or Burning bush.
From Biltmore, N. C. Received through Mr. C. D. Beadle, November 24, 1899.
4017. *ILEX VERTICILLATA*. Virginia winter berry.
From Biltmore, N. C. Received through Mr. C. D. Beadle, November 24, 1899.
4018. *CERCIS OCCIDENTALIS*. Red bud.
From Berkeley, Cal. Received through Prof. C. H. Shinn, of the California Experiment Station, November 27, 1899.
4019. *RHAMNUS CALIFORNICA*. Coffee berry.
From California. Received through Prof. C. H. Shinn, November 27, 1899.
4020. *RUMEX HYMENOSEPALUS*. Canaigre.
From California. Received through Prof. C. H. Shinn, November 27, 1899.
4021. *CYTISUS PROLIFERUS, ALBUS*. Tagasaste.
From California. Received through Prof. C. H. Shinn, November 27, 1899.
4022. *VITIS CALIFORNICA*. California grape.
From California. Received through Prof. C. H. Shinn, November 27, 1899.

4001 to 4136—Continued.

4023. *NEOWASHINGTONIA FILAMENTOSA*. **Fan palm.**
From Indio, Cal. Received through Mr. W. T. Swingle, November 28,
1899.
4024. *DIOSPYROS VIRGINIANA*. **Persimmon.**
From Washington, D. C. Received November 25, 1899.
4025. *OPUNTIA ENGELMANNI*. **Prickly pear.**
From Texas. Received through Mr. George Stolley, of Burnet, Tex.,
November, 1899.
4026. *ÆSCULUS CALIFORNICA*. **Horse chestnut.**
From California. Received through Mr. V. K. Chesnut, December 4, 1899.
4027. *NYSSA MULTIFLORA*. **Sour gum tupelo.**
From Gage, Tenn. Received December 6, 1899.
4028. *CORNUS FLORIDA*. **Flowering dogwood.**
From Gage, Tenn. Received December 6, 1899.
4029. *SASSAFRAS SASSAFRAS*. **Sassafras.**
From Gage, Tenn. Received December 7, 1899.
4030. *MAGNOLIA GLAUCA*. **Sweet bay.**
From Gage, Tenn. Received December 7, 1899.
4031. *RHODODENDRON MAXIMUM*. **Great laurel.**
From Gage, Tenn. Received December 7, 1899.
4032. *MAGNOLIA ACUMINATA*. **Cucumber tree, or Mountain magnolia.**
From Gage, Tenn. Received December 7, 1899.
4033. *CARPINUS CAROLINIANA*. **Blue beach, or Hornbeam.**
From Gage, Tenn. Received December 7, 1899.
4034. *LIQUIDAMBER STYRACIFLUA*. **Sweet gum.**
From Gage, Tenn. Received December 7, 1899.
4035. *CHIONANTHUS VIRGINICA*. **Fringe tree, or Old man's beard.**
From Gage, Tenn. Received December 7, 1899.
4036. *MAGNOLIA TRIPETALA*. **Umbrella tree.**
From Gage, Tenn. Received December 11, 1899.
4037. *BUTNERIA FLORIDA*. **Sweet shrub.**
From Gage, Tenn. Received December 11, 1899.
4038. *QUERCUS VIRGINIANA*. **Live oak.**
From Louisiana. Presented by Charles E. Roos, Southern University,
New Orleans, La. Received December 13, 1899.
4039. *SPONDIAS*. **Ciruela.**
From Acapulco, Mexico. Presented by Dr. Edward Palmer, December 1,
1899.
4040. *CRATAEGUS MEXICANUS*. **Hawthorn.**
From Saltillo, Mexico. Presented by Dr. Edward Palmer, December 1,
1899.
4041.
From Saltillo, Mexico. Presented by Dr. Edward Palmer, December 1,
1899.
4042. *CELTIS BERLANDIERI*. **Palo Blanco.**
From Saltillo, Mexico. Presented by Dr. Edward Palmer, December 1,
1899.
4043. *BYRSONIMA CRASSIFOLIA*. **Coliguana or Nance.**
From Colima, Mexico. Presented by Dr. Edward Palmer, December 1,
1899.

4001 to 4136—Continued.

4044. ACROCOMIA SCLEROCARPA. **Palm.**
From Acapulco, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4045. **Trompa.**
From Acapulco, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4046. EUGENIA. **Capulin.**
From Acapulco, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4047. CORDIA ALBA. **Sasanil.**
From Acapulco, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4048. LEUCAENA GLABRATA. **Guaje.**
From Acapulco, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4049. VITEX MOLLIS. **Collo tomate.**
From Colima, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4050. MABA ALBENS. **Coacollutillo.**
From Acapulco, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4051. CASEARIA NITIDA. **Frutilla.**
From Colima, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4052. OPUNTIA. **Red-fruited tuna.**
From Durango, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4053. OPUNTIA. **White-fruited tuna.**
From Durango, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4054. OPUNTIA. **Red-fruited tuna.**
From Durango, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
Tuna durasneios.
4055. OPUNTIA. **White-fruited tuna.**
From Durango, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
Tuna durasneios.
4056. OPUNTIA. **Tuna cardona.**
From San Luis Potosi, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4057. OPUNTIA. **Tuna toconostle.**
From Zacatecas, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4058. OPUNTIA. **Tuna morada.**
From San Luis Potosi, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4059. OPUNTIA. **Tuna jarrilla.**
From San Luis Potosi, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.
4060. OPUNTIA. **Tuna blanca cristalina.**
From San Luis Potosi, Mexico. Presented by Dr. Edward Palmer, December 1, 1899.

4001 to 4136—Continued.

4061. *OPUNTIA*. **Tuna amarilla.**
From San Luis Potosi, Mexico. Presented by Dr. Edward Palmer,
December 1, 1899.
4062. *OPUNTIA*. **Tuna chavena.**
From Zacatecas, Mexico. Presented by Dr. Edward Palmer, December
1, 1899.
4063. *OPUNTIA*. **Tuna camucsá.**
From San Luis Potosi, Mexico. Presented by Dr. Edward Palmer,
December 1, 1899.
4064. *OPUNTIA*. **Tuna cuija.**
From San Luis Potosi, Mexico. Presented by Dr. Edward Palmer,
December 1, 1899.
4065. *PITHECOLOBIUM DULCE*. **Huamúchil.**
From Guaymas, Mexico. Presented by Dr. Edward Palmer, December 1,
1899.
4066. *VITEX MOLLIS*. **Collo tomate.**
From Colima, Mexico. Presented by Dr. Edward Palmer, December 1,
1899.
4067. *LINDERA BENZOIN*. **Spice-bush or Wild allspice.**
From Gage, Tenn. Received through Mr. J. H. H. Boyd, December 18,
1899.
4068. *YUCCA CONSTRICTA*. **Spanish dagger.**
From Benson, Ariz. Received through Mr. W. T. Swingle, December 18,
1899.
4069. *PHASEOLUS RETUSUS*. **Metcalfé bean.**
From Silver City, N. Mex. Received through Mr. J. G. Smith, December
21, 1899. Grown by Mr. Jas. K. Metcalfe, Silver City, N. Mex.
4070. *PHASEOLUS ANGUSTISSIMUS*. **Wild bean.**
From Silver City, N. Mex. Received through Mr. J. G. Smith, December
21, 1899. Grown by Mr. Jas. K. Metcalfe, Silver City, N. Mex.
4071. *HILARIA CENCHROIDES*. **Curly mesquite.**
From Silver City, N. Mex. Received through Mr. J. G. Smith, December
21, 1899.
4072. *BOUTELOUA HUMBOLDTIANA*. **Spruce-top.**
From Silver City, N. Mex. Received through Mr. J. G. Smith, December
21, 1899.
4073. *RUELLIA BOURGAIL*.
From National Herbarium, Washington, D. C., March, 1900.
4074. *AGROPYRON SPICATUM*. **Bunch grass.**
From North Yakima, Wash. Presented by Mr. A. B. Leckenby, of
Rainier, Wash. Received January 8, 1900.
4075. *AGROPYRON SPICATUM*. **Bunch grass.**
From Wenatchee, Wash. Presented by Mr. A. B. Leckenby, of Rainier,
Wash. Received January 8, 1900. (See No. 4074.)
4076. *OPUNTIA BIGELOVIL*. **Cholla.**
From Arizona. Received through Mr. W. T. Swingle, December, 1899.
Collected at Ventana Canyon, 12 miles northeast of Tucson, Ariz.
4077. *OPUNTIA ARBUSCULA, MONOSPERMA*.
From Arizona. Received through Mr. W. T. Swingle, December 11, 1899.
4078. *OPUNTIA ARBUSCULA*.
From Arizona. Donated by Prof. J. W. Toumey, of the University of
Arizona, through Mr. W. T. Swingle, December 11, 1899.

4001 to 4136—Continued.

4079. *OPUNTIA VERSICOLOR*.
From Arizona. Received through Mr. W. T. Swingle, December 11, 1899.
Collected at the Ventana Canyon, 12 miles northeast of Tucson, Ariz.
4080. *UMBELLULARIA CALIFORNICA*. **California laurel.**
From Berkeley, Cal. Received through Mr. W. T. Swingle, January 24, 1900.
4081. *LAGENRIA PATTERSONI*.
From California. Received through Prof. Charles H. Shinn, of the California Agricultural Experiment Station, January 25, 1900.
4082. *FRAXINUS VELUTINA*. **Arizona ash.**
From California. Received through Prof. Charles H. Shinn, of the California Agricultural Experiment Station, January 25, 1900.
4083. *CERASUS ILICIFOLIA, INTEGRIFOLIA*. **Cherry-holly.**
From California. Received through Prof. C. H. Shinn, of the California Agricultural Experiment Station, January 25, 1900.
4084. *RHUS LAURINA*. **Sumach.**
From California. Received through Prof. C. H. Shinn, of the California Agricultural Experiment Station, January, 25, 1900.
4085. *YUCCA WHIPPLEI*. **Spanish bayonet.**
From California. Received through Prof. C. H. Shinn, of the California Agricultural Experiment Station, January 25, 1900.
4086. *DASYLIRION WHEELERI*. **Sotol.**
From Bowie, Ariz. Presented by Prof. J. W. Toumey, January 26, 1900.
4087. *AGAVE PALMERI*.
From Bowie, Ariz. Presented by Prof. J. W. Toumey, January 26, 1900.
4088. *YUCCA ELATA*.
From Bowie, Ariz. Presented by Prof. J. W. Toumey, January 26, 1900.
4089. *AGAVE SCHOTTII*.
From Bowie, Ariz. Presented by Prof. J. W. Toumey, January 26, 1900.
4090. *OPUNTIA LAEVIS*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4091. *OPUNTIA RAFINESQUII*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4092. *OPUNTIA RAMOSISSIMA*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4093. *OPUNTIA RAMOSISSIMA*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4094. *OPUNTIA BASILARIS*.
From California, opposite Yuma, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4095. *OPUNTIA MICRODASYS*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4096. *OPUNTIA TETRACANTHA*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.

4001 to 4136—Continued.

4097. *OPUNTIA SPINOSIOR*, NEOMEXICANA.
From Ventana Canyon, 12 miles northeast of Tucson, Ariz., altitude, 3,000-3,500 feet. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4098. *OPUNTIA SPINOSIOR*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4099. *OPUNTIA FULGIDA*, MAMMILATA.
From Ventana Canyon, 10 miles northeast of Tucson, Ariz., altitude, 3,000 feet. Received through Mr. W. T. Swingle, December, 1899.
4100. *OPUNTIA SPINOSIOR*.
From Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4101. *OPUNTIA LAEVIS*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4102. *OPUNTIA ACANTHOCARPA*.
From Tempe, Ariz. Received through Mr. W. T. Swingle, November, 1899.
4103. *OPUNTIA ARBUSCULA*, MONOSPERMA. (?)
From Ventana Canyon, 12 miles northeast of Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4104. *OPUNTIA ARBUSCULA*, MONOSPERMA.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4105. *OPUNTIA CHLOROTICA*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4106. *OPUNTIA ENGELMANNI*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4107. *OPUNTIA FULGIDA*. Cholla.
From Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4108. *OPUNTIA LEPTOCAULIS*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4109. *OPUNTIA LEPTOCAULIS*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4110. *OPUNTIA MICRODASYS*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4111. *OPUNTIA SPINOSIOR*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4112. *OPUNTIA SPINOSIOR*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4113. *OPUNTIA SPINOSIOR*, NEOMEXICANA.
From Arizona. Received through Mr. W. T. Swingle, December, 1899.
4114. *OPUNTIA TETRACANTHA*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.

4001 to 4136—Continued.

4115. *OPUNTIA BIGELOVII*. Cholla.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, November, 1899.
4116. *ECHINOCACTUS WISLIZENI*. Visnaga, or fishhook cactus.
From Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4117. *KOEBERLINIA SPINOSA*. Christ thorn.
From Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4118. *ACACIA GREGGII*.
From Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4119. *ACACIA CONSTRICTA*.
From Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4120. *OPODANTHERA UNDULATA*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4121. *ASTRAGALUS THURBERI*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4122. *CELTIS PALLIDA*.
From Ventana Canyon, near Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4123. *CUCURBITA FOETIDISSIMA*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4124. *EPHEDRA TRIFURCA*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4125. *KOEBERLINIA SPINOSA*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4126. *LYCIUM ANDERSONII, WRIGHTII*.
From Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4127. *MICRORHAMNUS ERICOIDES*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, 1899.
4128. *MICRORHAMNUS ERICOIDES*.
From Ventana Canyon, near Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4129. *MORANDA WISLIZENI*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, 1899.
4130. *PARKINSONIA MICROPHYLLA*.
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, 1899.
4131. *PINUS EDULIS*. Piñon pine.
From Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4132. *PROSOPIS VELUTINA*. Mesquite.
From Arizona. Received through Mr. W. T. Swingle, December, 1899.

4001 to 4136—Continued.

4133. *PSILOSTROPHE COOPERI*.
From Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4134. *RUMEX HYMENOSEPALUS*. **Canaigre.**
From Tucson, Ariz. Donated and determined by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.
4135. *COVILLEA TRIDENTATA*. **Creosote bush.**
From Tucson, Ariz. Received through Mr. W. T. Swingle, November, 1899.
4136. *AGAVE SCHOTTII*. **Amole, or soap root.**
From Tucson, Ariz. Donated by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899.

4137-4250.

From Naples, Italy. Received through Dr. Carl Sprenger, November, 1899.

This comprises a collection of small samples of seeds of the indigenous leguminous plants of Italy, secured by Dr. Sprenger, of Villa Rispoli, San Giovanni à Teduccio, near Naples, and presented by him to this Section. The quantities are too small for distribution. They will be used in experiments conducted by this Department. They are as follows: Distributed.

4137. *ASTRAGALUS BAETICUS*.
4138. *ASTRAGALUS CANADENSIS*.
4139. *ASTRAGALUS FALCATUS*.
4140. *ASTRAGALUS GALEGIFORMIS*.
4141. *SECURIGERA CORONILLA*.
4142. *CORONILLA SCORPIOIDES*.
4143. *DOLICHOS ANGUSTIFOLIUS*. **Bean.**
4144. *DOLICHOS UNGUICULATUS*. **Bean.**
4145. *DOLICHOS ORNATUS*. **Bean.**
4146. *DOLICHOS ORNATUS, ALBUS*. **Bean.**
4147. *ERVUM ERVILIA*. **Lentil.**
4148. *ERVUM LENS*. **Lentil.**
4149. *ERVUM LENS, NIGRUM*. **Lentil.**
4150. *ERVUM LENS, PUNCTATUM*. **Lentil.**
4151. *ERVUM LENS, VIRIDIS*. **Lentil.**
4152. *ERVUM PUNCTATUM*. **Lentil.**
4153. *ERVUM TENORII*. **Lentil.**
4154. *VICIA FABA*. **Horse bean.**
4155. *GALEGA OFFICINALIS*. **Goat's rue.**
4156. *GLYCERRHIZA ECHINATA*. **Licorice.**
4157. *HEDYSARUM CORONARIUM*. **Sulla.**
4158. *LATHYRUS ALATUS*. **Vetch.**
4159. *LATHYRUS CICER*. **Vetch.**
4160. *LATHYRUS CLYMENUS*. **Vetch.**
4161. *LATHYRUS COCCINEUS*. **Vetch.**
4162. *LATHYRUS ELEGANS*. **Vetch.**
4163. *LATHYRUS AURICULATUS*. **Vetch.**
4164. *LATHYRUS NAPOLEONIS*. **Vetch.**

4137-4250—Continued.

4165.	LATHYRUS ODORATUS.	Vetch.
4166.	LATHYRUS OCHRUS.	Vetch.
4167.	LATHYRUS SATIVUS.	Vetch.
4168.	LUPINUS ALBUS.	Lupin.
4169.	LUPINUS ELEGANS, CÆRULEUS.	Lupin.
4170.	LUPINUS LUCIDUS.	Lupin.
4171.	LUPINUS MUTABILIS.	Lupin.
4172.	LUPINUS VARIUS.	Lupin.
4173.	LUPINUS VENUSTUS.	Lupin.
4174.	MISSING.	
4175.	ONOBRYCHIS SATIVA.	Sainfoin.
4176.	MEDICAGO ARBOREA.	Tree medic.
4177.	MEDICAGO ARENARIA.	Medic.
4178.	MEDICAGO HISPIDA.	Medic.
4179.	MEDICAGO CASPICA.	Medic.
4180.	MEDICAGO DECANDOLEI.	Medic.
4181.	MEDICAGO DENTICULATA.	Medic.
4182.	MEDICAGO HISPIDA, HYSTRIS.	Medic.
4183.	MEDICAGO LACINIATA.	Medic.
4184.	MEDICAGO LITTORALIS.	Medic.
4185.	MEDICAGO LAPPACEA.	Bur clover.
4186.	MEDICAGO ORBICULARIS.	Bur clover.
4187.	MEDICAGO TURBINATA.	Bur clover.
4188.	MEDICAGO SARDOA (?)	Medic.
4189.	MEDICAGO SATIVA.	Alfalfa.
4190.	MEDICAGO SCUTELLARIA.	Bur clover.
4191.	MELILOTUS TOMMASINII.	Melilot.
4192.	MELILOTUS BICOLOR.	Melilot.
4193.	MELILOTUS BONPLANDIA.	Melilot.
4194.	MELILOTUS INTESTA.	Melilot.
4195.	MELILOTUS MACRORHIZA.	Melilot.
4196.	MELILOTUS OFFICINALIS.	Yellow sweet clover.
4197.	MELILOTUS ROTUNDIFOLIA.	Melilot.
4198.	MELILOTUS PARVIFLORA.	Melilot.
4199.	MELILOTUS VULGARIS.	Melilot.
4200.	PHASEOLUS COMPRESSUS, ATROPUNCTATUS.	Bean.
4201.	PHASEOLUS COMPRESSUS, CARNEUS, FLAVESCENS.	Bean.
4202.	PHASEOLUS COMPRESSUS, CARNEUS.	Bean.
4203.	PHASEOLUS COMPRESSUS, CERVINUS.	Bean.
4204.	PHASEOLUS ELLIPTICUS, ALBUS.	Bean.
4205.	PHASEOLUS ELLIPTICUS, ATROPURPUREUS.	Bean.
4206.	PHASEOLUS ELLIPTICUS, HELVOLUS, VARIEGATUS.	Bean.
4207.	PHASEOLUS ELLIPTICUS, MESOMELOS.	Bean.
4208.	PHASEOLUS ELLIPTICUS, FERRUGINEUS.	Bean.

4137-4250—Continued.

4209.	PHASEOLUS ELLIPTICUS, PICTUS.	Bean.
4210.	PHASEOLUS ELLIPTICUS, SPADICEUS.	Bean.
4211.	PHASEOLUS GONOSPERMUS, ORYZOIDES.	Bean.
4212.	PHASEOLUS GONOSPERMUS, VARIEGATUS.	Bean.
4213.	PHASEOLUS OBLONGUS, ALBUS.	Bean.
4214.	PHASEOLUS OBLONGUS, ZEBRINUS.	Bean.
4215.	PHASEOLUS OBLONGUS, AUREOLUS.	Bean.
4216.	PHASEOLUS OBLONGUS, CERVINUS.	Bean.
4217.	PHASEOLUS OBLONGUS, CARNEO-PUBESCENS.	Bean.
4218.	PHASEOLUS OBLONGUS, SPADICEUS.	Bean.
4219.	PHASEOLUS OBLONGUS, SPHAERICUS, MINOR.	Bean.
4220.	PHASEOLUS SPHAERICUS, PICTUS.	Bean.
4221.	PHASEOLUS VULGARIS, ALBUS, MICROSPERMUS.	Bean.
4222.	PHASEOLUS VULGARIS, NIGER, NITIDUS.	Bean.
4223.	PHASEOLUS VULGARIS, OCHRACEUS.	Bean.
4224.	PHASEOLUS VULGARIS, ZEBRA, CARNEUS.	Bean.
4225.	PHASEOLUS VULGARIS, ZEBRA, PURPUREUS.	Bean.
4226.	PHASEOLUS VULGARIS, VARIEGATUS.	Bean.
4227.	PHASEOLUS VULGARIS, SPADICEUS.	Bean.
4228.	PISUM SATIVUM ABYSSINICUM, SACCHARATUM.	Pea.
4229.	PISUM ARVENSE.	Pea.
4230.	PISUM MARITIMUM.	Pea.
4231.	PISUM SATIVUM.	Pea.
4232.	PISUM SATIVUM, ABYSSINICUM.	Pea.
4233.	PISUM SATIVUM, SACCHARATUM.	Pea.
4234.	PISUM THEBAICUM.	Pea.
4235.	TRIFOLIUM ANGUSTIFOLIUM.	Clover.
4236.	TRIFOLIUM HYBRIDUM.	Alsike clover.
4237.	TRIFOLIUM INCARNATUM.	Crimson clover.
4238.	TRIFOLIUM MOLINERIX.	Clover.
4239.	TRIFOLIUM OCHROLEUCUM.	Clover.
4240.	TRIFOLIUM PRATENSE.	Red clover.
4241.	TRIGONELLA FOENUM-GRÆCUM.	Fenugreek.
4242.	TRIGONELLA GLADIATA.	
4243.	VICIA ANGUSTIFOLIA.	Vetch.
4244.	VICIA ATROPURPUREA.	Vetch.
4245.	VICIA DASYCARPA.	Vetch.
4246.	VICIA NARBONENSIS.	Vetch.
4247.	VICIA SATIVA.	Spring vetch.
4248.	• VICIA SATIVA, MACROCARPA.	Vetch.
4249.	VICIA SATIVA, NIGRA.	Spring vetch.
4250.	VICIA WABIANA.	Spring vetch.

4251. ZEA MAYS.**Corn.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 320), December 28, 1899.

A corn for roasting. Matures in 90 days. Like Nos. 3999 and 4000. Said to be superior to any variety grown in Egypt from European seed. (Reprinted from Inventory No. 6.)

4252. LINUM USITATISSIMUM.**Flax.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 321), December 28, 1899.

The Egyptian flax is of inferior quality, but grows in regions which are dry. It receives only two irrigations, and may be of use in crossing with northern flaxes for drier lands. (Reprinted from Inventory No. 6.)

4253. ARACHIS HYPOGAEA.**Peanut.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 322), December 28, 1899.

Seed peanuts from the cultivator who took the first prize at last year's exposition of the Khedivial Agricultural Society of Cairo. Reported especially rich in oil and extensively grown for oil production. Deserve testing in irrigated dry regions of the South especially. (Reprinted from Inventory No. 6.) Distributed.

4254. TRIFOLIUM ALEXANDRINUM.**Egyptian clover.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 323), December 28, 1899.

Berseem Muscovi. The great fodder crop of Egypt. As a catch crop, considered in lower Egypt as unequaled by any other plant. Winter culture is necessary for its success, as the hot summers kill or seriously injure the plants. The variety 'Muscovi' has been grown successfully in England, according to Mr. George P. Foaden, secretary of the Khedivial Agricultural Society. It would be advisable to sow this variety as follows: In regions which can be irrigated, sow broadcast at the rate of not less than 40 pounds per acre. In Egypt as high as 50 and 60 pounds per acre are sown upon the mud left after subsidence of the Nile, or upon soil previously thoroughly overflowed by means of the irrigation ditches. Seed should be sown immediately after the subsidence of the water, directly on the mud. As the plants are very sensitive to cold, the seed should not be sown until all danger of frost is over. In Egypt the seed is sown toward the end of October and the first cutting can be made after 45 to 50 days, while if sown 20 days later, when cooler weather has set in, 70 days are required by the crop to reach a stage fit for cutting. If planted here in October, it is often left in the soil until the following June and five cuttings taken. This Muscovi variety is suited only for well-irrigated land, as it requires much water. For seed, the last cutting is omitted in June and the plants allowed to go to seed. This variety is not sown with wheat or barley and in this respect differs from the two following varieties, Saida and Fache. A thorough trial should be made to utilize this most important crop in America. (Reprinted from Inventory No. 6.)

4255. TRIFOLIUM ALEXANDRINUM.**Egyptian clover.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 324), December 28, 1899.

Saida. This variety is the dry land sort, requiring comparatively little water but giving fewer cuttings than the Muscovi variety. It should be sown after irrigation, as in case of the latter variety, but requires much less water subsequently. Any attempts to grow it as a summer crop in very warm regions will fail, for it is distinctly a cool-season crop in Egypt. The three varieties mentioned have perfectly distinct uses, which should not be disregarded in any attempted culture. The tendency of the Saida variety is to trail or creep along the ground. Large quantities of seed, 40 to 50 pounds per acre, are considered profitable for sowing. (For general statement see No. 4254.) (Reprinted from Inventory No. 6.)

- 4256. TRIFOLIUM ALEXANDRINUM. Egyptian clover.**
 From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 325),
 December 28, 1899.
Fache. This is a strong, upright growing variety of Berseem which is especially adapted to precede cotton or sugar cane. It is cut only once. It requires less water than the Muscowi (No. 4254). It is sown on the overflowed land which is not irrigated. It is often sown with wheat or barley, the wheat or barley being sown first, the Fache added broadcast. (Reprinted from Inventory No. 6.)
- 4257. ZEA MAYS. Corn.**
 From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 326),
 December 28, 1899.
 The variety *Nabarawi* field corn, a variety especially suited for irrigated land in hot climates like Florida or Arizona. Said to be superior to any variety grown in Egypt from European seed. This is a field variety. (Reprinted from Inventory No. 6.)
- 4258. CAPSICUM ANNUM. Pepper.**
 From Capri, Italy. Received through Messrs. Lathrop and Fairchild (No. 327),
 December 28, 1899.
 A sample of seed of a native variety of red pepper; very uniform in size and shape; dark red. Bought in market at Capri; many-seeded; very showy color. (Reprinted from Inventory No. 6.) Distributed.
- 4259. CAPSICUM ANNUM. Pepper.**
 From Luxor, Egypt. Received through Messrs. Lathrop and Fairchild (No. 328),
 December 28, 1899.
 A variety of very hot peppers introduced into upper Egypt from the Soudan. Found growing in garden of Hadji Hammed Mohammed at Luxor. Fruits bright red, very small when ripe, and full of flavor. The plant is a perennial in hot countries, but bears in one year from seed; highly prized by the natives. (Reprinted from Inventory No. 6.) Distributed.
- 4260. CAPSICUM ANNUM. Pepper.**
 From Assuan, Egypt. Received through Messrs. Lathrop and Fairchild (No. 329),
 December 28, 1899.
 Soudanese red pepper bought in the market in Assuan in dried state; a small form resembling bird pepper in shape and color. (Reprinted from Inventory No. 6.) Distributed.
- 4261. CAPSICUM ANNUM. Pepper.**
 From Luxor, Egypt. Received through Messrs. Lathrop and Fairchild (No. 330),
 December 28, 1899.
 Dark red, few-seeded, vigorous grower, reported of Italian origin, from garden of Hadji Mohammed. (*Distributed.*) (Reprinted from Inventory No. 6.)
- 4262. LAWSONIA INERMIS. Henna.**
 From Edfu, Egypt. Received through Messrs. Lathrop and Fairchild (No. 331),
 December 28, 1899.
 Seeds of the henna are ground and used for dyeing cloth a dull red; also used by the Arabs for dyeing the palms of the hands and the finger nails. A desert shrub 9 or 10 feet high that deserves trial, as it lives without water from irrigation. Should be tried as hedge plant in southern California. Grows easily from cuttings. Blossoms white, fragrant. (Reprinted from Inventory No. 6.) It is one of the best hair dyes. Distributed.

4263. LIPPIA NODIFLORA.**Lippia.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 332), December 28, 1899.

"According to Ascherson and Schweinfurth the Lippia is a native of Egypt. It has probably been used for lawn purposes for a great many years.

"It is a low, creeping plant of the Verbena family, with broad, flat, obovate leaves of a deep green color. The creeping stems throw out roots wherever they come in contact with the earth, and form thick mats of herbage. It is well known that in regions with climatic conditions similar to those of Egypt, grass lawns are generally very difficult to maintain. Although there are several substitutes for lawn grasses, none that I have seen are as good as Lippia. Owing to its rapid growth, the plant can be mown closely, and to a layman the lawn effects resemble closely those produced by English lawn grasses.

"In order to plant a lawn with Lippia the ground is prepared as it would be for the reception of grass seed. A mass of old Lippia is dug from some neighboring lawn or field. The native gardener cuts off or breaks off two or three long cuttings of the plant, makes a hole with a pointed stick in the soft earth, thrusts the cuttings, doubled up, into the hole and packs the earth securely about them. These cuttings are placed about 4 to 6 inches apart, quite irregularly over the field. They are given plenty of water, being sprinkled every day until well started. In winter in Egypt the lawns made of this Lippia are watered every four to five days, while in summer they are kept green by daily waterings. Every twenty days the lawns are gone over with a scythe and in this way kept quite closely mown. There is no evident reason why a lawn mower would not answer the purpose better than a scythe.

"Lawns of Lippia will last five to six years without renewing. Whenever a patch gets old or is injured by the shade of some tree, it is very easily repaired by setting new cuttings.

"While, according to the statement of Mr. Colombo of the Gizeh Gardens, no grasses form in Cairo a real sod, this plant produces a permanent sod lasting five to six years.

"The Lippia deserves a thorough trial as a lawn plant in southern California, Arizona, Texas, and Florida. Just what degree of hardiness it will show remains to be seen. It is not exposed to a temperature below freezing here in Cairo, except at extremely long intervals. Whether it is injured then or not I have been unable to ascertain. Although, during the hottest part of the summer, the lawns of Lippia wear a much less vigorous look than they do in winter, yet, from the fact that they are able to withstand the extreme heat and dryness of the Egyptian summer, it is evident that the plant is well suited for hot dry climates. It is to be hoped this will prove a valuable new lawn plant for the parks and gardens of the South." (Fairchild.)

It is well to note that this plant is already quite commonly introduced, especially in the Southern States. It occurs in low, moist situations from North Carolina to Florida, Texas, and Missouri, and is also present in California. So far as known it has not been utilized as a lawn plant in this country, although it is recognized as having some value as a sand-binder on the South Atlantic and Gulf coasts. Distributed.

4264. MANIHOT GLAZIOVII.**Ceara rubber.**

Presented by Rear-Admiral Crowninshield, Chief of the Bureau of Navigation. Received October 13, 1899.

"Ceara rubber occupies the second rank and it would undoubtedly be equal to Para rubber if the sap were collected by some method so that it would not include so much foreign stuff. Ceara rubber is very elastic, dry, and not sticky unless it is impure, but when impure the loss in bulk amounts often to 25 per cent. It is derived from a euphorbiaceous tree, *Manihot glaziovii*, which is native in the Provinces of Rio de Janeiro and Ceara. The tree grows to a height of about 30 feet with a round head. It has 3- to 7-lobed gray-green leaves, in shape and size resembling those of the castor bean plant. The trees may be tapped for rubber when they are 3 years old, or when the stem diameter attains 4 or 5 inches. The rubber collector first scrapes the loose dirt and stones away from under the tree and then covers the ground with broad leaves in order to catch the dripping sap. He then strips the bark from the trunk to a height of 4 to 5 feet, making a number of spiral incisions. The thick viscid milk flows from these incisions. Some of it runs down to the ground, but most of it remains on the trunk. It requires a good many days to dry completely. It is then broken off in long string-like pieces, which are rolled together in a ball or are simply packed in sacks. The product is then ready for market without further preparation." (Semmler.) Distributed.

4265. CUCURBITA MAXIMA.**Squash.**

From Cairo, Egypt. Received through Messrs. Lathrop and Fairchild (No. 304a), December 28, 1899.

A small, round variety. Both this variety and No. 3985 were compared with 15 European sorts grown in Egypt and found superior to them, both in amount of flesh and in sweetness. The trials were made by Mr. George Bonaparte, of Gizeh, near Cairo. (Reprinted from Inventory No. 6).

4266. TRITICUM VULGARE.**Wheat.**

From Japan. Presented by Prof. Setsusehuro Tawaka, of the Agricultural College, Imperial University, Komaba, Tokyo, Japan. Received January 4, 1900.

Aka-Yemide. A small sample of a red chaff variety of wheat. Distributed.

4267. TRITICUM VULGARE.**Wheat.**

From Japan. Presented by Prof. Setsusehuro Tawaka, of the Agricultural College, Imperial University, Komaba, Tokyo, Japan. Received January 4, 1900.

Shiro-Yemide. A small sample of a white chaff wheat. Distributed.

4268. STACHYS AFFINIS.**Crosne.**

Grown in Pennsylvania from stock imported from France. Received January 6, 1900.

Chinese artichokes. "The most important of the new vegetables introduced by Paillieux from China. I find them very good and think they will find favor in America for much the same uses as new potatoes.

"This is a perennial herb with simple or branched four-sided stems, 12 to 16 inches high. The leaves are opposite, lance-shaped, cordate at the base, crinkled and rough, and the flowers are borne in whorls of 4 to 6 on the upper part of the stems. The tubers are borne on the rootstocks in the same manner as potatoes. They resemble a string of coarse beads closely crowded together and flattened at their ends. When prepared according to French methods, the tubers are cooked from twelve to fifteen minutes. If boiled for a longer time they soften and become watery. They are served with sauces like broad beans, and possess a delicious but delicate flavor. They may be fried or cooked in a variety of ways or may be used in salads alone or with other vegetables. They also make fine pickles with onions, peppers, and gherkins. The plant is hardy, resisting severe cold. It is propagated from the tubers. These are set out in rows in a rich, loamy, clay soil very early in the spring, about potato-planting time. They are covered to the depth of 6 or 8 inches in hills 16 inches apart. The weeds are kept down during the summer, but the ground must not be stirred after the 1st of October, so as not to disturb the new tubers which are forming about that time. They will be ready to dig in November. The chief difficulty with the stachys is the difficulty of keeping the tubers after digging. They should be stored in a cellar in dry sand or earth and kept at a low temperature until required for the table. In France yields of 5 or 6 tons of stachys tubers per acre are often obtained. The stachys is a lover of moist, cool situations and does not thrive where exposed to great heat." (*Swingle.*) Distributed.

4269. CITRULLUS VULGARIS.**Watermelon.**

From Monetta, S. C. Received January 4, 1900.

Mathis. A new watermelon of superior quality and productiveness, shaped like the Kolb Gem, but larger, brighter green, with brighter stripes, and white seeds. The melons range from 30 to 100 pounds in weight and average from 700 to 1,000 to the carload. A carload (32,000 pounds) shipped from Monetta during the season of 1899 contained 700 melons, which averaged 46 pounds each. The vines are very thrifty and prolific. The yield often reaches 1 carload per acre. The *Mathis* is a fine shipper. Plant and cultivate as for other watermelons.

4270. HECHTIA.

From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December 18, 1899.

For foreign exchange.

4271. CUCURBITA?

From Morenos, Sonora, Mexico. Received through Mr. W. T. Swingle, December 18, 1899.

For foreign exchange.

4272. JACQUINIA PUNGENS.

From Hermosillo, Mexico. Received through Mr. W. T. Swingle, November 18, 1899.

For foreign exchange.

4273. IPOMOEA ARBORESCENS.**Palo santo.**

From Morenos, Sonora, Mexico. Received through Mr. W. T. Swingle, November 16, 1899.

For foreign exchange.

4274. SAPIUM BIGLANDULOSUM.**Tolima rubber.**

From England. Received December, 1899.

Tolima rubber, or *White Virgin Rubber of the Andes*. (See No. 3820.) Distributed.

4275. TRITICUM VULGARE.**Wheat.**

From California. Received February 7, 1900.

Sonora. A winter wheat in mild climates. It has a reddish velvet chaff, without beards, and a white or reddish-white grain. It is rather productive and somewhat drought-resistant. It is adapted for the Pacific coast States and for growth under irrigation.

4276. TRITICUM VULGARE.**Wheat.**

From Washington. Received from Mr. L. F. Hammersmith, Lincoln County, Wash., January, 1900.

Lamona. Mr. Hammersmith describes this variety of wheat as follows: "It is the best drought-resistant wheat ever tried here, yielding from 20 to 30 bushels per acre of fine, plump kernels. It is a No. 1 milling wheat and sells for the highest price in our markets. This wheat was sown late last spring (1898) on a field where winter wheat had failed through being frozen out. It was planted almost too late for blue stem even." For trial in Kansas, Nebraska, Colorado, and Wyoming. Distributed.

4277. TRITICUM DURUM.**Wheat.**

From Texas. Received January 10, 1900.

Nicaragua. This variety is one of the macaroni wheats and has been grown on the Southwestern plains of the United States for a number of years. It is the only durum wheat that has yet gained any very great popularity in the country. But from the cultural standpoint it is so successful that only its general employment in macaroni making is needed to make it one of the most important of our wheat varieties. It is at present grown chiefly in Texas, but its area of cultivation needs to be much more widely extended. It is adapted for growing in a hot climate, and, though it requires considerable moisture at certain periods, it will mature a good crop with a less rainfall than is required by other varieties. It yields 30 to 40 bushels per acre in the black, waxy soils of central Texas, but will probably produce a grain of a little better quality farther westward, near the one hundredth meridian, where the soils are a little grayer and the climate drier. It is most successfully grown as a winter variety, at least as far north as the thirty-third parallel, and should be sown about November 1 to November 15 south of latitude 30° and about October 15 to November 1 between that parallel and latitude 33°. In Oklahoma and other districts farther north it will probably not survive the winter, but must be grown as a spring variety, and, if so, should be sown from February 1 to February 15, or as early as the opening of spring will allow. It should not be very thickly sown and should always be sown with a

drill. The crop should be harvested in as dry a condition as possible. Nicaragua will do well in the greater part of Texas, in Oklahoma, western Kansas, and eastern Colorado.

An analysis made by the chemical division of the Department of Agriculture shows that first-grade wheat of this lot contains 14.76 per cent nitrogen as albumin, whereas the second-grade wheat contains 16.31 per cent, an appreciably larger quantity. Distributed.

4278. AVENA SATIVA.

Oat.

From Ohio. Received January 9, 1900.

Early Ripe. An early ripening white oat with medium-length straw which stands up well. For trial in the Northern States. A very good yielder. Distributed.

4279. CUCUMIS MELO.

Winter muskmelon.

From Applegate, Cal. Presented by Col. John P. Irish, through Mr. W. T. Swingle. Received January, 1900.

Casaba. Colonel Irish says that this is a most delicious melon, having a taste somewhat resembling a mixture of muskmelon and watermelon, with a slight dash of cucumber, which is, however, an improvement. In shape and size it resembles the Hubbard squash, but is covered with long longitudinal stripes. These stripes become closer and finer as they approach the blossom end. There are no ribs and ridges as on the ordinary muskmelon. In color it is grayish green, and it keeps well far into the winter. Repeated inquiry for this melon in Eastern markets has proved unavailing. It may prove valuable for melon growers in the South. Distributed.

4280. TRITICUM VULGARE.

Wheat.

From New York. Received January 15, 1900.

Clawson Longberry. "A dark amber berry of the finest quality; is a giant in growth, with very strong straw; grain large and long. A longberry cross from the same parentage (on one side) from which Red Clawson came, but appearing superior to that sort as it was first sent out. It resembles, in some respects, Red Clawson in the field, but is a stronger grower and a more prolific stooler; has a stout, thick-walled, wiry straw of a light-yellow shade. Heads long, wide, and full, tending to club shape on all heavy soils. Chaff dark and free from beards; grain large, of true longberry type, and when grown on strong clay soils would be classed as light red. It delights in a strong clay or clay loam. On such soils, with thorough preparation, it will often yield 50 or more bushels per acre." (*Jones.*) Distributed.

4281. TRITICUM VULGARE.

Wheat.

From New York. Received January 15, 1900.

Pedigree Early Genesee Giant. "Originated from seedlings grown from a combination of crosses from the leading standard sorts. It is of strong growth and heavy root, with the ability to withstand spring frosts and summer drought, soon covering the ground with a dense growth of side shoots and leaves. It is adapted to a great variety of soils and will be of value to the farmer in cold, bleak sections of northern Illinois, Wisconsin, Iowa, and as far north and west as winter varieties can be grown. It does remarkably well even when sown late. It should be sown on rich, dark, loamy, strong, gravelly, or clay soils. On land liable to heave in the spring, it will prove of great value, as its strong roots and rapid growth quickly repair the slight thinning on wet soils. It grows a little above medium height and is short jointed and stocky, the wall of the straw being very thick and hard, resisting severe winds and rain storms to a remarkable degree without lodging. Heads are long, broad, and square, enlarged near the top and completely crowded out of shape with large, plump, medium-long kernels. A noticeable point in this sort is the prominent row of kernels through center of head, which in most varieties are in a degree deficient. The straw is very strong at the base of the head, which is carried upright even when overripe. Chaff smooth, thick, and hard, varying from a light to a dark-brown color with dark spots. Beards short with many lacking on side of heads and some growing only on short spurs. Grain large and plump, standing out very prominent on the head, of a light-amber shade, very hardy, and rich in gluten." (*Jones.*)

4282. TRITICUM VULGARE.**Wheat.**

From New York. Received January 15, 1900.

Early Arcadian. "Originated from a cross between Early Genesee Giant and Early Red Clawson, having the compact, square-built head, strong, medium-long straw, and light amber grain of Giant, and bald, brown chaff, earliness, and even growth in the field of Early Red Clawson. It is strong in growth, stocky and strong in straw, and a most prolific stooler. The straw is of a light yellow color, free from any purple shade, and exceptionally free from rust, and should be cut before it is overripe. It will prove one of the most reliable for all strong soils and river bottoms. On strong clay and gravelly clay it has given large yields." (*Jones.*)

4283. TRITICUM VULGARE.**Wheat.**

From New York. Received January 5, 1900.

Diamond Grit. "A very productive, hardy red winter wheat with strong wiry straw, and of sturdy growth. Straw is of medium height, thick-walled and wiry, of a light yellow color. Heads of medium length and carried nearly erect; grains close set, four or five abreast, short, plump, and dark, weighing 64 pounds to the measured bushel; chaff lightly bearded, thick and small, holding the grain firmly in place, the middle row showing very prominent and full, giving the head a very solid appearance, being noticeable at a distance in the field. On clay and strong limestone soils it will be found to produce grain darker and more brilliant than when grown on poor, light land." (*Jones.*) Distributed.

4284. VIGNA CATJANG.**Cowpea.**

From Virginia. Received January 15, 1900.

Taylor. Sow the seed broadcast about corn-planting time, or scatter in the corn rows at the last cultivation, using 10 to 16 quarts per acre. The vines may be cut for hay or turned under for green manure. (See Farmers' Bulletin No. 89.)

4285. GLYCINE HISPIDA.**Soy bean.**

From Richmond, Virginia. Received January 15, 1900.

Yellow. An erect, branching, hairy annual, with large compound leaves, each composed of three leaflets; inconspicuous pale violet flowers in small clusters in the axils of the leaves, and broad, several-seeded pods covered with stiff bristly hairs. The seeds are rounded and pale yellow in color. The plant thrives in medium or rich soil. The seeds should be planted in drills about 3 feet apart and cultivated until the plants are large enough to shade the ground. Cut for hay when the first pods are forming, and for seed before thoroughly ripe. This is a medium variety for the South.

4286. RHAGODIA HASTATA.**Saltbush.**

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

Halbert-leaved saltbush. "A divaricately branched undershrub, attaining often a height of 6 feet. The whole plant is covered with a gray tomentum, intensified in dry seasons. Leaves are mostly opposite, ovate-hastate in outline, about 1 inch or less long on short stalks. The flowers are small, clustered on slightly branched terminal spikes. The fruit is a succulent red berry. The aborigines of Central Australia, of the Dieyerie tribe, collect these berries and use them as an article of food; they call the shrub *Yillaroo*. The drought enduring qualities of this plant are phenomenal. Stock of all description are particularly fond of it. It grows easily in the natural way by seed, and it has been successfully grown from cuttings. It stands clipping well and can be recommended as a hedge plant. Sow 6 feet apart after autumn rains." (*Koch.*)

4287. ENCHYLAENA TOMENTOSA.

From South Australia. Received through Mr. Max Koch, of Mount Lyndhurst, January 18, 1900.

"A procumbent or divaricately branched undershrub, sometimes ascending, or even erect. The branches are hoary or silvery with a woolly tomentum, sometimes gla-

brous. The leaves are linear, entire, an inch long or less; flowers axillary, solitary, and sessile. The fruit consists of the succulent calyx inclosing one seed. The fruit is either yellow or red in color, and the aborigines of the Dieyerie tribe, of Central Australia, eat them in great quantities. It is drought enduring. When other herbs become scarce this plant is greedily eaten by sheep. The plant grows from seed; to be planted 4 feet apart after the early autumn rains." (Koch.)

4288. KOCHIA APHYLLA.

Cottonbush.

From South Australia. Received through Mr. Max Koch, of Mount Lyndhurst, January 18, 1900.

"Considered by Baron von Mueller a variety of *K. villosa*. Aboriginal name in the Dieyerie dialect of South Australia, *Bulka*, also *Poondoo-Poondoo*. A rigid intricately branched, scrubby shrub with slender, sometimes spinescent, branches growing 2 to 3 feet high. The leaves are minute, often deciduous, varying in length from one-eighth to one-half inch. The fruiting calyx is furnished with a horizontal membranous wing, which is finely veined and spreads to nearly three-fourths of an inch in diameter. Considered the best of the *Kochias*. Horses or cattle fatten on it quickly. It makes good chaff cut up with *Mulga* (*Acacia aneura*), and *black oak*, (*Casuarina glauca*). It grows well on alluvial flats along water courses. Should be planted 6 feet apart in February or March, after rain." (Koch.)

4289. KOCHIA BREVIFOLIA.

Bluebush.

From South Australia. Received through Mr. Max Koch, of Mount Lyndhurst, January 18, 1900.

"A rather slender, mostly erect, undershrub growing about 2½ feet high. The branches and foliage are clothed with short woolly hairs. The leaves are alternate, sessile, linear, and about one-fourth inch long. The fruiting calyx is bordered by 5 horizontal membranous wings. Herbivora of all kinds are remarkably fond of this shrub, which is, like all the *Kochias*, very hardy. The seeds should be sown 3 feet apart during the early autumn months after rain." (Koch.)

4290. KOCHIA VILLOSA.

Cottonbush.

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"An undershrub of erect, spreading or decumbent habit, more or less covered with silky, villous wool. The leaves are alternate, linear, thick, and soft, about one-half to three-fourths inch long. The fruits resemble those of *K. aphylla*. As this plant is not so robust in growth as *K. aphylla* it has become rather scarce through long droughts and close cropping, but it is well worthy of conservation and cultivation. Plant at about the same time as *K. aphylla*, in rows 3 feet apart." (Koch.)

4291. KOCHIA PYRAMIDATA.

Bluebush.

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"Aboriginal name is *Koonambirra*, also *Ooneroo*. A divaricately branched shrub, growing 3 to 4 feet high. The leaves are alternate, linear, obtuse, thick, and soft, and often clustered in the axils. The fruiting calyx is an entire, annular, membranous wing with a pyramidal membranous appendage. In severe seasons, when herbage or grass has long disappeared, the usefulness of this shrub as a fodder is inestimable. Seed should be sown in autumn, 6 feet apart." (Koch.)

4292. ATRIPLEX ANGULATA.

Saltbush.

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"A spreading saltbush; aboriginal name, in the Dieyerie dialect of Central Australia, *Maltoo*. A dwarf shrubby plant with spreading branches of about 2 feet. The leaves are on rather long stalks and are variable in shape and size. The fruiting calyx is flat-stalked, membranous, and angular. This annual is fairly plentiful in the district and is extensively cropped by cattle, sheep, and horses, and is certainly a valuable constituent of the winter or spring pasture." (Koch.)

4293. ATRIPLEX HALIMOIDES.**Saltbush.**

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

Annual saltbush. "A widely distributed procumbent or diffuse underbush, attaining a height of 1 foot or more. The leaves are variable in form, mostly ovate-lanceolate or rhomboidal, from 1 to 1½ inches in length. This plant is peculiar to the arid saline country; it is a good fodder plant and has the reputation, like all the species of *Atriplex*, of preventing fluke in sheep. In fact, these plants have been known to entirely cure sheep badly afflicted with this or other distoma diseases, when kept grazing for a few months on these salinous plants." (*Turner.*)

4294. ATRIPLEX KOCHIANUM.**Saltbush.**

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"This perennial (or annual, with a woody base), is a comparatively new plant, first brought under notice by the writer and described by Mr. J. H. Maiden, director of the Botanic Gardens, Sydney, New South Wales. It is thinly distributed in the vicinity of Mount Distance and is a good fodder plant. It is nearest allied to *A. vesicarium*, which it much resembles in habit and foliage, and from which it is chiefly distinguished by the short and broad segments of the fruiting calyx, which are scarcely half as long as the dorsal appendages." (*Koch.*) Distributed.

4295. HETERODENDRUM OLEAEFOLIUM.**Mondera.**

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"A tall shrub, sometimes a tree. Leaves lanceolate or narrow, oblong, from 2 to 4 inches in length, leathery and often rigid. The hot winds and long spells of dry weather have little effect in checking its growth, and during the time when other fodders are scarce it is a valuable standby for the flock owners, who cut down large quantities for forage, which cattle and sheep greedily feed upon. The seeds should be sown during the early autumn months after rain. The aborigines of the Dieyerie tribe call this shrub *Mondera*. They eat the seed." (*Koch.*)

4296. BAUHINIA CARRONII.**Bean tree.**

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"Every traveler speaks highly of this tree on account of its attractive appearance and the dense shade its foliage affords. (?) I have one of them growing in my garden. Not having seen the plant in flower I am not quite certain whether the seed I send you is of *Bauhinia carronii* or *B. leichhardtii*. The tree thrives in a moist position, in alluvial flats liable to be inundated after rains. The seed should be softened by pouring boiling water over it and soaking it for twenty-four hours or more before sowing, in February or March. The aborigines of the Dieyerie tribe called the tree *Moodloo*, and the seeds are eaten by them." (*Koch.*) Distributed.

4297. PITTOSPORUM PHILLYRAEOIDES.**Pittospre.**

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

Willow leaved. "A small tree, attaining a height of from 15 to 20 feet, with its smaller branches pendulous, giving the tree a graceful appearance. When the fruits are developed the tree is an object of beauty and may be classed with the ornamental plants. The leaves are linear-lanceolate, from 2 to 5 inches in length, of a thick texture. The foliage, which is cut down in times of scarcity, yields fodder for cattle and sheep. The seeds, though very bitter, but not poisonous, used to be pounded up into flour by the blacks, made into cakes, roasted in the ashes, and eaten. The name of the tree in the Dieyerie dialect of central Australia is *Madroo*. Sow the seed in February or March, after rain. It does not succeed in moist situations." (*Koch.*)

4298. EREMOPHILA LONGIFOLIA.

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"A tall, erect shrub of a slightly hoary appearance, from 10 to 15 feet high; leaves scattered, linear-lanceolate, 3 to 5 inches long, tapering into recurved points. Flowers about 1 inch long, dull red, velvety outside. The sacred tree of the blacks, who call it *Kooyamurra* in the Dieyerie dialect of central Australia. The aborigines use the branches of this tree, or large shrub, for the sacred purpose of covering their dead. The wood is used also in certain operations by the blacks. A piece of wood of the *Kooyamurra* about 6 inches long is pointed at one end sufficiently sharp to pierce the nose, the partition of which the operator takes in his left hand, while he pierces it with the right. Before and after the operation the men and women sing, believing that by singing a great deal of pain is taken away from the child. After the hole is made a large quill is inserted to prevent it from closing up and kept there until the wound is thoroughly healed. This operation is inflicted on boys or girls at the age of from 5 to 10 years and is called Moodla-willpa, which means nose hole. Another performance in which the wood of the *Kooyamurra* is used is the Chirrin-chirrie, or extraction of the teeth. This cruel and painful practice consists in knocking out two front teeth of the upper jaw. Two pieces of the *Kooyamurra* tree, each about a foot long, are sharpened at one end to a wedge-like shape, then placed on either side of the tooth to be extracted and driven between as tightly as possible. The skin of a wallaby, in two or three folds, is then placed on the tooth about to be drawn, after which a stout piece of wood about 2 feet long is applied to the wallaby skin and struck with a heavy stone, two quick blows being sufficient to loosen the tooth, which is then pulled out by the hand. This operation is repeated on the second tooth. To stop the bleeding, damp clay is placed on the holes whence the teeth were extracted." (From G. Gason's "*The Dieyerie Tribe of Central Australia.*")

4299. EREMOPHILA MACULATA.

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"A tall, handsome shrub with rigid, spreading branches, nearly glabrous. The flowers, which are very numerous, are red, more or less variegated with yellow, and dotted inside. Besides the lovely flowers, it retains its distinctive evergreen appearance during the driest weather, and is a conspicuous feature among the surrounding vegetation. It is well worth cultivating for its ornamental qualities. The aboriginal name is *Nanyoo*." (Koch.)

4300. MYOPORUM MONTANUM.**Myrtle bush.**

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"A large shrub, leaves narrow lanceolate, acute, on long stalks, corolla white, with violet dots inside and bearded, flowers in clusters from 3 to 6. The aboriginal name in the Dieyerie dialect of Central Australia is *Adloo*. The fruits are eaten by the blacks." (Koch.)

4301. TRIBULUS HYSTRIX.

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"This annual herb, with long prostrate branches and pinnate leaves, the leaflets of which are obliquely oblong in about 7 pairs, produces an abundance of good fodder for all herbivora during the hot summer months. The seeds germinate readily in October or November after a good rain, but they are somewhat prickly and objectionable in the fleeces of sheep. Nevertheless it is a very useful fodder and worthy of trial. The aboriginal name in the Dieyerie dialect is *Koola*." (Koch.)

4302. ABUTILON MITCHELLI.**Abutilon.**

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"An undershrub, growing from 2 to 3 feet high, with large, velvety leaves and showy, yellow flowers. Like all species of mallows, this is favorably known as a

hardy fodder plant, which possesses also some claim as an ornament, and can be recommended either as a garden or fodder plant. Seeds sown in March or February, about 4 feet apart, after rain, will readily germinate, and under favorable conditions develop into presentable plants the first year." (Koch.)

4303. EREMOPHILA DUTTONII.

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"An ornamental shrub, attaining a height of 5 to 8 feet. Corolla orange red; calyx segments much enlarged after flowering; leaves narrowly lanceolate. Aboriginal names in the Dieyerie dialect of central Australia: *Kaltya, hlaya*." (Koch.)

4304. ELEUSINE CRUCIATA.

Eight-day grass.

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

Summer grass. "This annual, which starts into growth any time from October to the end of February, after a sufficient fall of rain, is valuable on account of its extremely quick growth, especially when the country has been reduced to a desert through the long absence of rain. A few days after a rain in summer it will produce fodder for sheep, and keep them going until the slower-growing grasses or herbs yield a crop. This grass grows on alluvial flats, especially in sandy soils. The aboriginal name in the Dieyerie dialect is *Wallamoorroo*." (Koch.)

4305. ACACIA SENTIS.

Prickly wattle.

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

Bramble Acacia. A small, spreading, thorny tree, sometimes 30 to 40 feet high, with linear or lanceolate phyllodes; occurring in all the colonies of Australia. In western New South Wales "its presence is considered to be a sure indication of underground water. It resists drouth and heat very well, probably because of the enormous depths to which its roots penetrate. Mr. Scott, in sinking wells in the Grey Ranges, northwest New South Wales, traced the roots down to a depth of 80 to 90 feet." (*Maiden*). "The timber is soft, but tough. A light-colored gum of good quality is produced sparingly. The bark contains some tannin. The seeds are eaten by the Australian blacks." (*V. Mueller*.) "Cropped by herbivora in dry seasons and receiving special attention from the camel at all times. Can also be tried as a hedge plant, as it stands clipping well. Seed should be steeped in water for a day or two before sowing in February or March. The aboriginal name in the Dieyerie dialect is *Kalyoo*." (Koch.) Distributed.

4306. BASSIA DALLACHYANA.

From South Australia. Received through Mr. Max Koch, Mount Lyndhurst, January 18, 1900.

"An undershrub of erect habit, cottony, growing about 1 foot or more high. The branches are clothed with wool; the leaves are sessile linear, obtuse, thick, soft, and densely tomentose, about one-half to one inch long; the flowers are mostly in pairs and crowded into terminal leafy spikes; the fruiting calyx is nearly globular, membranous and densely woolly tomentose. It is eaten by sheep, but when in fruit I believe it to be injurious to them. As a fodder plant it therefore can not be recommended, yet it may be useful to ascertain whether the cottony substance of the fruiting calyx be suitable for manufacture of cotton or felt. These plants produce this cottony or woolly material in great quantities, which, when matured, can easily be stripped off with the hand. The time to sow, like the *Atriplex*, is in early autumn, 3 feet apart." (Koch.)

4307. TRITICUM VULGARE.

Wheat.

From Michigan. Received January 19, 1900.

Budapest. "A red, bearded, winter wheat, with rather hard grains, and ripening fairly early. It has narrow compact heads, well filled. Introduced into Michigan from Hungary by C. G. A. Voigt, of Grand Rapids. The grain is dark red in

color and possesses a good gluten content. Adapted for trial in the North Central States. It will stand considerable drought and rather hard winters. Should be sown early in September." (*Curleton.*) Distributed.

4308. SORGHUM VULGARE. Sorghum.

From Kansas. Received January, 1900.

Colman. Grown from selected seed at Medicine Lodge during the season of 1896. An improved variety containing a high percentage of sucrose. Distributed.

4309. SORGHUM VULGARE. Sorghum.

From Kansas. Received January, 1900.

Collier. Grown from selected seed at Medicine Lodge during the season of 1899. An improved variety containing a high percentage of sucrose. Distributed.

4310. SORGHUM VULGARE. Sorghum.

From Kansas. Received January, 1900.

Folger's. Grown from selected seed at Medicine Lodge during the season of 1899. An improved variety containing a high percentage of sucrose. Distributed.

4311. SORGHUM VULGARE. Sorghum.

From Kansas. Received January, 1900.

Amber. Grown from selected seed at Medicine Lodge during the season of 1899. An improved variety containing a high percentage of sucrose. Distributed.

4312. SORGHUM VULGARE. Sorghum.

From Kansas. Received January, 1900.

Edgar. Grown from selected seed at Medicine Lodge during the season of 1889. An improved variety containing a high percentage of sucrose. Distributed.

4313. GOSSYPIMUM HERBACEUM. Cotton.

From Georgia. Received January 22, 1900.

Truitt's Big Boll. "A very hardy, prolific variety developed by careful selection and good cultivation by Mr. George W. Truitt in dry, hilly upland of medium fertility at La Grange, Ga. Plants large, 3 to 5 feet high, with rather long, spreading limbs; leaves firm in texture; bolls very large, about 2 inches long, roundish; maturing rather late; lint 30 to 32 per cent of the weight of seed cotton; staple three-quarters to seven-eighths of an inch. This is one of the hardiest and best drought-resisting varieties of the Piedmont region, and has borne good crops even under adverse conditions. It is recommended as one of the most prolific varieties for the upland region of the cotton belt. Plant in drills 4 feet apart, leaving plants 15 inches apart in the drill. Keep the surface of the ground well cultivated until the time of flowering. Save seeds for planting from early pickings from the most prolific plants." (*Devey.*)

4314. ZIZANIA AQUATICA. Wild rice.

From Minnesota. Received January 22, 1900.

"A tall, erect annual, 3 to 10 feet high, growing in shallow water along rivers and lakes from Canada southeast to Florida and westward to Texas. The grain is a favorite food of the reed bird, and it is cultivated to some extent by sportsmen with a view to attracting these and aquatic fowls. It grows very rapidly in 1 to 8 feet of water, and matures its seeds in August or early September. It succeeds best when sown in the fall broadcast in 2 to 3 feet of water having a muddy bottom, but it can be sown in spring, in water from 6 inches to 5 feet deep. Before sowing soak the seeds in water a few hours, so that they will sink readily. This grass is abundant in the tide waters of the rivers of the Middle States—notably, in the Delaware below Philadelphia, where it is designated as 'the reeds.' This grass is the 'manorrim' of the Chippewa Indians, who gather the grain for food." (*Scribner.*)

4315. VIGNA CATJANG.**Cowpea.**

From North Carolina. Received January 22, 1900.

Wonderful. This is one of the best cowpeas grown in the South. It is semierect, with large and abundant foliage, and is a prolific yielder both of vine and seed. Sow the seed broadcast about corn-planting time, or scatter in the corn rows at the last cultivation, using 10 to 15 quarts per acre. The vines may be cut for hay or turned under for green manure. (See Farmers' Bulletin No. 89.)

4316. VIGNA CATJANG.**Cowpea.**

From North Carolina. Received January 22, 1900.

Southern. This is the most commonly cultivated variety in the South. It is very prolific, but does not compare with the "Wonderful" in amount of seed or forage. Sow the seed broadcast about corn-planting time, or scatter in the corn rows at the last cultivation, using 10 to 15 quarts per acre. The vines may be cut for hay or turned under for green manure. (See Farmers' Bulletin No. 89.)

4317. VIGNA CATJANG.**Cowpea.**

From North Carolina. Received January 22, 1900.

Black. One of the earliest cowpeas; suitable for cultivation in the North. Sow the seed broadcast about corn-planting time, or scatter in the corn rows at the last cultivation, using 10 to 15 quarts per acre. The vines may be cut for hay or turned under for green manure. (See Farmers' Bulletin No. 89.)

4318. VIOLA TRICOLOR.**Pansy.**

From New York. Presented by M. Beaulieu, of Wood Haven, January 23, 1900.

Mille Cecile Davy. An improved strain of giant pansy.

4319. AMARANTHUS PANICULATUS.**Common amaranthus.**

From India. Received through the Division of Agrostology, January 24, 1900.

An annual weed which is cultivated as a food plant in the hill country of southern India. The seeds are parched, ground, and made into cakes with sugar. The green leaves are also used as a vegetable.

4320. PINUS GERARDIANA.**Neosia.**

From India. Received through the Division of Agrostology, January 24, 1900.

"A medium-sized pine found in the arid parts of northwestern India and Afghanistan. The seeds are collected and stored, and form an important item in the food supply of the region." (*Church.*)

4321.

From Ferndale, Wash. Presented by Dr. A. W. Thornton, January 17, 1900.

Some Chilean nuts from Valdivia. Adapted only to the citrus belt of California or Florida. Distributed.

4322. CITRULLUS VULGARIS.**Tsamma melon.**

From Berkeley, Cal. Presented by Prof. Charles H. Shinn, of the California Experiment Station. Grown in California from seed imported from South Africa by the Division of Agrostology through Prof. Peter MacOwan.

A forage melon from the Kalahari Desert of South Africa. The fruits are small, 4 to 6 inches in diameter, but are produced in the greatest abundance. It is said that travelers crossing the deserts of South Africa depend largely upon them for water for their stock. Of value for introduction in the deserts of southern California and Arizona.

4323. QUERCUS SUBER.**Cork oak.**

From Fayal, Azores. Donated by Mr. Caleb Wilkinson, United States consul at St. Michaels, Azores, through Hon. Geo. H. Pickerill, January 26, 1900.

"In Portugal and Spain the best way of growing the cork oak is found to be by scooping a shallow hole in the ground about 18 inches in diameter, stirring the earth well, then making a small mound of earth in the middle of the hole, on the top of which the acorn is placed on its side. A couple of handfuls of earth are then put over the acorn lying on the flattened top of the mound and a little brushwood on the weather side of the hole to protect the seedling. Rich ground or manure is unnecessary; in fact the harsher and drier the ground the better is the quality of the cork." (*Caleb Wilkinson.*) Distributed.

4324. EUCHLAENA LUXURIANS.**Teosinte.**

From Florida. Received January 27, 1900.

"This stout, leafy grass, 8 to 10 or 12 feet high, resembling Indian corn, to which it is botanically closely related, has been cultivated in various parts of the South and West. It has a habit of tillering or sending up many—20 to 50—stalks from the same root. From this habit the bulk of fodder produced to the acre is very large, probably unequalled by any other grass. It is liked by all kinds of stock and has a special value as a green fodder when other forage is dried up. It may be cut several times during the season, but nearly as good results will be obtained from a single cutting made just before frost. The stalks are tender, and there is no waste in the fodder when dry or green. One pound of seed to the acre, planted in drills 3 feet apart and thinned to a foot apart in the drill, is recommended. It is a native of the warmer portions of Central America and Mexico. The seed rarely matures north of southern Florida." (*Tracy.*) Distributed.

4325. GOSSYPIUM HERBACEUM.**Cotton.**

From Louisiana. Received January, 1900.

Lewis Prize. "A prolific variety developed by Mr. W. B. F. Lewis, of Tangipahoa Parish, La., yield of seed cotton nearly as great as that of the most prolific big boll varieties and percentage of lint nearly 35½ per cent. Although developed near the Gulf coast and at only a small elevation above tide water, it proved during the dry season of 1899 to be very hardy and very prolific at the Georgia Experiment Station, 45 miles south of Atlanta. It is recommended for trials in alluvial lands in all parts of the cotton belt except at the north, where the season may be too short. Plant in deep, rich, sandy loam or in clay loam, made mellow by deep cultivation, in drills 4 feet apart, leaving plants about 18 inches apart in the row. Keep the surface soil well stirred by frequent cultivation until the time of flowering." (*Dewey.*)

4326. GOSSYPIUM HERBACEUM.**Cotton.**

From Naples, Italy. Received February, 1900.

Neapolitan. One of the best varieties of cotton recently developed in the principal cotton-growing district of Italy, near Naples; fiber of medium length, very fine. A rich, deep, mellow soil is preferable for this variety. Prepare the land as for the cultivation of upland cotton. Plant in drills 4 feet apart, leaving them about 15 inches apart. Distributed.

4327. GOSSYPIUM HERBACEUM.**Cotton.**

From Alabama. Received January, 1900.

Russell's Big Boll. "A variety developed by careful cultivation and selection from seed from a very prolific plant found in 1893 by Mr. J. T. Russell in his cotton fields in Alabama. Plant erect, broadly pyramidal, with spreading branches, and rather stout central stalk 3 to 6 feet high; bolls large, 1¾ to 2¼ inches long, rounded, somewhat clustered along the branches; lint of medium length, about three-fourths of an inch, averaging about 32 per cent of the weight of the seed cotton. Fifty-four bolls yield 1 pound of seed cotton. In variety tests at several of the experiment stations during the past two years, Russell's Big Boll has proved to be one of the most prolific varieties, and especially during the dry season of 1899, it exhibited remarkable

drought-resistant qualities. Although producing a larger crop than most varieties on poor, dry upland, it responds well to better conditions. Forty bales have been produced on 14 acres. Plant in drills 4 feet apart, leaving plants 15 inches apart. Give thorough surface cultivation until the time of flowering. Keep the picking up as closely as possible to prevent loss from lint falling out, although the loss from this source is not likely to be greater than in other big boll varieties. Save seeds for planting from early pickings from the best plants." (*Dewey.*)

4328. GOSSYPIUM BARBADENSE.

Egyptian cotton.

From Texas. Received January, 1900.

Matafi. "The leading variety of Egyptian cotton imported by the U. S. Department of Agriculture and acclimated by five generations of cultivation by W. H. Wentworth in southern Texas. Plants robust, 4 to 7 feet high, with numerous spreading branches; leaves deeply 3-lobed; flowers large, yellow; bolls rather small, three-locked, numerous, scattered along the branches; lint light brown—lighter than the imported Egyptian cotton—soft, oily, strong, with well-developed twist, clinging together and remaining compact after the boll opens; staple about $1\frac{1}{4}$ inches long. A long, warm season is required for the growth of this cotton. It is desirable to have sufficient moisture during its early growth to induce a rapid development of the plant, followed by warm, dry weather while the bolls are forming, and to plant before the end of March, if possible, on an upland loamy soil long under cultivation. The bolls do not begin to form until the plant has attained nearly its full size, and in rich, moist land it continues to grow too long, producing large plants with few bolls. Plant in drills 6 feet apart, leaving plants about 30 inches apart in the row. Give frequent surface cultivation until time of flowering. Pick the cotton as soon as possible after the bolls open, as the fiber loses its luster and soft, oily qualities by long exposure to the weather. A roller gin must be used to obtain the fiber without injury and produce a good quality of cotton that will compare favorably with that imported from Egypt. Seed for planting should be saved from the early pickings from selected plants of the best type. A peck of seed should plant three-fourths of an acre, and under favorable conditions the yield should be at least three-fourths of a bale per acre." (*Dewey.*)

4329. GOSSYPIUM BARBADENSE.

Egyptian Cotton.

From Egypt. Received through Vilmorin, February, 1900.

Matafi. The leading variety grown in Egypt, where it is supposed to have developed from American Sea Island, early introduced there. A robust plant 4 to 7 feet high, pyramidal, with numerous spreading branches; leaves deeply three-lobed; bolls numerous, scattered along the branches, small, three-locked; seed black, with small tufts of green fiber at the ends; lint yellowish brown, fine, oily, soft, very strong, with well-developed twist making it cling together like wool, remaining compact after the boll opens; staple about $1\frac{1}{4}$ inches long. The lint averages about 33 per cent of the weight of seed cotton. The yield of this variety is usually higher than that of other Egyptian cottons. There is a demand for it at prices about double those of ordinary upland cotton. In Egypt it is cultivated throughout the cotton-growing region of the Nile delta, where very little rain falls from the time of planting in March to harvest time in November, but it is irrigated early in the season. It requires a long, warm, dry season and is recommended only for the southern part of the cotton belt in this country. It should be planted on upland sandy loam, in old cultivated land, in drills 5 or 6 feet apart, with plants about 30 inches apart in the drill. In rich moist soil more room will be needed, as large plants may be produced with few bolls. Frequent cultivation should be given until time of blooming. Picking should follow the opening bolls as soon as possible to prevent injury to the soft, oily qualities of the fiber by exposure to the weather. A roller gin must be used to obtain the fiber in a condition that will compare with that of the imported Egyptian cotton. The yield from the first planting of imported seed is likely to be less than that of later generations that have become acclimated. Seed for planting should be saved from early pickings from early maturing plants of the best type. (*Dewey.*)

4330. GOSSYPIUM BARBADENSE.

Egyptian Cotton.

From Egypt. Received through Vilmorin, February, 1900.

Abasi. "A variety of long staple cotton developed by selection in Egypt from the variety known as "Kafiri," which in turn was obtained from Matafi. It has a spreading habit, branching from near the base; leaves rather deeply three-lobed,

similar to those of Sea Island cotton, from which it is supposed to be remotely descended; bloom large and yellow; bolls small, three-locked, sharp-pointed; lint white, fine, silky, remaining compact after the bolls open; fiber about $1\frac{1}{4}$ inches long, very strong, with a well-developed twist, making it cling together like wool. The best Abbasi brings the highest price of any cotton produced in Egypt. The Abbasi requires a long season, and may succeed well in this country only in the southern part of the cotton belt, where it may be planted in March and harvested as late as November. A rather dry, sandy loam upland, retaining moisture below the surface, is best for its growth. Fertilize and prepare the land as for ordinary upland cotton. Plant in rows about 5 feet apart, leaving the plants 20 inches apart in the row; cultivate sufficiently to keep the surface continually mellow until the plants begin to bloom. Pick as soon as possible after the bolls are open, to prevent injury to the lint from exposure. The fiber should be ginned on a roller gin to obtain the best results and produce a fiber that will compare favorably with imported Egyptian cotton. Seed for planting should be selected from the early pickings, which usually produce the best fiber. Previous trials of this variety in this country indicate that the yield the first year is likely to be smaller than after the plants have become acclimated by growing here two or three generations." (*Dewey.*)

4331. *GOSYPIUM HERBACEUM.*

Cotton.

From Arkansas. Received February, 1900.

Eldorado. "A recently developed variety of much promise. Plant robust, erect, 46 feet high, with numerous spreading branches; bolls above medium size, very numerous, giving a large yield of seed cotton, maturing early; lint below the average percentage, because of the comparatively large seed, but with long staple, commanding one-quarter to 1 cent above the average market price. Its growth and production at the experiment station at Newport, Ark., during the last three years, indicate it to be the most profitable variety for that region. It is recommended for trial in sandy loam or alluvial soils. Plant in drills $4\frac{1}{2}$ to 5 feet apart, leaving plants 20 inches apart in the drill." (*Dewey.*)

4332. *LOTUS ULIGINOSUS.*

Swamp Clover.

From France. Received February 2, 1900.

This is a slender, branching clover with heads of rather large, yellow flowers, and slender, elongated pods. It is a native of Northern Europe, where it is esteemed for swampy meadow lands. It is now cultivated in Wisconsin and Minnesota on sour, peaty, or muck soils.

4333. *MUCUNA UTILIS.*

Velvet bean.

From Florida. Received January, 1900.

The velvet bean is apparently a native of India, and has been in cultivation as an ornamental garden plant for a good many years. It is believed to have been first introduced into this country by the Department of Agriculture for this purpose about 25 or 30 years ago. In favorable localities it often forms vines 30 to 50 feet in length. It is an excellent plant for quickly covering unsightly objects or arbors. The purple flowers are borne in clusters at intervals of 2 to 3 feet at the joints of the stem. These are followed by clusters of short, cylindrical pods, covered with the black, velvety down which has given the name to the plant. Each pod contains 3 to 6 large, rounded, brown and white mottled seeds. The pods are constricted laterally between the seeds, and are often more or less curved.

In Florida the seed is sown in drills 4 feet apart, from 2 to 4 seeds being planted in hills 2 feet apart in the row. The seed may be dropped in furrows when the ground is plowed and covered 2 to 3 inches deep. The crop should be cultivated several times. In orange groves and orchards the beans may be sown in drills 4 to 5 feet apart, and not less than 5 feet away from the trees, in order to keep the vines out of them. They make a better mulch crop in the orchard than cowpeas, because when the vines are cut down by a frost they form a tangled mass which retains the leaves and protects the soil from rain and sun. The leaves stay on the vines longer than on cowpeas. Farther north the seeds should be sown thicker, in drills 2 to 3 feet apart, or broadcast at the rate of 1 to 2 bushels per acre. The velvet bean makes its best growth on the lighter, sandy soils.

4334. POA SUDETICA.**Lawn grass.**

From France. Received February 2, 1900.

A good grass for shaded lawns.

4335. NICOTIANA TABACCUM.**Tobacco.**

From France. Received February 2, 1900.

Aromatic Turkish. The Turkish tobaccos are similar to the bright cigarette tobaccos of Virginia and the Carolinas. The plants are small, with very small leaves, and must be planted 18 to 24 inches apart in the rows. They require similar cultivation in the field and similar methods of curing to the bright tobaccos. Distributed.

4336. VICIA FULGENS.**Scarlet vetch.**

From France. Received February 2, 1900.

"An Algerian vetch with handsome red flowers. It is an annual and grows with extraordinary vigor, reaching a height of 6 to 8 feet and yielding an abundance of excellent forage. Dr. Trabut, who introduced the species into culture, reports that at the experiment station of Rouïba, near Algiers, it yields 40 tons of green fodder to the acre. The great drawback of this most promising vetch is that the pods when ripe snap open, especially under the influence of hot winds, and scatter the seeds, rendering their collection very difficult and the seed in consequence high priced. It is sown in autumn before the first rains, in Algeria, either alone or with winter oats. It occasionally produces seed abundantly. It is to be hoped that some region may be found in the United States where there is a sufficiently humid atmosphere during the ripening period of the pods to prevent their scattering the seeds. It might be possible to breed varieties which would hold the seed better. This vetch is most likely to succeed in the Southern States and on the Pacific slope." (*Swingle.*) (See 3825 and 5574.)

4337. VICIA MACROCARPA.**Vetch.**

From France. Received February 2, 1900.

"A variety of the common vetch (*Vicia sativa*) differing in having larger leaves and especially by its very large inflated pods, which resemble those of some garden peas. It is a native in Algeria and is much liked by the Arabs who eat the pods when full grown but still succulent. It should be sown in autumn, and has succeeded best in warm regions, though it should also be tried in the North where it should be sown in the spring. It is worthy of trial as a forage plant." (*Swingle.*)

4338. CANNABIS SATIVA.**Hemp.**

From Naples, Italy. Received February 5, 1900.

Giant of Naples, large seeded. "The best hemp on the market in this country comes from Italy. In Italy the seed is sown on deep, mellow, well-stirred soil at the rate of 2½ bushels per acre. The ground is well fertilized. The crop is harvested when the tops become yellow and the base of the stalks turn white. The male plants mature and are harvested first; the seed plants 20 to 24 days later. After cutting the plants are dried in a shady place. In favorable soils Italian hemp averages a yield of 1,700 to 2,200 pounds of dry stalks per acre, which produces 450 to 530 pounds of fiber." (*Dodge.*) Distributed.

4339. CANNABIS SATIVA.**Hemp.**

From Naples, Italy. Received February 5, 1900.

Giant of Naples, small-seeded. The best hemp on the market from this country comes from Italy. In Italy the seed is sown on deep, mellow, well-stirred soil. Sow as early as the ground is ready, 1 bushel per acre, broadcast for fiber, and cut when in full bloom. For seed, plant in drills 3 feet apart, 2 quarts of seed per acre. (See No. 4338.) Distributed.

4340. HORDEUM VULGARE.**Barley.**

From Naples, Italy. Received February 5, 1900.

Altamura. One of the best varieties of Italian barleys. For trial in the Southern States and in Texas.**4341. CANNABIS SATIVA.****Hemp.**

From Naples, Italy. Received February 5, 1900.

Giant Piedmont. In Italy the seed is grown on deep, mellow, well-stirred soils. Seed should be sown at the rate of 1 bushel per acre, broadcast for fiber, and cut when in blossom. For seed, 2 quarts per acre, in drills 3 feet apart. (See 4338.)**4342. TRITICUM VULGARE.****Wheat.**

From Naples, Italy. Received February 5, 1900.

Rieti. A bearded, winter wheat, with large, rather hard, red grains. It is fairly hardy and rather rust resistant. It is adapted to all winter wheat States east of the Rocky mountains, but especially to Kentucky, Tennessee, and the Southern States, where a rather hard, red, rust resistant wheat is desired.**4343. SECALE CEREALE.****Rye.**

From Naples, Italy. Received February 5, 1900.

Abruzzes. A superior rye grown in the Abruzzi province, a mountainous district east of Rome. This strain is one of the best grown in Italy. For trial in the South and in the Central and Southwestern States.**4344. AVENA SATIVA.****Oat.**

From Naples, Italy. Received February 5, 1900.

Black Hungarian. A rather prolific black side oat, which originated in Hungary. It is fairly hardy, quite rust resistant, and of excellent quality. It is well adapted for all middle latitudes of this country, but especially the Great Plains region. Seed should be sown as early in the spring as possible.**4345. CYNARA SCOLYMUS.****Artichoke.**

From Naples, Italy. Received February 5, 1900.

Large Early Green Naples. Distributed.**4346. CYNARA SCOLYMUS.****Artichoke.**

From Naples, Italy. Received February 5, 1900.

Large Green of Laon. "A vigorous, comparatively hardy plant, of medium height; leaves silvery gray, the ribs reddish, especially at the base, end without spines; stems stiff, erect, usually branching two or three times; heads large, broader than long, particularly remarkable for the breadth of the receptacle; scales very fleshy at the base, at first very closely pressed together, later opening out and the two upper rows slightly bent back; scales pale green, tinged with purple at the base, with few or no spines; stems 2½ to 3 feet high. A plant two years old will have three to four stems. It is a very early variety, but is the best for yielding heads every year of its cultivation. No other variety has such a thick, broad, fleshy receptacle or bottom. It comes fairly true from seed." (*Vilmorin.*) Distributed.**4347. CYNARA SCOLYMUS.****Artichoke.**

From Naples, Italy. Received February 5, 1900.

Purple of Venice. "A new variety." (*Dammann.*)

4348. CYNARA SCOLYMUS.**Artichoke.**

From Naples, Italy. Received February 5, 1900.

Remontant. "This is one of the best of all. The heads are very large, heavy, dark green, tinged with violet, and absolutely free of spines. The heads are tender and of fine flavor. It bears two crops each year, one in spring and the second in autumn." (*Dammann.*) Distributed.

4349. CYNARA SCOLYMUS.**Artichoke.**

From Naples, Italy. Received February 5, 1900.

Modica. "A giant variety, with glaucous green leaves, without spines. Very prolific and very early, the swollen bases of the scales tender and very thick." (*Dammann.*) Distributed.

4350. CYNARA SCOLYMUS.**Artichoke.**

From Naples, Italy. Received February 5, 1900.

Terranova. "A medium large variety. Fruits very early and very numerous, earlier than any other known variety. Receptacle broad and thick. Bases of the involueral scales moderately thickened, violet, the apex without spines, but bent backward. An early market sort." (*Dammann.*) Distributed.

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Mr. Harlan

Organ

U. S. DEPARTMENT OF AGRICULTURE.

BUREAU OF PLANT INDUSTRY—BULLETIN No. 5.

B. T. GALLOWAY, Chief of Bureau.

Mr. F.

SEEDS AND PLANTS

IMPORTED THROUGH THE SECTION OF SEED AND PLANT INTRODUCTION FOR DISTRIBUTION IN COOPERATION WITH THE AGRICULTURAL EXPERIMENT STATIONS.

INVENTORY No. 9,
NUMBERS 4351-5500.

ISSUED JANUARY 18, 1902.



WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1902.

BUREAU OF PLANT INDUSTRY.

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SEED AND PLANT INTRODUCTION.

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U. S. DEPARTMENT OF AGRICULTURE.

BUREAU OF PLANT INDUSTRY—BULLETIN No. 5.

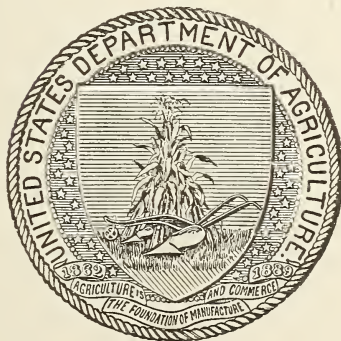
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LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF PLANT INDUSTRY,
OFFICE OF THE CHIEF,
Washington, D. C., September 10, 1901.

SIR: I have the honor to transmit herewith the manuscript of an inventory of seeds and plants imported for distribution in cooperation with the agricultural experiment stations. Many of these importations have proved to be of great value to the agricultural industries of the United States. Attention is called to the introductory statement (p. 5) for information regarding the distribution of the seeds and plants listed.

I recommend the publication of this manuscript as Bulletin No. 5 of the Bureau series.

Respectfully,

B. T. GALLOWAY,
Chief of Bureau.

HON. JAMES WILSON,
Secretary of Agriculture.

INVENTORY OF FOREIGN SEEDS AND PLANTS.

INTRODUCTORY STATEMENT.

This inventory or catalogue of seeds and plants received during the spring and summer of 1900 represents the collections of the agricultural explorers of the Department of Agriculture in foreign countries, and also the receipts from various other sources. Included in the list are the seeds of a large number of native plants obtained for exchange with botanists and horticulturists abroad, it being possible to secure in this manner many valuable seeds and plants not for sale by dealers.

An effort has been made to verify every name, but in many cases the only sources of information have been the persons from whom the seeds or plants were obtained, while in some cases only colloquial names were obtainable. It is probable, therefore, that some of the names will be found to be incorrect.

The publication of this list has been so long delayed that many of the numbers are already entirely exhausted, as indicated by the word "Distributed," and many others will probably be distributed before this inventory reaches the experimenters.

The supply of seeds and plants at the disposal of this office is in most cases quite limited, inasmuch as the importations are made for experimental purposes and not for general distribution, it being unwise to make the latter until the value of the plants distributed is known. Distribution of the plants here catalogued will be confined almost entirely to the agricultural experiment stations and to persons known to be careful and reliable experimenters. It must not be expected that all or even the greater part of the importations will prove valuable. However, it is important that records not only of successes but of failures be obtained in order that future work may be more successful.

It is especially desirable that all persons receiving seeds or plants should retain the original numbers marked on the packages, as all the reports or other information will be filed under these numbers, and in this way be easy of access.

ERNST A. BESSEY,
Assistant in Charge of Seed and Plant Introduction.

INVENTORY.

- 4351. VICIA FABA. Broad bean.**
From Naples, Italy. Received February 5, 1900.
Aguadulce, improved. A fine bean with pods 2 inches wide and 14 to 16 inches long, but few-seeded and with only three or four well-grown pods on each plant.
- 4352. VICIA FABA. Broad bean.**
From Naples, Italy. Received February 5, 1900.
Sevilla Long Pod. "Stem quadrangular, erect, 2 to 2½ feet high, not very stout, green or slightly tinged with red; foliage light green; flowers one or two to four in each cluster. The standard is greenish white, longer than broad, and remains folded in the center even when the flower is in full bloom. The first cluster of flowers usually appears in the axil of the seventh leaf from the base of the stem. The pods are about one-half inch wide and 8 to 12 inches long; solitary or in pairs, and soon become pendent by their weight. An early variety, but not very hardy." (*Vilmorin.*)
- 4353. VICIA FABA. Broad bean.**
From Naples, Italy. Received February 5, 1900.
Sicilian. A purple-seeded variety, smaller and less productive than the field bean.
- 4354. VICIA FABA. Broad bean.**
From Naples, Italy. Received February 5, 1900.
Neapolitan.
- 4355. BRASSICA OLERACEA BOTRYTIS. Broccoli.**
From Naples, Italy. Received February 5, 1900.
Purple Navidad. Early, dark purple.
- 4356. BRASSICA OLERACEA BOTRYTIS. Broccoli.**
From Naples, Italy. Received February 5, 1900.
Santa Teresa. "Early, purple, changing to green when cooked." (*Dammann.*)
- 4357. BRASSICA OLERACEA BOTRYTIS. Broccoli.**
From Naples Italy. Received February 5, 1900.
White San Isidor.
- 4358. BRASSICA OLERACEA BOTRYTIS. Broccoli.**
From Naples, Italy. Received February 5, 1900.
San Martinari. A purplish variety, which ripens in Italy in November.
- 4359. BRASSICA OLERACEA BOTRYTIS. Broccoli.**
From Naples, Italy. Received February 5, 1900.
Gennarese. A purplish variety, maturing in Italy in January.

4360. CICHORIUM INTYBUS. Chicory.

From Naples, Italy. Received February 5, 1900.

Asparagus. A variety which produces rosettes of much-thickened leaves. These are cooked and served cold, and are said to be delicious in salads.

4361. BETA VULGARIS. Chard.

From Naples, Italy. Received February 5, 1900.

Swiss Silver-ribbed. "A fine sort, with large, wide leaves, which are very wavy, half-erect, and remarkable for the size of their stalks and midribs, which are often 4 inches or more in width. Quite productive and of very good quality, with a delicate, slightly acidulous flavor. The leaves may also be used for greens, the lighter-colored ones being the best for this purpose. Chards sown in early spring commence to mature their stalks in July and continue well into the winter." (*Vilmorin.*) Distributed.

4362. BETA VULGARIS. Chard.

From Naples, Italy. Received February 5, 1900.

Curl'd Silver-ribbed. Almost as prolific as No. 4361, with leaves equally white but remarkably crimped and curled. The leafstalks are narrower, but of quite as good quality.

4363. BETA VULGARIS. Chard.

From Naples, Italy. Received February 5, 1900.

Chilian Scarlet. A very large kind, with long, stiff, almost erect leafstalks 2 or 3 inches wide. Leaves rather large, 2 to 2½ feet long, wavy, almost curled, dark green, with a metallic luster. The leafstalks are bright red. Often grown as an ornamental plant.

4364. BETA VULGARIS. Chard.

From Naples, Italy. Received February 5, 1901.

Chilian Yellow. A very large kind, with long, stiff, almost erect leafstalks 2 or 3 inches wide. Leaves rather large, 2 to 2½ feet long, wavy, almost curled, dark green, with a metallic luster. The leafstalks are a deep yellow. Often used as an ornamental plant.

4365. CUCURBITA PEPO. Vegetable marrow.

From Naples, Italy. Received February 5, 1900.

4366. CUCURBITA PEPO. Vegetable marrow.

From Naples, Italy. Received February 5, 1900.

White Cocozella of Tripoli.

4367. FENICULUM DULCE. Sweet fennel.

From Naples, Italy. Received February 5, 1900.

Largest of Sicily. A new Italian variety.

4368. FENICULUM DULCE. Sweet fennel.

From Naples, Italy. Received February 5, 1900.

Prince Bismarck. Remarkable for the very much thickened leafstalks.

4369. FENICULUM DULCE. Sweet fennel.

From Naples, Italy. Received February 5, 1900.

Morosini. A variety originated by Dammann in 1896. The sweetest, best, and most tender variety known. In three months from the seed it forms very large, golden yellow stalks and bright green, finely divided leaves. An excellent market-gardener's variety.

- 4370. FENICULUM DULCE.** **Sweet fennel.**
 From Naples, Italy. Received February 5, 1900.
Bolognese.
- 4371. BOEHMERIA NIVEA.** **Ramie.**
 From Naples, Italy. Received February 5, 1900.
 A perennial, native of eastern Asia, long grown in China and India. A fiber known as *China grass* is manufactured from the stems. Ramie requires a hot, moist climate, without extremes of temperature, and a rich, moist soil, so that growth shall be rapid and continuous during the season. The plant is propagated by seeds, cuttings, layers, and division of the roots. The seeds, when used, should be started in hot-beds and the beds shaded until the plants are 2 to 6 inches high, when they may be transplanted to the fields. The best method of propagation is by dividing the roots. The plant is ready for harvest when the seeds commence to ripen.
- 4372. CERATONIA SILIQUA.** **Carob.**
 From Naples, Italy. Received February 5, 1900.
 St. John's Bread, or Algaroba. (See No. 3112. Inventory No. 7.)
- 4373. HOVENIA DULCIS.** **Raisin tree.**
 From Naples, Italy. Received February 5, 1900.
 (See Nos. 3028 and 3310, Inventory No. 7.)
- 4374. NICOTIANA TABACUM.** **Tobacco.**
 From Naples, Italy. Received February 5, 1900.
Hungarian Debrö.
- 4375. NICOTIANA TABACUM.** **Tobacco.**
 From Naples, Italy. Received February 5, 1900.
Hungarian Czetneck.
- 4376. NICOTIANA TABACUM.** **Tobacco.**
 From Naples, Italy. Received February 5, 1900.
Hungarian Szegedin.
- 4377. VIGNA CATJANG.** **Cowpea.**
 From Naples, Italy. Received February 5, 1900, under the name of *Dolichos sphaerospermus*.
- 4378. PACHYRHIZOS TUBEROSUS.** **Yam-bean.**
 From Naples, Italy. Received February 5, 1900.
 "The yam-bean or ahipa is a native of Venezuela and other parts of South America up to elevated country. It climbs to a height of 20 feet and bears pods much larger than those of *P. angulatus*, which in a young state are used like French beans. When boiled they are tender and sweetish, but deleterious when raw. They are free from fibrous strings at the edge. Seeds variable in color. The tubers of three plants may fill a bushel basket. They mature in a few months. These edible tubers may attain a weight of 60 pounds." (*Von Mueller.*)
- 4379. VIGNA CATJANG.** **Cowpea.**
 From Naples, Italy. Received February 5, 1900, under the name of *Dolichos lobia*.
- 4380. DOLICHOS LABLAB.** **Madagascar bean.**
 From Naples, Italy. Received February 5, 1900.

- 4381. VIGNA CATJANG. Cowpea.**
From Naples, Italy. Received February 5, 1900, under the name of *Dolichos bahiensis*.
- 4382. VIGNA CATJANG. Cowpea.**
From Naples, Italy. Received February 5, 1900, under the name of *Dolichos biconortus*.
- 4383. DOLICHOS ATROPURPUREUS.**
From Naples, Italy. Received February 5, 1900.
- 4384. DOLICHOS SEMPERVIRENS.**
From Naples, Italy. Received February 5, 1900.
- 4385. PHASEOLUS CARACALLA.**
From Naples, Italy. Received February 5, 1900.
- 4386. PANICUM TEXANUM. Colorado grass.**
From Fort Worth, Tex. Received February 5, 1900.
(This seed was destroyed because of its low germination.)
- 4387. ZEA MAYS. Corn.**
From Texas. Received February 7, 1900.
Mexican June. This variety is much used in Mexico and southern Texas for late planting. In the southern half of the Gulf States it can be successfully grown after a crop of oats, millet, or wheat has been harvested. It is a white corn and the ears are of a good size, each stalk producing from one to three ears. The stalks attain a height of from 10 to 15 feet. The blades are more numerous than on most other varieties, making this valuable for forage or ensilage purposes. It is often planted between rows of Irish potatoes and other truck, and is suitable for rich bottom lands that become dry enough to plant early in June.
- 4388. MIMUSOPS BALATA. Balata.**
From Georgetown, British Guiana. Received February 7, 1900, from John Guillat.
This tree is the source of the balata gum of commerce, a substance closely resembling guttapercha, and substituted for it in many manufactures. It is a native of tropical South America. Distributed.
- 4389. CUCUMIS MELO. Winter muskmelon.**
From California. Received February 8, 1900. Presented by Ira W. Adams, of Calistoga, Cal.
"The seed of this valuable melon was procured by Dr. J. D. B. Stillman, at Smyrna, in 1879. It came from the city of Cassaba, in Asia Minor, a city celebrated for the fine quality of its melons. I found them to be the sweetest, spiciest, and most delicious melons I ever ate. I could compare them to nothing else I ever ate in the fruit line, unless it was to a ripe, luscious pineapple. I kept one of these melons through the winter of 1885, until April 3; it was then fully ripe and very delicious. They should be planted the same as other muskmelons and picked after the frost has killed the vines or nipped them pretty badly. Light frosts do not harm them in the least. Cut off the stem quite close to the melon and handle carefully, putting them in the coolest and driest place you have. If stored in a warm room they ripen very rapidly, and will be gone before the winter fairly sets in. This melon, unlike any other I have ever seen, when cut from the vine is very hard, especially two-thirds of it from the stem end, and quite rough and deeply corrugated, deflecting, however, very much from a straight line. The rind is of a grayish-green color, and can scarcely be indented with the thumb nail. The flesh is a creamy green and

very thick and firm. When fully ripe most of them turn a little yellow, some quite yellow, and a spot on the blossom end about the size of a half dollar will be found quite mellow on pressing it. This is an infallible test, and you may be sure the melon is fit to eat, notwithstanding it may still look green, and most of the rind may yet remain very hard. They are excellent feed for milch cows, calves, horses, and poultry. The average weight for salable melons is from 6 to 10 pounds, although I have raised a great many that weighed 12 to 15 pounds each, and one that weighed 19½ pounds. I have had these melons in my yard entirely exposed to the weather when the temperature was down to 32° and 30° above zero, without being harmed in the least. I plant the seeds of this melon here from the 1st to the 10th of May, in hills 6 feet apart each way, leaving finally two plants in a hill. I cultivate them thoroughly, once a week both ways, until the vines interfere." (*Adams.*) Distributed.

4390. ZEA MAYS. Corn.

From Tennessee. Received February 8, 1900.

Wellborn's Conscience. Seed destroyed.

4391. AVENA SATIVA. Oat.

From North Dakota. Received February 1, 1900.

White Russian. This is a very hardy oat, prolific and of excellent quality. It is admirably adapted for cultivation in the coldest latitudes of this country, having originated in a similar climate. It is about the most resistant to crown rust of all northern-grown varieties. Should be sown very early—as soon as the opening of spring will permit.

4392. TRITICUM COMPACTUM. Wheat.

From Idaho. Received February, 1900.

Little Club. This variety is one of the club group of wheats, and is commonly grown in Washington, Idaho, and Oregon. It may be sown in autumn or spring. The plant is short, with short but very compact, beardless heads, well filled. The grain is white, soft and starchy, rounded, and pointed, somewhat similar in shape to barley grains. It is adapted admirably to all Northwestern mountain States, but might also be tried in the more southern States if sown in October.

4393. ZEA MAYS. Corn.

From South Carolina. Received February, 1900.

Garick's Prolific. A white field corn with medium ears. Stalks stout, leafy, bearing two to five ears, which finally become pendent. An excellent variety for the South.

4394. MEDICAGO SATIVA. Alfalfa.

From northern Utah. Received February 8, 1900. Distributed.

4395. MEDICAGO SATIVA. Alfalfa.

From southern Utah. Received February 8, 1900. Distributed.

4396. PHLEUM PRATENSE. Timothy.

From Utah. Received February 8, 1900.

4397. LANDOLPHIA HENDELII.

From France. Received February 10, 1900.

The *Landolphias* are African rubber plants. They are lianes or vines. Recent experiments indicate that all of the caoutchouc in the plant may be extracted by mechanical means, the stems being first dried and then macerated in warm water. Distributed.

4398. LANDOLPHIA KLEINII.

From France. Received February 10, 1900.
(See No. 4397.) Distributed.

4399. FICUS ELASTICA.**Assam rubber.**

From France. Received February 14, 1900.
"Assam rubber comes mostly from *Ficus elastica*. A little of it is derived from *Urostigma laccifera*. *Ficus elastica* grows in the hot mountain valleys of the Himalayas, between 70° and 80° east longitude, where the air remains warm and damp and the mercury stands at 38° C. in the shade." (*Semmler*.) Distributed.

4400. FICUS RELIGIOSA.**Fig of Scripture.**

From France. Received February 14, 1900.
Somewhat similar to No. 4399 in that it is the source of a commercial rubber in the East Indies. Distributed.

4401. PITHECOLOBIUM SAMAN.**Rain tree.**

From France. Received February 14, 1900.
Inga Saman. The pods of this West Indian tree are useful for forage, resembling those of the mesquite bean. The tree has been recommended as a nurse tree in banana or coffee plantations. (See No. 2724, Inventory No. 7.)

4402. BETA VULGARIS.**Sugar beet.**

From Germany. Presented by Mr. Ad. Strandes, of Rittergut, Zehringen bei Cöthen. Received February 15, 1900.
Zehringen Elite, from polarized mother beets. Distributed.

4403. ZEA MAYS.**Sugar corn.**

From New York. Received February 14, 1900.
Stowell's Evergreen.

4404. TRITICUM VULGARE.**Wheat.**

From Minnesota. Received February 16, 1900.
Wellman's Fife. An improved strain of the "Saskatchewan" and further improved through rigid seed selection by Mr. D. L. Wellman, of Frazee City, Minn. Claimed to be particularly hardy, productive, and rust-resistant. A bald variety with medium-sized hard, red grains. Should be sown as early in the spring as the weather will permit. Adapted to all Northern spring-wheat districts.

4405. ANDROPOGON SORGHUM.**Sorghum.**

From Missouri. Received February 15, 1900. Presented by Mr. W. P. Griffin, of Altamont.
An improved variety, originated by Mr. Griffin. It is better adapted for sirup than the Amber cane, because the juice does not granulate so readily. The cane is stout, erect, firmly rooted. It matures in 12 to 14 weeks, and is a heavy yielder both of juice and seed.

4406. AVENA SATIVA.**Oat.**

From Texas. Received February 13, 1900.
Texas Rust-proof. This prolific variety of red oat is very popular in Texas and other portions of the Southern States, particularly because of its rust-resisting qualities, as the oat crop in that region is often ruined by rust if ordinary varieties are sown. It should be sown in the fall or early in the spring. It is one of the best varieties for the South.

- 4407. AVENA SATIVA.** **Oat.**
 From Rock West, Ala. Received February 15, 1900.
Ninety Day. An early-maturing oat. Presented by Mr. W. P. Murphy.
- 4408. TRIFOLIUM ALPINUM.** **Clover.**
 From Grenoble, France. Received February 15, 1900.
 This clover was one of the most promising sorts grown in the Alpine grass garden at Grenoble.
- 4409-4413. LAGENARIA VULGARIS.** **Gourd.**
 From Naples, Italy. Received February 19, 1900.
 A collection of ornamental gourds useful for trellis work:
4409. LAGENARIA VULGARIS DEPRESSA.
4410. LAGENARIA VULGARIS MAXIMA.
4411. LAGENARIA VULGARIS LONGISSIMA.
4412. LAGENARIA VULGARIS.
4413. LAGENARIA VULGARIS, *Pulverhorn.*
- 4414. CAPRIOLA DACTYLON.** **Bermuda grass.**
 From Australia. Received February 18, 1900.
- 4415. PINUS.** **Pine.**
 From Syria. Presented by Mr. W. Michael, of Congo, Ky. Received February 24, 1900.
 A pine from the slopes of Mount Lebanon.
- 4416. BETA VULGARIS.** **Sugar beet.**
 From Proskurow, Russia. Received through Dr. Mrozinski, February 27, 1900.
Kleinwanzlebener (Mrozinski, No. 2, Russia). Seed from beets grown on clayey black prairie soil. (See No. 3941, Inventory No. 8.) Distributed.
- 4417. BROMUS INERMIS.** **Smooth brome grass.**
 From Portland, Oreg. Received March, 1900.
 Oregon-grown seed. (See No. 2964, Inventory No. 7.) Distributed.
- 4418. BROMUS INERMIS.** **Smooth brome grass.**
 From Portland, Oreg. Received February 28, 1900.
 Seed grown in the vicinity of Spokane, Wash. (See No. 2964, Inventory No. 7.) Distributed.
- 4419. BROMUS INERMIS.** **Smooth brome grass.**
 From Toronto, Canada. Received February 28, 1900.
 Seed grown in Assiniboia, Northwest Territory, Canada. (See No. 2964, Inventory No. 7.) Distributed.
- 4420. BROMUS INERMIS.** **Smooth brome grass.**
 From Manitoba. Received March, 1900.
 Seed grown in Manitoba, Canada. (See No. 2964, Inventory No. 7.) Distributed.

4421. *NICOTIANA TABACUM*. **Tobacco.**
From Naples, Italy. Received February 26, 1900.
Sumatra.
4422. *NICOTIANA TABACUM*. **Tobacco**
From Naples, Italy. Received February 26, 1900.
Brazilian.
4423. *COVILLEA DIVARICATA*. **Greasewood.**
From Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4424. *PROSOPIS VELUTINA?* **Mesquite.**
From Tucson, Ariz. Received through Mr. W. T. Swingle, November, 1899.
4425. *PROSOPIS VELUTINA?* **Mesquite.**
From Tucson, Ariz. Received through Mr. W. T. Swingle, November, 1899.
4426. *VITIS ARIZONICA*.
From Tucson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4427. *ZIZYPHUS LYCIOIDES*.
From Arizona. Received through Mr. W. T. Swingle, December, 1899. Distributed.
4428.
From Benson, Ariz. Received through Mr. W. T. Swingle, November, 1899. Distributed.
4429. *LYCIUM ERICOIDES*.
From Benson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4430. *ECHINOCACTUS WISLIZENI*. **Visnaga.**
From Benson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4431. *SESBANIA MACROCARPA*.
From Yuma, Ariz. Received through Mr. W. T. Swingle, November, 1899.
4432. *ATRIPLEX CANESCENS*.
From Yuma, Ariz. Received through Mr. W. T. Swingle, December, 1899. Distributed.
4433. *PARKINSONIA TORREYANA*. **Palo verde.**
From Yuma, Ariz. Received through Mr. W. T. Swingle, November, 1899. Distributed.
4434. *HOLACANTHA EMORYI*.
From Maricopá, Ariz. Received through Mr. W. T. Swingle, December, 1899.
4435. *PROSOPIS JULIFLORA?* **Mesquite.**
From Tempe, Ariz. Received through Mr. W. T. Swingle, November, 1899. Distributed.

- 4436. PROSOPIS PUBESCENS?** **Mesquite.**
From California, near Yuma, Ariz. Received through Mr. W. T. Swingle, November, 1899.
- 4437. ATRIPLEX LENTIFORMIS.**
From California, near Yuma, Ariz. Received through Mr. W. T. Swingle, November, 1899.
- 4438. ASCLEPIAS SUBULATA.**
From California. Received through Mr. W. T. Swingle, November, 1899.
- 4439. ATRIPLEX LENTIFORMIS.**
From California, near Yuma, Ariz. Received through Mr. W. T. Swingle, November, 1899. Distributed.
- 4440. CUCUMIS MELO.** **Muskmelon.**
From Applegate, Cal. Presented by Col. John P. Irish, through Mr. W. T. Swingle, October, 1899.
- 4441. MEDICAGO LUPULINA.**
From Applegate, Cal. Received through Mr. W. T. Swingle, October, 1899.
- 4442. TRICHOSTEMA LANCEOLATUM.**
From Applegate, Cal. Received through Mr. W. T. Swingle, October, 1899. Distributed.
- 4443. LOTUS SERICEUS.**
From Applegate, Cal. Received through Mr. W. T. Swingle, October, 1899. Distributed.
- 4444. LUPINUS ARBOREUS.**
From San Francisco, Cal. Received through Mr. W. T. Swingle, November, 1899.
- 4445. LINUM GRANDIFLORUM.**
From Berkeley, Cal. Received through Mr. W. T. Swingle, October, 1899.
- 4446. LUPINUS DENSIFLORUS.**
From Hornbrook, Cal. Received through Mr. W. T. Swingle, October, 1899.
- 4447. YUCCA WHIPPLEI.**
From Los Angeles, Cal. Received through Mr. W. T. Swingle, November, 1899.
- 4448. SCHINUS MOLLE.** **Pepper tree.**
From California. Received through Mr. W. T. Swingle, October, 1899.
- 4449. VITIS CALIFORNICA.**
From Sacramento, Cal. Received through Mr. W. T. Swingle, October, 1899. Distributed.
- 4450. ROBINIA NEO-MEXICANA.**
From California. Received through Mr. W. T. Swingle, October, 1899.

- 4451. FOUQUIERIA SPLENDENS.** **Ocatillo.**
From California, opposite Yuma, Ariz. Received through Mr. W. T. Swingle, November, 1899. Distributed.
- 4452. PLATANUS RACEMOSA.**
From Santa Barbara, Cal. Received through Mr. W. T. Swingle, November, 1899.
- 4453. PHASEOLUS VULGARIS.** **Bean.**
From Applegate, Cal. Presented by Col. John P. Irish, through Mr. W. T. Swingle, October, 1899. Distributed.
Frijole Romana.
- 4454. GILIA AGGREGATA.**
From Spokane Falls, Wash. Received through Mr. W. T. Swingle, September, 1899. Distributed.
- 4455. BROMUS PORTERI.**
From Pullman, Wash. Received through Mr. W. T. Swingle, September, 1899. Distributed.
- 4456. RUMEX HYMENOSEPALUS.** **Canaigre.**
From Tempe, Ariz. Received through Mr. W. T. Swingle, November, 1899. Distributed.
- 4457. GAULTHERIA SHALLON.**
From Seattle, Wash. Received through Mr. W. T. Swingle, October, 1899.
- 4458. MAMMILLARIA GRAHAMI.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4459. CRATÆGUS.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4460. VALLESIA GLABRA.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1889.
- 4461. PERITYLE LEPTOGLOSSA.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4462. MARTYNIA FRAGRANS.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4463. STEGNOSPERMA HALIMIFOLIA.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4464. ASCLEPIAS SUBULATA.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.

- 4465. PARKINSONIA ACULEATA.** **Vagote.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
- 4466. NISSOLIA SCHOTTII.**
From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
- 4467. COUTAREA LATIFOLIA.**
From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
- 4468. ACACIA FILICULOIDES.**
From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
- 4469. PARKINSONIA.** **Palo verde.**
From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
- 4470. FOUQUIERIA.** **Ocatillo.**
From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4471. CESALPINIA GRACILIS.**
From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
- 4472. CEREUS THURBERI.** **Pitahaya.**
From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4473. CEREUS PECTEN-ABORIGINUM.**
From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
- 4474. GOSSYPIUM BARBADENSE.** **Sea-island cotton.**
From James Island, South Carolina. Received February 28, 1900, through the Division of Vegetable Physiology and Pathology. Presented by Mr. F. P. Seabrook.
This is one of the best varieties of sea-island cotton.
- 4475. DAHLIA VARIABILIS.** **Dahlia.**
From Naples, Italy. Received through Wulle & Co., February 28, 1900.
Dahlia excelsior fantasia. Distributed.
- 4476. DAHLIA VARIABILIS.** **Dahlia.**
From Naples, Italy. Received through Wulle & Co., February 28, 1900.
Dahlia variabilis Imperialis.
- 4477. HELIOTROPIUM INCANUM.** **Heliotrope.**
From Naples, Italy. Received through Wulle & Co., February 28, 1900.
Non plus ultra. Distributed.

- 4478. TORENIA FOURNIERI.** **Torenia.**
 From Naples, Italy. Received through Wulle & Co., February 28, 1900.
Princess Helena of Montenegro. Torenia with giant flowers. Distributed.
- 4479. TORENIA FOURNIERI.** **Torenia.**
 From Naples, Italy. Presented by Wulle & Co., February 28, 1900.
The Bride. Distributed.
- 4480. IPOMŒA COLLATA.**
 From Naples, Italy. Received February 28, 1900.
Ipomoea collata cinerea. A very delicately colored new hybrid with corolla irregular like the Japanese sorts.
- 4481. IPOMŒA LEARI.**
 From Naples, Italy. Received February 28, 1900.
Ipomœa leari perenne splendida. A remarkably rapid grower; very showy.
- 4482. BRASSICA OLERACEA BOTRYTIS.** **Broccoli.**
 From Naples, Italy. Received through Wulle & Co., February 28, 1900.
Early Violet. Ripens in January. A spring and summer vegetable, like cauliflower, but with green heads.
- 4483. BRASSICA OLERACEA BOTRYTIS.** **Broccoli.**
 From Naples, Italy. Received February 28, 1900.
Febratino. Ripens in February. A spring and summer vegetable, like cauliflower, but with green heads.
- 4484. FŒNICULUM DULCE.** **Sweet fennel.**
 From Naples, Italy. Received February 28, 1900.
Doux de Boulogne. An excellent vegetable, which deserves trial by American gardeners.
- 4485. FŒNICULUM DULCE.** **Sweet fennel.**
 From Naples, Italy. Received February 28, 1900.
Doux de Messina. (See No. 4484.)
- 4486. LACTUCA SATIVA.** **Lettuce.**
 From Naples, Italy. Received February 28, 1900.
Scarlet Genazzano. "A black-seeded variety; head very hard, brown, but yellow inside. It lasts a long time and withstands the highest temperatures and drought. Worthy of trial in all arid and semiarid regions." (*Fairchild.*)
- 4487. ALLIUM CEPA.** **Onion.**
 From Naples, Italy. Received February 28, 1900.
Tripoli Barletta Wonder. A small, very early white variety.
- 4488. ALLIUM CEPA.** **Onion.**
 From Naples, Italy. Received February 28, 1900.
Silver-white Nocera.

- 4489. ALLIUM CEPA.** **Onion.**
 From Naples, Italy. Received February 28, 1900.
Giant Rocca. Blood red.
- 4490. ALLIUM CEPA.** **Onion.**
 From Naples, Italy. Received February 28, 1900.
Bassano. Dark red.
- 4491. LYCOPERSICUM ESCULENTUM.** **Tomato.**
 From Naples, Italy. Received February 28, 1900.
Prince Bismarck. "A larger fruit than the *Peach* tomato, with yellow skin. A seedling from the *Peach*, but differing from it in color." (*Fairchild.*)
- 4492-4498. LAGENARIA VULGARIS.** **Gourd.**
 From Naples, Italy. Received February 28, 1900.
 A collection of the so-called *Zuccini*. The immature fruits are cooked like vegetable marrow or summer squash. These are worthy a trial. They are as follows:
- 4492. CLAVATA.** A club-shaped gourd.
4493. DEPRESSA.
4494. CANTEEN.
4495. BOTTLE.
4496. MINIMA. Dwarf.
4497. POWDERHORN.
4498. MIXED.
- 4499. LUPINUS ARBOREUS.**
 From Berkeley, Cal. Received through Mr. W. T. Swingle, January, 1900.
 Distributed.
- 4500. FOUQUIERIA SPINOSA?** **Ocatillo.**
 From Moreno, Mexico. Received through Mr. W. T. Swingle, December 16, 1899.
- 4501. RANDIA THURBERI.**
 From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899.
 Distributed.
- 4502. ACACIA?**
 From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4503. ANTIGONON LEPTOPUS.**
 From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899.
 Distributed.
- 4504. BURSERA MICROPHYLLA.** **Torrote blanco.**
 From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4505. CEREUS PECTEN-ABORIGINUM?**
 From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899.
 Distributed.

- 4506. PARKINSONIA.** **Palo verde.**
From Moreno, Mexico. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
- 4507. HIREA SEPTENTRIONALIS.** **Gallinito.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
- 4508. CALOPHANES PENINSULARIS.**
From Guaymas, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4509. HEMATOXYLON BOREALE.**
From Guaymas, Mexico. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
- 4510. PITHECOLOBIUM SONORE.**
From Guaymas, Mexico. Received through Mr. W. T. Swingle, December, 1899)
- 4511. POINCIANA REGIA.** **Árbol de fuego.**
From Guaymas, Mexico. Presented by Señor Bustamante, through Mr. W. T. Swingle, December, 1899.
- 4512. FICUS FASCICULATA.**
From Guaymas, Mexico. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
- 4513. LORANTHUS.**
From Guaymas, Mexico. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
- 4514. ECHINOCACTUS.**
From Guaymas, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4515. BEBBIA JUNCEA.**
From Guaymas, Mexico. Received through W. T. Swingle, December, 1899.
- 4516. DIOSPYROS.** **Guayparin.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
- 4517. PARKINSONIA ACULEATA.** **Vagote.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
- 4518. NICOTIANA GLAUCA.**
From San Juan, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
- 4519. BURSERA MICROPHYLLA.**
From Guaymas, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4520. CRESCENTIA ALATA.** **Ayal.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.

- 4521. PITHECOLOBIUM DULCE.** **Guaymochil.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4522. CARTHAMUS TINCTORIUS.** **Safflower.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4523. ABRUS PRECATORIUS.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4524. QUERCUS EMORYI.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
- 4525. MARTYNIA PROBOSCIDEA.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
- 4526. CAPSICUM ANNUM.** **Red pepper.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
Chipotle.
- 4527. CAPSICUM ANNUM.** **Red pepper.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
Chile ancho.
- 4528. CAPSICUM.** **Red pepper.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
Chile pasilla or C. pasia?
- 4529. CAPSICUM FRUTESCENS BACCATUM.** **Bird pepper.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
Chillipines.
- 4530. CAPSICUM ANNUM.** **Red pepper.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
Chile colorado.
- 4531. CAPSICUM ANNUM.** **Red pepper.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
Chile costeño.
- 4532. SIMMONDSIA CALIFORNICA.** **Jojoba.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.

4533. *PITHECOLOBIUM DULCE*. **Guaymochil.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
4534. *SALVIA COLUMBARLE*. **Chia.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle.
4535.
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
4536. *PINUS EDULIS?* **Piñon.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
4537. *OLNEYA TESOTA*.
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
4538. *TAMARINDUS INDICA*. **Tamarind.**
From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
4539. *CEREUS SCHOTTII*.
From Tucson, Ariz. Presented by Prof. J. W. Toumey, through Mr. W. T. Swingle, December, 1899. Distributed.
4540. *ACACIA LONGIFOLIA*.
From Oakland, Cal. Received through Mr. W. T. Swingle, December, 1899.
4541. *ZIZYPHUS?* **Chinese date.**
From San Francisco, Cal. Received through Mr. W. T. Swingle, October, 1899.
4542. *SYMPHORICARPOS RACEMOSUS*. **Snowberry.**
From Pullman, Wash. Received through Mr. W. T. Swingle, September, 1899. Distributed.
4543. *RIBES DIVARICATUM?*
From Seattle, Wash. Received through Mr. W. T. Swingle, October, 1899.
4544. *HUMULUS LUPULUS*. **Hop.**
From Puyallup, Wash. Received through Mr. W. T. Swingle, October, 1899. Distributed.
Cluster Hop.
4545. *BROMUS VULGARIS EXIMIUS*.
From Seattle, Wash. Received through Mr. W. T. Swingle, October, 1899. Distributed.
4546. *CHAMENERION ANGUSTIFOLIUM*. **Fireweed.**
From Madroña Park, Seattle, Wash. Received through Mr. W. T. Swingle, October, 1899. Distributed.

4547. *ANAPHALIS MARGARITACEA*. **Everlasting.**
From Seattle, Wash. Received through Mr. W. T. Swingle, October, 1899.
Distributed.
4548. **"Lo han qua."**
From San Francisco, Cal. Received through Mr. W. T. Swingle, December,
1899. Distributed.
4549. *CEPHALANTHUS OCCIDENTALIS*. **Button-bush.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
4550. *PANICUM VIRGATUM*.
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
4551. *POLYGONUM DUMETORUM SCANDENS*.
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
4552. *AMORPHA FRUTICOSA*. **False indigo.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
4553. *HUMULUS LUPULUS*. **Wild hop.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
4554. *LIATRIS PUNCTATA*. **Blazing-star.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
4555. *CELTIS OCCIDENTALIS*. **Hackberry.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
4556. *CELTIS OCCIDENTALIS*. **Hackberry.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
4557. *PLATANUS OCCIDENTALIS*. **Plane tree.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
4558. *RHUS GLABRA*. **Sumac.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
4559. *CERCIS CANADENSIS*. **Red bud.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
4560. *CERCIS CANADENSIS*. **Red bud.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
4561. *RHUS GLABRA*. **Sumac.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.

- 4562. GLEDITSIA TRIACANTHOS. Honey locust.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
From a nearly thornless tree. Distributed.
- 4563. GLEDITSIA TRIACANTHOS. Honey locust.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
From an entirely thornless tree. Distributed.
- 4564. GLEDITSIA TRIACANTHOS. Honey locust.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
From a thorny tree. Distributed.
- 4565. CUCURBITA PEPO. Vegetable marrow.**
From Westfield, Mass. Received through Mr. H. L. Loomis, March 1, 1900.
Originally from Honolulu. Distributed.
- 4566. ERIOBOTRYA JAPONICA. Loquat.**
From Sicily. Received through Messrs. Lathrop and Fairchild, March 5, 1900.
Palermo. A new variety originated by Dr. C. Sprenger, Vomero, Naples, Italy.
Distributed.
- 4567. ERIOBOTRYA JAPONICA. Loquat.**
From Sicily. Received through Messrs. Lathrop and Fairchild, March 5, 1900.
Limoncella. A new strain originated by Dr. C. Sprenger, Vomero, Naples, Italy.
Distributed.
- 4568. ZEA MAYS. Corn.**
From Kansas. Received March 6, 1900.
A yellow dent.
- 4569. ZEA MAYS. Corn.**
From Kansas. Received March 6, 1900.
Roseland White.
- 4570. OPUNTIA FICUS-INDICA INERMIS. Spineless cactus.**
From France. Received March 6, 1900.
This spineless pear cactus is extensively grown in Algeria for forage.
- 4571. PANICUM MILIACEUM. Broom-corn millet.**
From Smrzicich, Moravia. Received from Frant. Vodicka, March 6, 1900.
This millet is one of the most important crops in many parts of Moravia.
- 4572. HORDEUM DISTICHUM NUTANS. Barley.**
From Smrzicich, Moravia. Received from Frant. Vodicka, March 6, 1900.
Hanna. "A famous variety of barley for malting purposes. It is grown in the valley of the river Hanna, the richest part of Moravia." (*Dongres.*)
- 4573. PLATANUS OCCIDENTALIS. Plane tree.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
Distributed.

4574. *GYMNOCLADUS CANADENSIS*. **Kentucky coffee tree.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
4575. *GYMNOCLADUS CANADENSIS*. **Kentucky coffee tree.**
From Manhattan, Kans. Received through Mr. W. T. Swingle, December, 1899.
4576. *SCHRANKIA UNCINATA*. **Sensitive briar.**
From Barton County, Kans. Presented by Mr. Albert Dickens, Kansas Agricultural Experiment Station. Received through Mr. W. T. Swingle, February, 1900.
4577. *SPOROBOLUS AIROIDES*. **Sacaton grass.**
From Benson, Ariz. Received through Mr. W. T. Swingle, December, 1899.
Distributed.
4578. *SAPINDUS ACUMINATUS*.
From Columbia, Tex. Received through Mr. B. F. Bush, February, 1900
Very handsome in cultivation.
4579. *DODECATHEON MEADII*.
From Swan, Mo. Received through Mr. B. F. Bush, February, 1900. Distributed.
4580. *ECHINACEA ANGUSTIFOLIA*.
From Lees Summit, Mo. Received through Mr. B. F. Bush, February, 1900.
4581. *RHAMNUS LANCEOLATUS*.
From Independence, Mo. Received through Mr. B. F. Bush, February, 1900.
Distributed.
4582. *RHUS AROMATICA*.
From Swan, Mo. Received through Mr. B. F. Bush, February, 1900.
4583. *ECHINACEA PURPUREA*.
From Monteer, Mo. Received through Mr. B. F. Bush, February, 1900. Distributed.
4584. *AGAVE VIRGINICA*.
From Swan, Mo. Received through Mr. B. F. Bush, February, 1900. Distributed.
4585. *CRATEGUS VIRIDIS*.
From Columbia, Tex. Received through Mr. B. F. Bush, February, 1900.
4586. *SMILAX ROTUNDIFOLIA*.
From Columbia, Tex. Received through Mr. B. F. Bush, February, 1900.
Distributed.
4587. *BUMELIA LYCIOIDES*.
From Columbia, Tex. Received through Mr. B. F. Bush, February, 1900.
4588. *CISSUS STANS*.
From Columbia, Tex. Received through Mr. B. F. Bush, February, 1900.
Distriouted.

4589. BERCHEMIA SCANDENS.

From Swan, Mo. Received through Mr. B. F. Bush, February, 1900. Distributed.

4590. CRATEGUS POPULIFOLIA.

From Swan, Mo. Received through Mr. B. F. Bush, February, 1900.

4591. CRATEGUS ROTUNDIFOLIA.

From Swan, Mo. Received through Mr. B. F. Bush, February, 1900.

4592. CRATEGUS COLLINA.

From Swan, Mo. Received through Mr. B. F. Bush, February, 1900.

4593. CRATEGUS SACCHARINA.

From Swan, Mo. Received through Mr. B. F. Bush, February, 1900. Distributed.

4594. ILEX DECIDUA.**Deciduous holly.**

From Pleasant Grove, Mo. Received through Mr. B. F. Bush, February, 1900. Distributed.

4595. VIBURNUM RUFOTOMENTOSUM.

From Chadwick, Mo. Received through Mr. B. F. Bush, February, 1900. Distributed.

4596. GLEDITSIA.

From Brazoria, Tex. Received through Mr. B. F. Bush, February, 1900. Distributed.

4597. CRATEGUS MOLLIS.

From Courtney, Mo. Received through Mr. B. F. Bush, February, 1900.

4598. SMILAX HISPIDA.

From Courtney, Mo. Received through Mr. B. F. Bush, February, 1900.

4599. SYMPHORICARPOS VULGARIS.

From Kansas. Presented by Mr. Leon Swingle, through Mr. W. T. Swingle, February, 1900.

4600. LOTUS SERICEUS.**Dakota vetch.**

From South Dakota. Received through Mr. A. J. Pieters, February, 1900. Collected by Mr. L. P. Reinoehl.

4601. ECHINOPS SPHEROCEPHALUS.**Chapman's honey plant**

From Berkeley, Cal. Presented by Prof. J. Burt Davy, December, 1899. Distributed.

4602. MAMMILLARIA GRAHAMI.

From Washington, D. C. Received through Mr. W. T. Swingle, February, 1900. Distributed.

4603. MAMMILLARIA GRAHAMI.

From Washington, D. C. Received through Mr. W. T. Swingle, February, 1900. Distributed.

4604. LOPHOPHORA.

From Washington, D. C. Received through Mr. W. T. Swingle, February, 1900. Distributed.

4605. LOPHOPHORA.

From Washington, D. C. Received through Mr. W. T. Swingle, February, 1900. Distributed.

4606. LOPHOPHORA WILLIAMSII.

From Washington, D. C. Received through Mr. W. T. Swingle, March, 1900. Distributed.

4607. BRACHYCHITON ACERIFOLIA.**Flame tree.**

From Santa Ana, Cal. Presented by Dr. John M. Lacy through Mr. Newton B. Pierce.

4608. CELASTRUS SCANDENS.

From Manhattan, Kans. Presented by Mr. J. F. Swingle, through Mr. W. T. Swingle, March 8, 1899.

4609. BRAHEA GUADALUPENSIS ?

From La Paz, Lower California, Mexico. Received through Mr. W. T. Swingle, February, 1900.

4610. PHENIX DACTYLIFERA.**Date.**

From Washington, D. C. Received through Mr. W. T. Swingle, March, 1900.
Deglet Noor. Bought at a Washington fruit market. Distributed.

4611. PHENIX DACTYLIFERA.**Date.**

Probably from M'Zab oasis, Sahara. Presented by Yahia ben Kassem, through Mr. W. T. Swingle, March, 1900.
Deglet Noor.

4612. PHENIX DACTYLIFERA.**Date.**

Probably from M'Zab oasis, Sahara. Presented by Yahia ben Kassem, through Mr. W. T. Swingle, March, 1900.
Degla Beida.

4613. PHENIX DACTYLIFERA.**Date.**

Probably from M'Zab oasis, Sahara. Presented by Yahia ben Kassem, through Mr. W. T. Swingle, March, 1900.
Todala techeleff. Distributed.

4614. PHENIX DACTYLIFERA.**Date.**

Probably from M'Zab oasis, Sahara. Presented by Yahia ben Kassem, through Mr. W. T. Swingle, March, 1900.
Horra. Distributed.

4615. PHENIX DACTYLIFERA.**Date.**

Probably from M'Zab oasis, Sahara. Presented by Yahia ben Kassem, through Mr. W. T. Swingle, March, 1900.
Possibly *Medjhoul.* A large, unnamed date.

- 4616. PHOENIX DACTYLIFERA. Date.**
Probably from M'Zab oasis, Sahara. Presented by Yahia ben Kassem, through Mr. W. T. Swingle, March, 1900.
Deglet Noor.
- 4617. PHOENIX DACTYLIFERA. Date.**
Probably from M'Zab oasis, Sahara. Presented by Yahia ben Kassem, through Mr. W. T. Swingle, March, 1900.
Tedalla (?).
- 4618. PHOENIX DACTYLIFERA. Date.**
Probably from M'Zab oasis, Sahara. Presented by Yahia ben Kassem, through Mr. W. T. Swingle, March, 1900.
Ghero. Distributed.
- 4619. PHOENIX DACTYLIFERA. Date.**
Probably from M'Zab oasis, Sahara. Presented by Yahia ben Kassem, through Mr. W. T. Swingle, March, 1900.
Bent Kabala (?). Distributed.
- 4620. PHOENIX DACTYLIFERA. Date.**
Probably from M'Zab oasis, Sahara. Presented by Yahia ben Kassem, through Mr. W. T. Swingle, March, 1900.
Possibly *Medjhoul*. An unnamed, medium-sized fruit. Distributed.
- 4621. ANDROPOGON SORGHUM. Kafir corn.**
From Berryton, Kans. Presented by Mr. M. Mathewson, March 6, 1900.
Mammoth black-hulled white. Distributed.
- 4622. DIOSPYROS VIRGINIANA. Persimmon.**
From Lodema, Mo. Presented by Mr. R. A. W. Argenbright, March 10, 1900.
- 4623. NICOTIANA TABACUM. Tobacco.**
From Sagua la Grande, Cuba. Presented by Feodoro Miranda, March 12, 1900.
- 4624. CRATÆGUS MEXICANA. Haw.**
From Coahuila, Mexico. Presented by Prof. Felix Foëx, of Torreon. Received March 12, 1900.
- 4625. CRATÆGUS MEXICANA. Haw.**
From Coahuila, Mexico. Presented by Prof. Felix Foëx, of Torreon. Received March 12, 1900.
Seeds from fruits of largest size and finest flavor.
- 4626. GOSSYPIUM BARBADENSE. Cotton.**
From Egypt. Received March 13, 1900.
Gordon Pasha. An improved strain of Egyptian cotton, introduced for the first time. Seed purchased in Italy.
- 4627. PHASEOLUS VULGARIS. Bean.**
From San Antonio, N. Mex. Received from Mr. C. B. Allaire, March 13, 1900.
A variety commonly grown by the Mexicans. It forms the staple food of the laboring classes of New Mexico.

- 4628. GLYCINE HISPIDA.** **Soy bean.**
 From Massachusetts. Received March 13, 1900.
Medium green. Distributed.
- 4629. MEDICAGO SATIVA.** **Alfalfa.**
 From Colorado. Received March 16, 1900.
 Colorado-grown seed. Distributed.
- 4630. FICUS ELASTICA.** **India rubber.**
 From Italy. Received March 13, 1900. Distributed.
- 4631. TRITICUM VULGARE.** **Wheat.**
 From Idaho. Received March 14, 1900.
Canadian Hybrid. One of the standard wheats grown in Idaho, Wyoming, and Washington.
- 4632. CENTAUREA ODORATA.** **Dusty miller.**
 From Italy. Received May 19, 1900. Presented by Dammann & Co., of San Giovanni a Teduccio, near Naples, Italy, through Hon. A. H. Byington, United States consul at Naples.
Centennial Chameleon. "A new hybrid annual which changes color several times during the season. Plant in pots and transplant to sunny spot in rich soil." (*Dammann.*)
- 4633. TRITICUM VULGARE.** **Wheat.**
 From Idaho. Received March 14, 1900.
Red Chaff. One of the standard wheats of Idaho, Washington, and Oregon.
- 4634. PYRUS BACCATA GENUINA.** **Siberian crab-apple.**
 From Russia. Received March 18, 1900. Presented by Dr. A. Fischer von Waldheim, director of the Imperial St. Petersburg Botanic Garden. Distributed.
- 4635. NICOTIANA TABACUM.** **Tobacco.**
 From Sumatra. Received March 21, 1900.
Deli.
- 4636. ERYTHRINA.** **Coral tree.**
 From Mexico. Received March 21, 1900. Presented by Mr. Herman Meenen, of Harsenville, Fla.
Zumpante, or Coralines.
- 4637. COBÆA SCANDENS.** **Cobæa.**
 From Mexico. Received March 21, 1900. Presented by Mr. Herman Meenen, of Harsenville, Fla.
 A vigorous climbing plant with beautiful blue flowers.
- 4638. ANONA CHERIMOLIA.** **Cherimoya.**
 From Mexico. Received March 21, 1900. Presented by Mr. Herman Meenen, of Harsenville, Fla.
 "Considered by many one of the finest fruits in existence. Being very tender, it can only be grown successfully in the extreme southern portion of Florida." (*Meenen.*)
- 4639. CANNABIS SATIVA.** **Hemp.**
 From Kentucky. Received March 22, 1900. Distributed.

4640-4748. VITIS VINIFERA.

Grape.

A collection of European grapes from Alexandre Tacussel, of Vaucluse, France, imported in cooperation with the Division of Pomology. No cuttings are now available for distribution. (See Nos. 2381-2541, Inventory No. 5.) Distributed.

- 4640. ADMIRABLE DE COURTILLER.
- 4641. ADMIRABLE DE COURTILLER.
- 4642. BICANE.
- 4643. BURGRAVE DE HONGRIE.
- 4644. CHASSELAS NAPOLEON.
- 4645. CORNICHON BLANC.
- 4646. CORNICHON NOIR.
- 4647. DATTIER DE BEYROUTH.
- 4648. DIAMANT TRAUBE.
- 4649. FINTINDO.
- 4650. FOSTER'S SEEDLING.
- 4651. FRANKENTHAL HATIF.
- 4652. GENERAL LAMARMORA.
- 4653. GENERAL LAMARMORA.
- 4654. GOLDEN CHAMPION.
- 4655. GRADISKA.
- 4656. HENAB TURKI.
- 4657. JOANNENC.
- 4658. JOANNENC.
- 4659. ZABALKANSKOL.
- 4660. MALVOISIE DE SITJES.
- 4661. MALVOISIE DE SITJES.
- 4662. MAMELON.
- 4663. MAMELON.
- 4664. MUSCAT DE MADERE ROSE.
- 4665. MUSCAT HATIF DU PUY DE DOME.
- 4666. MUSCAT ST. LAURENT.
- 4667. OLIVETTE DE CADENET.
- 4668. OLIVETTE DE CADENET.
- 4669. PIS DE CHEVRE DES ALPES.
- 4670. ROSAKI.
- 4671. SULTANINA.
- 4672. TRENTHAM BLACK.
- 4673. TRENTHAM BLACK.
- 4674. VERDELHO DE MADERE.
- 4675. VERDELHO DE MADERE.
- 4676. ACTONI MACERON.
- 4677. AIBATHY ISJUM.
- 4678. ANGELINA.
- 4679. ANGULATA.
- 4680. BAUDE.

4640-4748. VITIS VINIFERA—Continued.

- 4681. BELLINO.
- 4682. BERMESTIA BIANCA.
- 4683. BOHERAAVE.
- 4684. CHASSELAS ST. BERNARD.
- 4685. CITRONELLE.
- 4686. CITRONELLE.
- 4687. DUC DE MAGENTA.
- 4688. FRANKENTHAL BLANC.
- 4689. HAMBOURG BLANC.
- 4690. IMPERIAL.
- 4691. KAROAD.
- 4692. MERVELLE DE VAUCLUSE.
- 4693. MUSCAT NOIR PRÉCOCE.
- 4694. MUSCAT DE SAUMUR.
- 4695. MUSCAT VIOLET.
- 4696. OLIVETTE ROSE.
- 4697. RAISAINÉ DE PULLIAT.
- 4698. WEST ST. PETERS.
- 4699. CHASSELAS DE JÉRICO.
- 4700. GAMAY DE BOURGOGNE.
- 4701. GRUNER MUSCATELLER.
- 4702. LONG NOIR D'ESPAGNE.
- 4703. OLIVETTE NOIR.
- 4704. RAZAKI ZOLO.
- 4705. AGOSTENGA.
- 4706. AGOSTENGA.
- 4707. MUSCAT BOWOOD.
- 4708. BUCKLAND SWEETWATER.
- 4709. CALABRÈSE.
- 4710. CALABRÈSE.
- 4711. CHASSELAS DE FLORENCE.
- 4712. CHASSELAS DE MONTAUBAN.
- 4713. CHASSELAS DE NEGREPONT.
- 4714. CHASSELAS DE NEGREPONT.
- 4715. CHASSELAS MUSQUÉ VRAI.
- 4716. CHASSELAS MUSQUÉ VRAI.
- 4717. CHASSELAS VIOLET.
- 4718. CHASSELAS NAPOLÉON.
- 4719. CHASSELAS ROSE ROYAL.
- 4720. TOKAY BLANC.
- 4721. CLAIRETTE POINTUE.
- 4722. CORNICHON NOIR.
- 4723. DIAMANT TRAUBE.

4640-4748. VITIS VINIFERA—Continued.

4724. FOLLE BLANCHE.
 4725. JOANNENC CHARNU.
 4726. LUGLIENGA NÉRA.
 4727. MADELEINE ANGEVINE.
 4728. MADELEINE ANGEVINE.
 4729. BICOLOR.
 4730. MUSCAT DE ALEXANDRIE.
 4731. MUSCAT DE ALEXANDRIE.
 4732. MUSCAT DE HAMBOURG.
 4733. MUSCAT DE HAMBOURG.
 4734. MUSCAT ROUGE DE MADÈRE.
 4735. ZABALKANSKOI.
 4736. PARC DE VERSAILLES.
 4737. PARC DE VERSAILLES.
 4738. PINOT NOIR DE BOURGOGNE.
 4739. PINOT BLANC.
 4740. PINOT BLANC DE CHARDONNAY.
 4741. PIS DE CHEVRE NOIR.
 4742. PRECOCE DE COURTILLER.
 4743. ROSAKI.
 4744. ROUSSELET.
 4745. SERVAN.
 4746. SERVAN.
 4747. SIRAH DE L'ERMITAGE.
 4748. ULLIADE NOIR.

4749. (Blank.)

4750. PISTACIA VERA X TEREBINTHUS.

Presented by Mr. G. P. Rixford, of the California Academy of Sciences, San Francisco, Cal., January, 1900.

To be used for stocks on which to graft the pistache. Distributed.

4751. TUBER MELANOSPERMA.

Truffle.

From Paris, France. Received March 30, 1900.

(See No. 2230, Inventory No. 5.) Distributed.

4752. FICUS CARICA.

Smyrna fig.

From California. Presented by Mr. George C. Roeding, March, 1900.

4753. PERSEA PUMILA.

From Eustis, Fla. Presented by Mr. Frank W. Savage, March, 1899.

4754-4808.

A collection of seeds of native American plants growing near Washington, D. C. Presented by the Seed Laboratory, March, 1900.

4754. CLEMATIS OCHROLEUCA.
 4755. ECONYMUS ATROPURPUREUS.

4754-4808—Continued.

4756. *AGRIMONIA PARVIFLORA*.
 4757. *VIBURNUM DENTATUM*.
 4758. *SAPONARIA OFFICINALIS*.
 4759. *ARCTIUM LAPPA*.
 4760. *CRATÆGUS CRUS-GALLI*.
 4761. *MAGNOLIA ACUMINATA*.
 4762. *PANICUM ELONGATUM*.
 4763. *LEONURUS CARDIACA*.
 4764. *SMILAX HERBACEA*.
 4765. *VAGNERA RACEMOSA*.
 4766. *POLYMNIA UVEDALIA*.
 4767. *SMILAX ROTUNDIFOLIA*.
 4768. *POLYGONUM SAGITTATUM*.
 4769. *LOBELIA INFLATA*.
 4770. *ALNUS RUGOSA*.
 4771. *MAGNOLIA TRIPETALA*.
 4772. *SAURURUS CERNUUS*.
 4773. *AGROPYRON TENERUM*.
 4774. *EUCONYMUS AMERICANUS*.
 4775. *ELEPHANTOPUS*.
 4776. *POLYGONUM DUMETORUM*.
 4777. *SILPHIUM TRIFOLIATUM*.
 4778. *ANDROPOGON NUTANS*.
 4779. *ONOSMODIUM CAROLINIANA*.
 4780. *MONARDA PUNCTATA*.
 4781. *ERECHTITES HIERACIFOLIA*.
 4782. *NYSSA AQUATICA*.
 4783. *BENZOIN BENZOIN*. Distributed.
 4784. *BAPTISIA AUSTRALIS*.
 4785. *XOLISMA LIGUSTRINA*.
 4786. *PRUNELLA VULGARIS*.
 4787. *VACCINIUM STAMINEUM*.
 4788. *VERBESINA OCCIDENTALE*.
 4789. *STAPHYLEA TRIFOLIA*.
 4790. *APOCYNUM ALBUM*.
 4791. *CASSIA NICTITANS*.
 4792. *LECHEA RACEMULOSA*.
 4793. *CYPERUS OVULARIS*.
 4794. *POLYGONUM PUNCTATUM*.
 4795. *ROSA HUMILIS*.
 4796. *PENTSTEMON LEVIGATUS*.
 4797. *HELENIUM AUTUMNALE*. Distributed.
 4798. *TECOMA STANS*.
 4799. *GEMMINGA CHINENSIS*.

4754-4808—Continued.

4800. SOLIDAGO SEROTINA.
4801. ANDROPOGON PROVINCIALIS. Distributed.
4802. POA COMPRESSA.
4803. EUPATORIUM PERFOLIATUM. Distributed.
4804. PHYTOLACCA DECANDRA.
4805. DIPSACUS SYLVESTRIS.
4806. VERBESINA ALTERNIFOLIA.
4807. GAURA BIENNIS.
4808. VERNONIA. Distributed.
4809. ANDROPOGON SORGHUM. **Kafir corn.**
 From Manhattan, Kans. Presented by Prof. H. M. Cottrell, through Mr. W. T. Swingle, April, 1900.
Black-hulled White.
4810. ANDROPOGON SORGHUM. **Kafir corn.**
 From Manhattan, Kans. Presented by Prof. H. M. Cottrell, through Mr. W. T. Swingle, April, 1900.
Red. Distributed.
4811. PHŒNIX DACTYLIFERA. **Date.**
 From Washington, D. C. Received through Mr. W. T. Swingle, March, 1900.
 Distributed.
4812. PHŒNIX DACTYLIFERA. **Date.**
 From Washington, D. C. Received through Mr. W. T. Swingle, March, 1900.
 Distributed.
4813. PHŒNIX DACTYLIFERA. **Date.**
 From Guaymas, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
4814. FRAXINUS VELUTINA. **Ash.**
 From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899. Distributed.
4815. PHORADENDRON JUNIPERINUM.
 From Mescalero, N. M. Presented by Miss Minnie Pincumb, through Mr. W. T. Swingle, December, 1899.
 Parasite on fir. Distributed.
4816. KARWINSKIA PARVIFLORA.
 From Hermosillo, Mexico. Received through Mr. W. T. Swingle, December, 1899.
 Shrub 2 to 3 feet high. Leaves like *Psidium guava*.
4817. CEREUS PRINGLEI.
 From Guaymas, Mexico. Presented by the U. S. National Museum, March, 1900.
4818. CEREUS PECTEN-ABORIGINUM.
 From Mazatlan, Mexico. Presented by the U. S. National Museum, March, 1900.

4819. RUBUS.

From Puyallup, Wash. Received through Mr. W. T. Swingle, October, 1899.
A perennial evergreen blackberry. Distributed.

4820. CELASTRUS SCANDENS.**Bittersweet.**

From Manhattan, Kans. Presented by Mr. J. F. Swingle, March, 1900. Distributed.

4821. LOPHOPHORA LEWINII.

From Washington, D. C. From plants growing in S. P. I. greenhouse. Received March, 1900. Distributed.

4822. PANICUM BULBOSUM.

From Washington, D. C. From plants growing in S. P. I. greenhouse. Received March, 1900.
A paniced grass, resembling a small *Sorghum halapense*. Distributed.

4823 QUERCUS MACROCARPA.**Bur oak.**

From Manhattan, Kans. Presented by Prof. A. S. Hitchcock, April 20, 1900.

4824. BOUTELOUA CURTIPENDULA.

From Manhattan, Kans. Presented by Prof. A. S. Hitchcock, April 20, 1900. Distributed.

4825. BULBILIS DACTYLOIDES.**Buffalo grass.**

From Manhattan, Kans. Presented by Prof. A. S. Hitchcock, April 20, 1900.

4826-4840.

From Avalon, Santa Catalina Island, California. Received through Mrs. Blanche Trask, May 1, 1900. A collection of seeds of native plants as follows:

4826. ANTIRRHINUM SPECIOSUM. Distributed.

4827. LUPINUS.

4828. HETEROMELES ARBUTIFOLIA.

4829. LEPTOSYNE GIGANTEA.

4830. CERCOCARPUS TRASKLE.

4831. CROSSOSOMA CALIFORNICUM.

4832. ERIOGONUM GIGANTEUM.

4833. ARCTOSTAPHYLOS BICOLOR.

4834. QUERCUS TOMENTELLA.

4835. ERIOPHYLLUM NEVINII.

4836. QUERCUS MACDONALDI.

4837. LAVATERA ASSURGENTIFOLIA.

4838. CEANOTHUS ARBOREUS.

4839. ARCTOSTAPHYLOS DIVERSIFOLIA.

4840. RIBES VIBURNIFOLIA.

4841. CRESCENTIA ALATA.

From California. Presented by Dr. F. Franceschi, through Dr. Edward Palmer, May 5, 1900.

4842. (Blank.)

4843. (Blank.)

4844-4854. TRIFOLIUM PRATENSE.

Red clover.

From Hamburg, Germany. Received March 17, 1900.

This collection of seed of various red clovers was imported for use in a series of cooperative experiments conducted by the agricultural experiment stations of Minnesota and Wisconsin. It is often claimed that the American strains of red clover are of less value for forage than the European. It is also stated by various agriculturists that the cause of this inferiority is the greater narrowness of the leaves and the coarser and more weedy habit of growth of the stems. However, the amount of forage per acre is said to be greater in the case of the American than of the European forms. The experiments at the above-mentioned stations are being connected in order to determine whether such differences as are claimed really exist between the best American and the European varieties or forms. They are as follows:

- 4844. HUNGARIAN.
- 4845. ITALIAN.
- 4846. FRENCH.
- 4847. GALICIAN.
- 4848. RUSSIAN.
- 4849. TRANSYLVANIAN.
- 4850. STEIERMARK.
- 4851. LEITMERITZ.
- 4852. NORWEGIAN. Distributed.
- 4853. GERMAN.
- 4854. ENGLISH.

4855. TRITICUM VULGARE.

Wheat

From German East Africa. Received March 20, 1900. Presented by Dr. Wittmack, of the Agricultural High School, Berlin, Germany.

Tabora. A rust-proof winter wheat of excellent yield and quality.

4856-4905.

A collection of seeds and plants from Wuchang, China. Received March 20, 1900. Presented by Messrs. G. D. Brill and J. W. Gilmore.

- 4856. SESAMUM INDICUM. Sesame.
Heh-sez-ma; black sesame. (No. 27.) "This is not so extensively grown here as the white sesame, No. 4857." (*Gilmore.*)
- 4857. SESAMUM INDICUM. Sesame.
Beh-sez-ma; white sesame. (No. 25.)
- 4858. PHASEOLUS VULGARIS. Bean.
Ni-do. (No. 13.)
- 4859. CUCURBITA.
Langqua. (No. 4.) "A large gourd or pumpkin." (*Gilmore.*)
- 4860. BETA VULGARIS. Chard.
Tien beh tsai. (No. 24.) "A sweet, white vegetable. This is the popular summer salad here. It grows larger than either No. 4874 or No. 4896. Several crops of this are taken from the same piece of ground during the course of the summer." (*Gilmore.*)

4856-4905—Continued.

4861. IPOMŒA.

Tso yea rsia; bamboo leaf vegetable. (No. 3.) "This grows here abundantly, but I can not identify the plant by the name. I think, however, it is used something like spinach." (*Gilmore.*)

4862. BRASSICA.

Yo tsai; oil vegetable. (No. 12.) "A mustard which is sown in the spring and grown for its seed, from which oil is extracted." (*Gilmore.*)

4863. CAPSICUM ANNUM.

Red pepper.

Chin la joo. (No. 29.)

4864. CANAVALLIA ENSIFORMIS.

Knife bean.

Tao do. (No. 2.)

4865. CITRULLUS.

Citron.

Tung gua. (No. 40.) "A large green gourd, white inside. The largest are about 3 feet long and a foot in diameter." (*Gilmore.*)

4866. AVENA FATUA GLABRESCENS.

Wild oat.

Red oats. (No. 43.)

4867. MOMORDICA.

Gourd.

Ku gua. (No. 16.) "A kind of squash which is very warty, and red when ripe." (*Gilmore.*)

4868. CUCUMIS SATIVUS.

Cucumber.

Whang gua; yellow cucumber. (No. 14.) "This is grown very extensively here in the spring, though it does not yield abundantly." (*Gilmore.*)

4869. CHLÉTOCHLOA ITALICA.

Millet.

Tsan schioh. (No. 36.) "This seed is used for feeding birds." (*Gilmore.*)

4870. RAPHANUS SATIVUS.

Radish.

Turnip. A white variety. (No. 22.)

4871. SAPIUM SEBIFERUM.

Wax berry.

Beh jo; white wax berry. (No. 44.) "These are the seeds from the white wax tree. The tree grows from 30 to 60 feet high and bears an abundance of berries on new wood." (*Gilmore.*)

4872. HELIANTHUS ANNUUS.

Sunflower.

Quei wha. (No. 31.) "This is not grown very extensively here except as an ornament. The flowers are 8 or 10 inches in diameter." (*Gilmore.*)

4873. CELOSIA.

Han tsai. (No. 9.)

4874. BRASSICA PETSAL.

Chinese cabbage.

Heh beh tsai; black white vegetable. (No. 18.) "This is a winter and spring cabbage, and the habits and appearance are quite like those of No. 4896, except that the leaves are not curled. This winter the temperature has been as low as -5° C. and it has not been injured." (*Gilmore.*)

4875. RAPHANUS SATIVUS.

Radish.

Loh boh. (No. 21.)

4856-4905—Continued.

4876. AVENA FATUA GLABRESCENS. **Wild oat.**
Mixed oats. (No. 47.)
4877. MALVA. **Mallow.**
Tung han tsai. (No. 19.) "A winter variety." (*Gilmore.*)
4878. ORYZA SATIVA. **Rice.**
Tsan gu. (No. 35.) "This is the ordinary rice which is the great staple of China." (*Gilmore.*)
4879. ZEA MAYS. **Corn.**
U gao liang. (No. 39.) A kind of maize.
4880. ORYZA SATIVA. **Rice.**
Loh gu; glutinous rice. (No. 34.)
- 4880a. FAGOPYRUM ESCULENTUM. **Buckwheat.**
(No. 34.)
4881. BRASSICA. **Mustard.**
La tsai. (No. 11.) This is a large mustard, and is almost like No. 4887.
4882. IPOMEA BONA-NOX. **Moonflower.**
Tien chue. (No. 28.)
4883. STERCULIA PLATANIFOLIA.
Wu tung. (No. 45.)
4884. PHASEOLUS VULGARIS. **Bean.**
Tung tsao do. (No. 1.)
4885. BRASSICA PETSAL. **Chinese cabbage.**
Heh beh tsai. (No. 26.)
4886. LACTUCA SATIVA. **Lettuce.**
Wo ju. (No. 17.) "A kind of lettuce. It is sown in beds in the spring and transplanted when the plants are 2 or 3 inches high. It is then well manured and watered until its leaves are a foot or more in height. The plant is grown for the stem, which is sliced and cooked as a vegetable." (*Gilmore.*)
4887. BRASSICA. **Mustard.**
Gai tsai. (No. 7.) "This is a very large mustard. In exceptional instances the leaves will grow 3 feet long. It is transplanted in the early spring and heavily manured until the leaves reach their full size. The plants are then cut off at the roots and dried; they are then pickled and used throughout the year." (*Gilmore.*)
4888. HORDEUM VULGARE. **Barley.**
Da meh. (No. 33.) "This is used in the North to some extent for whisky, so I have heard, but here it is used for making sugar for candies and for feeding horses and pigs. It is a winter crop, planted on land which has been overflowed in the summer, or upon cotton, bean, or sesame land." (*Gilmore.*)
4889. APIUM GRAVEOLENS. **Celery.**
Chin tsai. "This seems to be a primitive type. It is small and spindling. It is planted both in the spring and fall in beds and covered with reeds, placed like the roof of a house. When it is about grown fine dirt is sprinkled and sifted among the plants until they are almost covered. The celery bleaches in a short time and is then used as needed." (*Gilmore.*)

4856-4905—Continued.

4890. CRATEGUS CUNEATA. Hawthorn.
San tsao hung. (No. 23.) Fruit about the size of a cherry.
4891. CELOSIA.
Wan tsai. (No. 20.)
4892. AVENA SATIVA. Oat.
Black. (No. 42.) "Found growing wild in old gardens and waste places." (*Gilmore.*)
4893. LAGENARIA. Calabash.
Hu gua. (No. 15.)
4894. BUTNERIA. Flowering almond.
La may wha. (No. 41.)
4895. LUFFA EGYPTIACA. Gourd.
Tsz gua; silk gourd. (No. 5.) "It sometimes grows 5 feet long and not more than an inch in diameter, except at the bottom. It is planted in the spring and trained on a trellis. The gourds are used for food when they are young and tender." (*Gilmore.*)
4896. BRASSICA PETSAL. Chinese cabbage.
Nan kin beh tsai; white vegetable. (No. 6.) "This is a cabbage and is grown extensively in fall and winter." (*Gilmore.*)
4897. SPINACEA OLERACEA. Spinach.
Bo tsai. (No. 8.) It is planted in the spring and used as greens.
4898. CHRYSANTHEMUM.
Tung hao. (No. 32.) "According to William's Dictionary this is a kind of celery." (*Gilmore.*)
4899. CITRULLUS VULGARIS. Watermelon.
Sz gua tsz. (No. 30.) "They are mainly of two varieties, those of red flesh and those of yellow. Neither grow very large, but the red-fleshed one is preferred to the other. Salted seeds are highly esteemed at dinners and feasts and are eaten throughout the meal." (*Gilmore.*)
4900. PAULOWNIA IMPERIALIS. Paulownia.
Yang wu tung. (No. 49.) This is an ornamental tree of rapid growth, having large leaves and flowers very much like those of the catalpa.
4901. ALLIUM. Garlic.
Da suan. (No. 46.)
4902. TRITICUM VULGARE. Wheat.
Hsioh meh. (No. 37.) "This is extensively grown here for flour. Here, where so much of the land is overflowed in the summer, this is the principal crop on the lowlands, and it is mostly of the bearded kind."
4903. CELTIS. Hackberry.
Tang ti hsu. (No. 48.) This tree grows rapidly and to a large size. It is not very common.
4904. CANAVALLA ENSIFORMIS. Knife bean.
(No. 2.)
4905. ANDROPOGON SORGHUM. Sorghum.
Loh goa liang. (No. 38.) "This is a nonsaccharine sorghum. There are two or three kinds, but the main use of all is for making a kind of whisky." (*Gilmore.*)

- 4906. NICOTIANA TABACUM. Tobacco.**
From Turkey. Received April 7, 1900.
Turkish Samsun.
- 4907. NICOTIANA TABACUM. Tobacco.**
From Turkey. Received April 7, 1900.
Turkish Bafra.
- 4908. FRAGARIA VESCA. Strawberry.**
From France. Received April 10, 1900.
St. Antoine de Padoua, everbearing. "This variety, which was sent out in 1898 by the Abbé Thivolet, was obtained by crossing the St. Joseph with the large-fruited English Royal Sovereign. The fruits of this sort are larger than those of the St. Joseph, are firm, good keepers, and have an excellent flavor. The fruit clusters are erect and do not require support as do those of the St. Joseph. This is the newest and most remarkable of the large-fruited, everbearing strawberries." (*Swingle.*) Distributed.
- 4909. PRUNUS. Cherry.**
From Waynesville, N. C. Presented by Dr. G. D. Green. Received April 10, 1900.
"This wild cherry goes by two names—the Peruvian Tree and the Balsam Cherry." (*Green.*) Distributed.
- 4910. PSIDIUM CATTLEYANUM. Dwarf guava.**
From Waterloo, Kans. Received March 24, 1900. Presented by Mr. J. W. Riggs.
A seedling of dwarf guava which lives and bears fruit in Kansas. Distributed.
- 4911. PUNICA GRANATUM. Pomegranate.**
From Waterloo, Kans. Received March 24, 1900. Presented by Mr. J. W. Riggs.
A very hardy seedling pomegranate which lives and bears fruit in Kansas. Distributed.
- 4912-4914. GLYCINE HISPIDA. Soy bean.**
A collection of soy beans from Japan. Received March 23, 1900. They are as follows:
4912. COMMON. Distributed.
4913. BEST WHITE. Distributed.
4914. BEST GREEN. Distributed.
- 4915-4946.**
From Perth, West Australia. Received March 24, 1900. Presented by Mr. E. F. Brady.
A collection of seeds of native West Australian plants.
- 4915. KINGIA AUSTRALIS.**
- 4916. ACTINOTUS LEUCOCEPHALUS. Flannel flower.**
- 4917. LESCHENAULTIA.**
A small perennial, 18 inches high, with blue flowers.
- 4918. Christmas bush.**

4915-4946—Continued.

4919. *GASTROLOBIMUM CALYGINUM*.
A poison plant.
4920. *WAITZIA AUREA*.
4921. *MYRIOCEPHALUS STUARTII*.
4922. White clematis.
A handsome climber. Distributed.
4923.
An annual with blue, lobelia-like flowers.
4924. *AUSTRALINA MUELLERI*. Kangaroo paw.
4925. *HELICHRYSUM BRACTEATUM*. Everlasting.
4926. Flannel flower.
An annual.
4927. Coral creeper.
The seeds must be scalded and soaked before planting.
4928.
A fine summer-flowering plant with pink sprays.
4929. *HIBISCUS*.
Flowers lilac.
4930.
A small, yellow-flowered legume.
4931.
A dwarf perennial shrub.
4932. Flannel flower.
4933.
A bamboo-like plant.
4934.
A native annual lobelia with deep-blue flowers.
4935. *HARDENBERGIA*.
A climber with fine blue flowers. Makes a fine show in our woods.
4936. *BANKSIA*.
A short, prickly shrub.
4937. *AUSTRALINA*.
Tall, green-flowering. Grown on swampy land.
4938. *CALLISTEMON*. Scarlet bottle-bush.
Flowers scarlet. Grows in dry situations.
4939. *ACACIA*. Wattle.
Flowers bright golden. Grows 2 feet high.

4915-4946—Continued.

4940.

Smoke plant.

4941.

Marguerite.

A perennial with large, single white flowers. Distributed.

4942. HOVEA.

Blue mixed. Distributed.

4943.

Scarlet grevillea.

A shrub, in dry situations.

4944. BANKSIA GRANDIS.

Bull banksia.

A handsome tree.

4945.

An annual with white flowers.

4946.

A dwarf plant like *Banksia*, with long, serrated leaves.

4947-4962.

A collection of Mexican species of *Physalis*. Received March 27, 1900. Presented by Dr. Edward Palmer.

4947. PHYSALIS.

From Zacatecas, Mexico. "Fruit the size of a cherry; in color pea green to a yellow tint; quite sticky; used with red peppers in sauce to neutralize the bad effect of excessive use of red pepper." (*Palmer.*)

4948. PHYSALIS.

From San Luis Potosi, Mexico. "A fine species, with a rather flat fruit, plum-colored at base, solid and purplish when ripe." (*Palmer.*)

4949. PHYSALIS.

From Durango, Mexico. "The fruit has a fine aroma; is edible raw; very prolific, of good size, and worthy of cultivation." (*Palmer.*)

4950. PHYSALIS.

From Zacatecas, Mexico. "A species with husk entirely covering the fruit and extending above. Fruit is round and plum-colored." (*Palmer.*)

4951. PHYSALIS ALKENGI.

From Mexico. "Fruit edible raw, of fine flavor." (*Palmer.*)

4952. PHYSALIS.

From San Luis Potosi, Mexico.

4953. PHYSALIS.

From San Luis Potosi, Mexico.

4954. PHYSALIS FENDLERI.

From Acapulco, Mexico. "Used in soups, gravies, and stuffings for fowls. This fruit is found all the year round in the markets of Acapulco." (*Palmer.*)

4947-4962—Continued.

4955. *PHYSALIS*.

From Mapimi, Durango, Mexico. "Fruit yellow, with an agreeable odor and good to eat. Yields abundantly. A low plant. Worthy of cultivation." (*Palmer*.)

4956. *PHYSALIS*.

From San Luis Potosi, Mexico. "Large fruit having a husk which opens in two parts so that the top of the fruit is bare." (*Palmer*.)

4957. *PHYSALIS*.

From San Luis Potosi, Mexico.

4958. *PHYSALIS*.

From San Luis Potosi, Mexico. "A large-fruited species which is covered entirely by a husk that is purple at the base." (*Palmer*.)

4959. *PHYSALIS*.

From San Luis Potosi, Mexico. "This form has a very close-fitting, smooth husk with rather prominent veins at the base." (*Palmer*.)

4960. *PHYSALIS*.

From Durango, Mexico. "This species has a very strong odor and is as sticky as tobacco." (*Palmer*.)

4961. *PHYSALIS*.

From San Luis Potosi, Mexico. Distributed.

4962. *PHYSALIS*.

From San Pedro Soapuilla, Aguascalientes, Mexico. "It is one of the finest varieties." (*Palmer*.)

4963. *NICOTIANA*.**Tobacco.**

From Durango, Mexico. Received March 27, 1900. Presented by Dr. Edward Palmer.

"Strong grower, large leaves, very gummy, strong odor; once used by native population." (*Palmer*.) Distributed.

4964. *PENNISETUM SPICATUM*.**Pearl millet.**

From Kangundo, British East Africa. Presented by Mr. Charles F. Johnston. *Nivali*. Distributed.

4965-5002.

From Yokohama, Japan. Received March 27, 1900. A collection of vegetable seeds presented by Suzuki & Iida, New York City.

4965. *CITRULLUS VULGARIS*.**Watermelon.**4966. *PHASEOLUS VULGARIS*.**Bean.**4967. *CRYPTOTENIA CANADENSIS*.

Mitsuba.

4968. *BRASSICA RAPA*.**Turnip.**

Tennoji.

4969. *SALSOLA SODA*.

4965-5002—Continued.

4970.	CANAVALIA ENSIFORMIS. <i>Natamame.</i>	Knife bean.
4971.	PERILLA ARGUTA.	
4972.	TETRAGONA EXPANSA.	New Zealand spinach.
4973.	DOLICHOS UMBELLATUS. <i>Jinroku-sasage.</i>	
4974.	DOLICHOS UMBELLATUS. <i>Sanjak-sasage.</i>	
4975.	BETA VULGARIS. <i>Fudanso.</i>	Beet.
4976.	CUCURBITA LONGA. <i>Naga-yugao.</i>	
4977.	ALLIUM PORRUM. <i>Tokio.</i>	Leek.
4978.	ALLIUM PORRUM. <i>Iwatsuki.</i>	Leek.
4979.	ALLIUM PORRUM. <i>Shimo-vita.</i>	Leek.
4980.	GLYCINE HISPIDA. <i>Early soja.</i>	Soy bean.
4981.	LAPPA MAJOR. <i>Yamato.</i>	
4982.	LAPPA MAJOR. <i>Red Stalk.</i>	
4983.	LAPPA MAJOR. <i>Sunagawa.</i>	
4984.	PHASEOLUS VULGARIS. <i>Buff.</i>	Bean.
4985.	PHASEOLUS VULGARIS. Prolific climber.	Bean.
4986.	CHRYSANTHEMUM CORONARIUM.	Edible chrysanthemum.
4987.	LUFFA EGYPTIACA.	Vegetable sponge.
4988.	DAUCUS CAROTA. <i>Long red.</i>	Carrot.
4989.	CUCUMIS SATIVUS. <i>Late.</i>	Cucumber.
4990.	CUCUMIS SATIVUS. <i>Medium green.</i>	Cucumber.

4965-5002—Continued.

4991. CUCUMIS SATIVUS. Joint fruiting:	Cucumber.
4992. CUCUMIS SATIVUS. <i>Common.</i>	Cucumber.
4993. CUCUMIS MELO. <i>Makwa-wir.</i>	Muskmelon.
4994. SOLANUM MELONGENA. <i>Sadowara.</i>	Egg plant.
4995. SOLANUM MELONGENA. <i>Early prolific.</i>	Egg plant.
4996. RAPHANUS SATIVUS. <i>Everlasting.</i>	Radish.
4997. RAPHANUS SATIVUS. <i>Summer.</i>	Radish.
4998. RAPHANUS SATIVUS. <i>Long Otapuka.</i>	Radish.
4999. BENINCASA CERIFERA.	Wax gourd.
5000. LAGENARIA VULGARIS. <i>Ohiotau.</i>	Large gourd.
5001. CUCURBITA MAXIMA.	Pumpkin.
5002. CUCURBITA MAXIMA. <i>Early Crêpe.</i>	Pumpkin.

5003-5020.

From Yokohama, Japan. Received March 27, 1900. A collection of seeds of the native forest trees of Japan, presented by Suzuki & Iida, of New York City.

5003. ABIES BRACHYPHYLLA.	Fir.
5004. ABIES FIRMA.	Fir.
5005. ABIES VEITCHII.	Fir.
5006. CARPINUS YEDOENSIS.	Hornbeam.
5007. CELTIS BUNGEANA.	Hackberry.
5008. CORNUS KOUSA.	Cornel.
5009. CRYPTOMERIA JAPONICA. Distributed.	
5010. EDGEWORTHIA GARDNERI.	
5011. ELEAGNUS UMBELLATUS.	
5012. ILLICIAM ANISATUM.	
5013. JUGLANS SIEBOLDIANA.	Walnut.
5014. JUNIPERUS RIGIDA.	Juniper.
5015. QUERCUS ACUTA.	Oak.
5016. RHUS SUCCEDANEA.	Tallow tree.
5017. THEA VIRIDIS. Distributed.	Tea.

5003-5020—Continued.

5018. TORREYA NUCIFERA.

5019. XANTHOXYLON PIPERITUM.

5020. ZELKOVA ACUMINATA.

5021. CANNABIS SATIVA.

Hemp.

From Shanghai, China. Received March 28, 1900. Presented by Dr. Kung, through Mr. Young S. Allen. Distributed.

5022. THEA VIRIDIS.

Tea.

From Heneratgoda, Ceylon. Received March 28, 1900.

Best Assam Hybrid. Distributed.

5023. LANDOLPHIA KIRKI.

From Heneratgoda, Ceylon. Received March 28, 1900.

This is one of the African lianes from which commercial rubber is extracted. Distributed.

5024. URCEOLA ESCULENTA.

From Heneratgoda, Ceylon. Received March 28, 1900.

An East Indian rubber plant. Distributed.

5025. OPUNTIA PUBESCENS.

From Heneratgoda, Ceylon. Received March 28, 1900. Presented by J. P. William & Bros.

A prickly-pear cactus which is valuable as a forage plant. Distributed.

5026. NOPALEA COCCINELLIFERA.

From Heneratgoda, Ceylon. Received March 28, 1900. Presented by J. P. William & Bros. Distributed.

5027. PAYENA LEERII.

From Heneratgoda, Ceylon. Received March 28, 1900.

An East Indian rubber plant. Distributed.

5028. MANIHOT GLAZIOVII.

Ceara rubber.

From Heneratgoda, Ceylon. Received March 28, 1900. Distributed.

5029. MIMUSOPS ELENGI.

From Heneratgoda, Ceylon. Received March 28, 1900.

An East Indian tree from which a commercial guttapercha is extracted. Distributed.

5030. CUCUMIS SATIVUS.

Cucumber.

From Heneratgoda, Ceylon. Received March 28, 1900. Presented by J. P. William & Bros.

An especially fine cucumber for cultivation in the tropics.

5031. SECALE CEREALE.

Rye.

From Schlansted, Germany. Received March 30, 1900.

Schlansted Winter. An improved strain, originated in Germany. The grain is one of the best for bread-making purposes.

- 5032. AVENA SATIVA.** **Oat.**
 From France. Received March 30, 1900.
Avoine rousse couronnée. "Grain red, short; chaff very thin; straw is stiff and does not lodge readily; very productive, but late." (Vilmorin.)
- 5033. NICOTIANA TABACUM.** **Tobacco.**
 From Sumatra. Received March 30, 1900.
Sumatra Rano.
- 5034. ASTRAGALUS FALCATUS.**
 From France. Received March 30, 1900.
 A leguminous forage plant.
- 5035. TRITICUM MONOCOCCUM.** **Einkorn.**
 From France. Received March 30, 1900.
Engrain. Distributed.
- 5036. TRITICUM MONOCOCCUM.** **Einkorn.**
 From France. Received March 30, 1900.
Commun. (See No. 5035.) Distributed.
- 5037. BETA VULGARIS.** **Mangold.**
 From Paris, France. Presented by Vilmorin-Andrieux et Cie. Received March 30, 1900.
Giant Half-sugar Rose.
- 5038. BETA VULGARIS.** **Mangold.**
 From Paris, France. Presented by Vilmorin-Andrieux et Cie. Received March 30, 1900.
Giant Half-sugar White. (See No. 5037.)
- 5039. GLYCINE HISPIDA.** **Soy bean.**
 From Paris, France. Received March 30, 1900. Presented by Vilmorin-Andrieux et Cie.
Extra early black-seeded. A very early maturing strain.
- 5040. PACHYRHIZOS TUBEROSUS.** **Yam-bean.**
 From Italy. Received April 2, 1900.
 Of possible value as a forage plant.
- 5041. NICOTIANA TABACUM.** **Tobacco.**
 From Italy. Received April 2, 1900.
Turkish Bafra. (See No. 4378.)
- 5042. VIGNA CATJANG.** **Cowpea.**
 From Georgia. Received April 4, 1900.
New Era. The earliest maturing variety of cowpea known. Distributed.
- 5043. FRAGARIA VESCA.** **Strawberry.**
 From Irapuato, Guanajuato, Mexico. Received April 6, 1900.
 An everbearing strawberry. Distributed.

- 5044-5047. TRIFOLIUM PRATENSE. Red clover.**
 From Vienna, Austria-Hungary. Received April 7, 1900.
 A collection of European red clovers:
5044. HUNGARIAN.
5045. RUSSIAN.
5046. STEIERMARK.
5047. TRANSYLVANIAN.
- 5048. TRITICUM VULGARE. Wheat.**
 From Minnesota. Received April 10, 1900. Presented by Prof. W. M. Hays, of the Agricultural Experiment Station, St. Anthony Park, Minn.
Minn. No. 169. Distributed.
- 5049. TRITICUM VULGARE. Wheat.**
 From Minnesota. Received April 10, 1900. Presented by Prof. W. H. Hays, of the Agricultural Experiment Station, St. Anthony Park, Minn.
Minn. No. 187. Distributed.
- 5050. TRITICUM VULGARE. Wheat.**
 From Minnesota. Received April 10, 1900. Presented by Prof. W. M. Hays, of the Agricultural Experiment Station, St. Anthony Park, Minn.
Minn. No. 149. Distributed.
- 5051. TRITICUM VULGARE. Wheat.**
 From Shanghai, China. Received through Consul-General Goodnow, April 11, 1900.
Pootung. Said to be grown on the lowlands between the Hwang-ho and Yangtse rivers. The Chinese report that this wheat is never attacked by rust.
- 5052. POA VIOLACEA.**
 From Steiermark, Bohemia. Received April 14, 1900. Presented by the director of the Samen Control Station, Vienna.
 "From the Alps, near Aussee, at an altitude of 4,200 feet." Distributed.
- 5053. Confederate grass.**
 From Victoria, Tex. Received April 12, 1900. Presented by Mr. William Benton. Distributed.
- 5054. TRITICUM VULGARE. Wheat.**
 From Douglas, Wyo. Received April 14, 1900. Presented by Mr. B. C. Wheelock.
Seven-head wheat. "This wheat yielded 43 bushels per acre and weighed 63 pounds to the bushel."
- 5055. ZEA MAYS. Corn.**
 From Douglas, Wyo. Received April 14, 1900. Presented by Mr. B. C. Wheelock.
Longfellow. "This flint corn ripens in from 80 to 90 days from time of planting. It yields a heavy crop." (*Wheelock.*)
- 5056. EUGENIA UNIFLORA. Surinam cherry.**
 From Lemon City, Fla. Received April 13, 1900. Presented by Mr. E. J. Brown. Distributed.

- 5057. PANICUM MILIACEUM.** **Broom-corn millet.**
 From Walla Walla, Wash. Received April 16, 1900.
 Seed grown in Washington. The original was imported by Prof. N. E. Hansen for this Department from Russia.
- 5058. SECALE CEREALE.** **Rye.**
 From Germany. Received through a French seedsman, April 26, 1900.
Petkus. This is an improved strain originated by a plant breeder at Petkus, a small town about 40 miles south of Berlin. It is one of the best varieties for bread making.
- 5059. AVENA SATIVA.** **Oat.**
 From Italy. Received through a French seedsman, April 26, 1900.
Gentile primo vera d' Umbria. A very early maturing variety with paniced heads and tall straw.
- 5060. BOUTELOUA OLIGOSTACHYA.** **Blue grama.**
 From Silver City, N. Mex. Received March 1, 1900. Distributed.
- 5061. LYCURUS PHLEOIDES.** **Timothy grama.**
 From Silver City, N. Mex. Received March 1, 1900. Distributed.
- 5062. MUSA.** **Banana.**
 From Manila, P. I. Received through Messrs. Lathrop and Fairchild (No. 389), April 14, 1900.
 "A variety of banana with fruit filled with seed. The flavor is quite different from any other variety known to me and very agreeable. Imported for breeding experiments." (*Fairchild.*) Distributed.
- 5063. MANGIFERA INDICA.** **Mango.**
 From Manila, P. I. Received through Messrs. Lathrop and Fairchild (No. 390), April 14, 1900.
 "Two seeds of a most delicious variety (name unknown) of mango, grown near Manila. Large, orange yellow, kidney-shaped. Pronounced by Mr. Lathrop as good as any Indian mango he ever ate. Very little fiber." (*Fairchild.*) Distributed.
- 5064. CAPSICUM ANNUM.** **Red pepper.**
 From Manila, P. I. Received through Messrs. Lathrop and Fairchild (No. 388), April 14, 1900.
 "Seeds of a large, bright-red, sweet pepper from Manila market." (*Fairchild.*) Distributed.
- 5065. MELALEUCA LEUCODENDRON.** **Cajuput.**
 From France. Received April 30, 1900.
 An evergreen tree of large size, native from the Malayan Archipelago to Australia. Cajuput oil, extensively used in medicine, is extracted from the leaves. Distributed.
- 5066. MUCUNA UTILIS.** **Velvet bean.**
 From Florida. Received May 1, 1900. Presented to Hon. J. H. Brigham, Assistant Secretary of Agriculture, by Mr. Kline O. Varn, of Fort Meade, Fla. (See No. 4333, Inventory No. 8.)

5067. AGARICUS CAMPESTRIS.**Mushroom.**

From France. Received May 5, 1900. Presented by Vilmorin-Andrieux et Cie., Paris, France.

Vilmorin's New Mushroom Spawn. Grown from spores of the best mushrooms by Dr. Repin's process.

5068. LESPEDEZA STRIATA.**Japan clover.**

From Sardis, Miss. Received May 5, 1900.

An annual plant of especial value for covering barren soils in the Southern States.

5069. CANAVALLIA ENSIFORMIS.**Knife bean.**

From Wahiawa, Oahu, H. I. Received May 8, 1900. Presented by Hon. Byron O. Clark.

"A large white bean brought here from California by a gardener. It is a strong grower and very productive." (*Clark.*)

5070. DOLICHOS.**Tongan bean.**

From Wahiawa, Oahu, H. I. Received May 8, 1900. Presented by Hon. Byron O. Clark.

"Imported from Australia. This bean will cover a trellis or outhouse. One plant will yield bushels of delicious beans, which may be either cut up like a French bean or shelled when nearly ripe. As the seed germinates slowly, it has been found a good plan to soak in boiling water before planting, so as to soften the hard outer skin." (*Clark.*)

5071. PHASEOLUS MUNGO.**Green gram.**

From Wahiawa, Oahu, H. I. Received May 8, 1900. Presented by Hon. Byron O. Clark.

A native of China

5072. PHASEOLUS MUNGO.**Green gram.**

From Wahiawa, Oahu, H. I. Received May 8, 1900. Presented by Hon. Byron O. Clark.

A native of China.

5073. CUCURBITA PEPO.**Vegetable marrow.**

From Wahiawa, Oahu, H. I. Received May 8, 1900. Presented by Hon. Byron O. Clark.

A native of Australia. "Very choice as a green squash; used as our butter squashes are." (*Clark.*)

5074. POLYGALA BUTYRACEA.**Polygala.**

From Paris, France. Received May 8, 1900. Presented by A. Godefroy-Lebeuf.

This plant produces a vegetable butter. It will grow in summer in the hot portions of California and Florida, and as the plants can be grown as annuals it will probably prove successful.

5075. TRITICUM VULGARE.**Wheat.**

From New South Wales, Australia. Received May 8, 1900.

Allora. This variety is obtained in Australia, though it is said to have come originally from California. It is medium or small in height, with red, bald, or slightly bearded heads. The grain is soft and white, and produces flour with a low gluten content. Its particularly valuable quality for this country is its earliness in ripening, although it is usually rather rust-resistant (at least in Australia) and fairly drought-resistant. It is adapted to the Southern States, but might also be tried in Oregon, northern California, and southeastern Washington. It is a winter variety in mild climates.

5076. TRITICUM VULGARE.**Wheat.**

From New South Wales, Australia. Received May 8, 1900.

Steinwedel. This is a winter variety for mild climates. It has bald heads, soft, white grains, and produces a weak flour of fair gluten content. It is particularly resistant to drought, and ripens early; is adapted to our Southern States, but may well be tried in our Pacific coast States. It is not considered a good milling wheat in Australia.

5077. TRITICUM VULGARE.**Wheat.**

From New South Wales, Australia. Received May 8, 1900.

Canning Downs. This variety is a wheat of short growth, with bearded heads. It ripens very early, and possesses a fair quality of grain, but is not hardy. It is adapted for trial in the Southern States west to Texas, and, because of its early maturity, should be tested in Oregon and southeastern Washington.

5078. TRITICUM VULGARE.**Wheat.**

From New South Wales, Australia. Received May, 8, 1900.

Early Baart. This is an early-ripening variety, adapted to the Pacific States. It is a winter variety in mild climates.

5079. TRITICUM VULGARE.**Wheat.**

From New South Wales, Australia. Received May 8, 1900.

King's Early. This is a winter variety for mild climates. It produces a rather soft grain and is very early in ripening. It is adapted to the Southern States, and may well be tried in the Pacific coast States.

5080. BROMUS UNIOLOIDES.**Rescue grass.**

From New South Wales, Australia. Received May 8, 1900.

This grass is a native of South America, and possibly also of the southwestern United States. Distributed.

5081. PASPALUM DILATATUM.**Large water grass.**

From New South Wales, Australia. Received May 8, 1900.

A rather coarse-leaved perennial, growing in clumps 2 to 5 feet high, bearing near the summit of the stems 2 to 10 more or less spreading racemes or spikes of crowded, hairy spikelets. Although a native of Brazil, it has now become quite largely introduced throughout the United States.

5082. ATRIPLEX NUMMULARIA.**Round-leaved saltbush.**

From New South Wales, Australia. Received May 8, 1900.

This plant attains a height of from 6 to 10 feet and is highly valued as forage for cattle and sheep. Although it is extensively planted and highly valued in central Australia and South Africa, the experiments with it in this country have not been satisfactory.

5083. ATRIPLEX HALIMOIDES.**Mealy saltbush.**

From New South Wales, Australia. Received May 8, 1900.

A low-growing, shrubby perennial about 1 foot high, with variable, ovate-lanceolate leaves, which are covered with whitish, dust-like scales. It is a native of the Central regions of Australia, where it makes a very rapid growth and begins to bear seeds in three months after sowing. In this country it has not been sufficiently experimented with to state its possibilities.

5084. POA PRATENSIS.**Kentucky blue grass.**

From New York. Received May 5, 1900. Distributed.

5085-5105. CAPSICUM ANNUM.**Red pepper.**

From British Guiana. Received May 14, 1900. Presented by the Director of the Botanic Gardens. A collection of different varieties, of which but two are named or described:

- 5085. (1.) Distributed.
- 5086. (2.) Distributed.
- 5087. (3.) Distributed.
- 5088. (4.) Distributed.
- 5089. (5.) Distributed.
- 5090. (6.) Distributed.
- 5091. (7.) Distributed.
- 5092. (8.) Distributed.
- 5093. (9.) Distributed.
- 5094. (10.) Distributed.
- 5095. (11.) Distributed.
- 5096. (12.) Distributed.
- 5097. (13.) Distributed.
- 5098. (14.) Distributed.
- 5099. (15.) Distributed.
- 5100. (16.) Distributed.
- 5101. (17.) Distributed.
- 5102. (18.) Distributed.
- 5103. (19.) Distributed.
- 5104. (20.) *Killmissy*. Distributed.
- 5105. (21.) Black when young, yellow when ripe.

5106. CAPSICUM FRUTESCENS BACCATUM.**Bird pepper.**

See Nos. 5085-5105. Distributed.

5107. HUMULUS LUPULUS.**Hop.**

From Bohemia. Received through Messrs. Lathrop and Fairchild (No. 252), May 15, 1900.

Red Semsch. A variety, originated in Auscha, which has been improved by being grown two years on the red soils of Saaz, the most noted hop region of Bohemia. (See Circular No. 19, Division of Botany.) Distributed.

5108. HUMULUS LUPULUS.**Hop.**

From Bohemia. Received through Messrs. Lathrop and Fairchild (No. 255), May 15, 1900.

The true Saaz hop, less fruitful than Auscha, but with the finest aroma and bitter taste. (See Circular No. 19, Division of Botany.) Distributed.

5109. FICUS CARICA.**Caprifig.**

From Algiers, Algeria. Received through Mr. Walter T. Swingle (No. 1), May 16, 1900. Presented by Dr. Trabut.

From Jardin d'Essai. Distributed.

5110. OLEA EUROPEA.**Olive.**

From Algiers, Algeria. Received through Mr. Walter T. Swingle (No. 4), May 17, 1900. Presented by Dr. Trabut.

Olive longue de Constantine. "A very large pickling olive of very superior quality, from the Jardin du Hamma, at Constantine." (*Swingle*.) Distributed.

- 5111. OLEA EUROPEA.** **Olive.**
 From Algiers, Algeria. Received through Mr. Walter T. Swingle (No. 5), May 17, 1900.
Round Constantine. Distributed.
- 5112. CARICA PAPAYA.** **Papaw.**
 From Honduras. Presented by Dr. R. Fritzgartner, Director of the Mint, Tegucigalpa. Received May 17, 1900.
 Large, yellow fruit. Distributed.
- 5113. FICUS CARICA.** **Caprifig.**
 From Algiers, Algeria. Received through Mr. W. T. Swingle, May 17, 1900.
 Distributed.
- 5114. NICOTIANA TABACUM.** **Tobacco.**
 From Japan. Received May 17, 1900. Presented to Hon. James Wilson, Secretary of Agriculture, by C. Maki, Director of the Ibraki Prefecture of the Ota Tobacco Monopoly.
Kokubu. "The best tobacco produced in this district. The aromatic leaves are excellent and grade first in Japan." (*Maki.*)
- 5115-5122.**
 From Sinaloa, Mexico. A collection of seed presented by Mr. G. Lawton Taylor, of Santa Cruz de Alaya, through the Office of Experiment Stations, May 21, 1900.
- 5115. CARICA PAPAYA.** **Papaw.**
Papai. A tree about 20 feet high; fruit excellent. Distributed.
- 5116. CARICA PAPAYA.** **Papaw.**
Papai. From Oahu, H. I. "Extremely productive and excellent eaten green, cooked as vegetables, or ripe as fruit." (*Taylor.*) Distributed.
- 5117. BRASSICA JUNCEA.** **Chinese mustard.**
Koytoi. "From Asia. Eaten cooked as greens and also made into a sauerkraut." (*Taylor.*) Distributed.
- 5118. VIGNA CATJANG.** **Cowpea.**
Aukok. "A long, black climbing bean from Asia. Eaten as snap beans. Very tender even when old." (*Taylor.*) Distributed.
- 5119. CUCURBITA PEPO.** **Squash.**
Umqua. "A Chinese squash, weighing about 30 to 40 pounds. The squash looks much like a watermelon, but is hollow and will keep a year if not frozen, pieces being cut off and cooked as vegetables." (*Taylor.*) Distributed.
- 5120. CITRULLUS VULGARIS.** **Citron.**
Tegua. "From Asia. Is like the *Umqua* in appearance and weight, but keeps only four months." (*Taylor.*) Distributed.
- 5121. MOMORDICA CHARANTIA.** **Gourd.**
Laqua. "A climber. Fruit looks like a large gherkin. Is cooked with roast meats. Acid fruit weighs about three-fourths of a pound." (*Taylor.*) Distributed.
- 5122. LUFFA ACUTANGULA.** **Gourd.**
Suqua. "From China. A delightful cornucopia-shaped, 10-ribbed vegetable, climber, from 1 to 2½ feet long. Is good raw or cooked. Looks like black watermelon seed." (*Taylor.*) Distributed.

- 5123. FICUS CARICA.** **Caprifig.**
From Algeria. Received through Mr. W. T. Swingle (No. 3), May 21, 1900.
Distributed.
- 5124. CITRUS LIMONUM.** **Lemon.**
From Banda, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 350), May 22, 1900.
Sauerbier. A very large, thin-skinned, exceedingly juicy lemon of good flavor.
Distributed.
- 5125. STIPA LEUCOTRICHA.** **Bearded mesquite.**
From Victoria, Tex. Presented by Hon. J. D. Mitchell, May 21, 1900.
This is the best hay grass of the "sedge-grass prairies" of southern Texas. It is a bunchy grass with long and abundant leaves, and grows 3 to 4 feet high.
- 5126. RUMEX HYMENOSEPALUS.** **Canaigre.**
From San Antonio, N. Mex. Received March 1, 1900. Presented by Mr. C. B. Allaire.
A few seeds from a plant selected for its high tannin content. Distributed.
- 5127. CUCUMIS MELO.** **Muskmelon.**
From Turkey. Received May 24, 1900, through Mr. H. S. D. Ashby, Smithfield, Tex.
"A few seeds sent by Judge A. Terrell from Constantinople. Said to be a very fine melon of delicate flavor." (*Ashby.*)
- 5128. CARAGANA FRUTESCENS.** **Siberian pea tree.**
From Russia. Received through Prof. N. E. Hansen, March, 1898.
- 5129. RUBUS XANTHOCARPUS.** **Raspberry.**
From North China. Received through Prof. N. E. Hansen, March, 1898.
Orange-fruited raspberry. From mountains of North China. Fruit large; peculiar, pleasant flavor; semirecumbent habit. Hardy at St. Petersburg. Cultivated in ordinary way. Likely to become a bad weed. Should be watched.
- 5130-5138.**
From Russia. Received through Prof. N. E. Hansen, March, 1898. A collection of seeds as follows:
- 5130. ROSA RUGOSA (No. 600.)
 - 5131. NEILLIA AMURENSIS. (No. 602.) Distributed.
 - 5132. LONICERA CHRYSANTHA. (No. 603.)
 - 5133. CLEMATIS ALPINA. (No. 606.)
 - 5134. RUBUS ARCTICUS. (No. 607.) Distributed.
 - 5135. LONICERA ALBERTI. (No. 608.)
 - 5136. LONICERA CERULEA DEPENDENS. (No. 609.)
 - 5137. ROSA RUGOSA ALBA. (No. 610.)
 - 5138. CARAGANA FRUTESCENS GRANDIFLORA. (No. 611.)
- 5139. AVENA SATIVA.** **Oat.**
From Kiovikko, Finland. Received through Messrs. Lathrop and Fairchild (No. 433), September 28, 1900.
North Finnish Bleck. "The climate of Kiovikko is extremely cold. During the winter of 1899-1900 the temperature remained for nearly three weeks at from -4° F.

to -40° F., reaching an extreme minimum of -49° F. Frosts often occur every month during the summer. Seed is sown here in April and May. The harvest occurs at the end of August. This seed was grown at the Finnish Agricultural School of Kiovikko. It matures earlier than any other sort." (*Fairchild.*)

5140. AVENA SATIVA. Oat.

From Kiovikko, Finland. Received through Messrs. Lathrop and Fairchild, September 28, 1900.

A white oat which was mixed with No. 5139.

5141. PINUS SILVESTRIS. Scottish pine.

From Jokkis, Finland. Received through Messrs. Lathrop and Fairchild (No. 434), September 28, 1900.

5142. PROSOPIS HORRIDA. Algaroba.

From Rosario, Argentina. Received September 28, 1900. Presented by Hon. James M. Ayers, United States consul.

"The pods of this tree, which resembles the Mesquite bean of Texas, are extensively used for feeding cattle and for food by the common people. It grows luxuriantly in very dry regions." (*Fairchild.*)

5143. DIOSPYROS TEXENSIS. Texas ebony.

From Victoria, Tex. Presented by Mr. E. H. Smith. Received October 1, 1900.

5144. MENTHA PIPERITA. Peppermint.

From Hungary. Received October 2, 1900.

5145. TRITICUM VULGARE. Wheat.

From Columbia, Mo. Received September 29, 1900.

Fultz. Wheat grown by the Missouri Agricultural Experiment Station.

5146. VICIA CRACCA. Vetch.

From Luleå, Sweden. Received through Messrs. Lathrop and Fairchild (No. 437a), October 4, 1900.

5147. VICIA FABA. Horse bean.

From Freemansburg, Pa. Presented by Mr. J. H. Denyer. Received October 5, 1900.

(See No. 3997, Inventory No. 8.)

5148. VICIA FABA. Horse bean.

From Freemansburg, Pa. Presented by Mr. J. H. Denyer. Received October 5, 1900.

(See No. 3997, Inventory No. 8.)

5149. HICORIA PECAN. Pecan.

From Victoria, Tex. Presented by Mr. E. H. Smith. Received October 15, 1900.

5150. TRITICUM VULGARE. Wheat.

From Japan. Received May 26, 1900. Presented by Prof. Setsuschuro Tanaka, Agricultural College, Komaba, Tokyo.

Onigara. "Produced in Owada in the Prefecture Scitama, several miles from Tokyo, a region noted for its wheat production."

5151. HIBISCUS SABDARIFFA.**Roselle.**

From Topolobampo, Mexico. Received May 31, 1900. Presented by Mr. A. J. Wilber.

Roselle is used for various culinary purposes; the leaves as greens; the fleshy calyxes for sauces, salads, etc. The dried calyxes are the roselles of commerce.

5152. HALOXYLON AMMODENDRON.

From Russia. Received May 31, 1900. Presented by the Secretary for Agriculture and Mines, Department of Agriculture, St. Petersburg.

Black.

5153. HALOXYLON AMMODENDRON.

From Russia. Received May 31, 1900. Presented by the Secretary for Agriculture and Mines, Department of Agriculture, St. Petersburg.

White.

5154. CAPSICUM ANNUM.**Red pepper.**

From Surabaya, Java. Received through Messrs. Lathrop and Fairchild (No. 391), June 1, 1900.

"Long red pepper, very silky skinned, three-eighths of an inch in diameter, from the market of Surabaya." (*Fairchild.*)

5155. SOLANUM.

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 392), June 1, 1900.

"Seed from single fruit of ornamental shrubby species of *Solanum*, grown in pots in the 'City of the Dead' at Canton. The showy fruits are of an exceedingly deep, rich red color. Plant more or less spiny; 1 foot high; should be grown as a pot plant." (*Fairchild.*)

5156. SOLANUM.

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 393), June 1, 1900.

"A thorny shrub 2 feet high, grown in pots as an ornamental. The lemon-yellow fruits are distinguished by small manifold enlargements around the base, giving it a most peculiar appearance. Are egg-shaped, 2 or 3 inches long. From the 'City of the Dead' in Canton." (*Fairchild.*)

5157. QUERCUS CORNEA.**Oak.**

From Hongkong, China. Received through Messrs. Lathrop and Fairchild (No. 394), June 1, 1900.

"An edible acorn grown in Hongkong. Tons of this acorn are consumed. It is as sweet as a chestnut and has a flavor which is very agreeable. It deserves serious consideration." (*Fairchild.*)

5158. SCIRPUS TUBEROSA.**Water chestnut.**

From Hongkong, China. Received through Messrs. Lathrop and Fairchild (No. 395), June 1, 1900.

"One of the most interesting aquatic vegetables in China. Has been introduced into California by the Chinese. (See reports of California Experiment Station.)" (*Fairchild.*)

5159. ANDROPOGON SORGHUM.**Broom corn.**

From Batavia, Java. Received through Messrs. Lathrop and Fairchild (No. 396); June 1, 1900.

"Red variety, used as an ornamental grass in Batavia." (*Fairchild.*)

- 5160. TERMINALIA CHEBULA. Myrobalan.**
 From Canton, China. Received through Messrs. Lathrop and Fairchild, June 1, 1900.
 "A nut, of which the epicarp is used for a black dye. I am told that this is the *Myrobalan* of India, which is used in large quantities for tanning purposes in the very extensive boot and shoe factories of Cawnpore. Deserves to be looked up. From market in Canton, China. These samples will not grow." (*Fairchild.*)
- 5161. ORYZA SATIVA. Rice.**
 From Canton, China. Received through Messrs. Lathrop and Fairchild, June 1, 1900.
 Grown in Whampoa, near Canton. Distributed.
- 5162. ORYZA SATIVA. Rice.**
 From Canton, China. Received through Messrs. Lathrop and Fairchild, June 1, 1900.
 "This variety is the highest-priced rice in Canton." (*Fairchild.*) Distributed.
- 5163. ORYZA SATIVA. Rice.**
 From Canton, China. Received through Messrs. Lathrop and Fairchild, June 1, 1900.
 "Variety grown everywhere about Canton. The common sort." (*Fairchild.*) Distributed.
- 5164. ORYZA SATIVA. Rice.**
 From Saikong, China. Received through Messrs. Lathrop and Fairchild, June 1, 1900.
 "This variety is imported into Canton." (*Fairchild.*) Distributed.
- 5165. ORYZA SATIVA. Rice.**
 From Bangkok, Siam. Received through Messrs. Lathrop and Fairchild (No. 397), June 1, 1900.
Royal Caw Hluang. "From the private paddy field of the King of Siam. Said to be of superior quality." (*Fairchild.*)
- 5166. ORYZA SATIVA. Rice.**
 From Bangkok, Siam. Received through Messrs. Lathrop and Fairchild (No. 398), June 1, 1900.
Nasuan. "The largest-kerneled rice in Siam." (*Fairchild.*) Distributed.
- 5167. PIPER NIGRUM. Pepper.**
 From Bangkok, Siam. Received through Messrs. Lathrop and Fairchild (No. 399), June 1, 1900.
 "A variety of white pepper said to be grown exclusively for the table of the King of Siam." (*Fairchild.*)
- 5168. AVENA SATIVA. Oat.**
 From Proskurow, Russia. Presented by Dr. S. de Mrozinski.
 An early oat which ripens within 75 days from the seed. Distributed.
- 5169. MUSA ABYSSINICA. Banana.**
 From Santa Ana, Cal. Received through Mr. W. T. Swingle, June 1, 1900.
 A flowering banana with seeds as large as cacao beans.

- 5170. VITIS ROTUNDIFOLIA.** **Grape.**
From Clarcona, Fla. Presented by Mr. H. Meislahn.
Scuppernong.
- 5171. VITIS ROTUNDIFOLIA.** **Grape.**
From Clarcona, Fla. Presented by Mr. H. Meislahn.
Thomas.
- 5172. PTÆROXYLON UTILE.** **Sneezewood.**
From South Africa. Presented by Hon. A. D. Heywood, Conservator of Forests, Umtata, Cape of Good Hope.
"This tree supplies one of the most durable of South African timbers. Very hard and difficult to work, but valuable for fence posts. Splits easily and burns well." (*Von Mueller.*)
- 5173. GUAIAACUM OFFICINALE.** **Lignum-vitæ.**
From Jamaica. Received through Mr. D. G. Fairchild, from the Director, Botanical Department.
"Tree, attaining middle size, but of slow growth. Yields a heavy, diagonally fibrous, somewhat odorous, greenish *lignum-vitæ*, which is unique in its qualities and much sought for pulley blocks, rulers, etc. The resin is used medicinally and for chemical tests." (*Von Mueller.*)
- 5174. TRIFOLIUM JOHNSONI.** **Clover.**
From British East Africa. Presented by the Director of the Royal Botanic Gardens, Kew, England, through the U. S. National Museum.
Seeds of the white clover of the rich, short pastures in the Kiluyu district, at an elevation of 6,500 feet. It is greedily devoured by all sorts of stock and will probably prove most useful in tropical and subtropical countries. Distributed.
- 5175. GOSSYPIUM BARBADENSE.** **Egyptian cotton.**
From Egypt.
- 5176. ISOPOGON DAWSONI.** **Isopogon.**
From New South Wales, Australia. Presented by Mr. R. P. Baker, Curator of the Technological Museum, Sydney.
"A new species of this genus recently described in the Proc. Linn. Soc. N. S. W. It is the tallest of any of the *Isopogons* occurring in eastern Australia. The flowers are more showy than those of other species of the genus." (*Baker.*)
- 5177. ACTINOTUS HELIANTHUS.** **Flannel flower.**
From New South Wales, Australia. Presented by Mr. R. T. Baker, Curator of the Technological Museum, Sydney.
"This is one of the favorite wild flowers of Sydney and at first sight would be taken for a composite, the large, white involucrel bracts resembling the ray florets of a composite. It much resembles the *edelweiss* of the Swiss Alps. Grows in poor, sandy, rocky soil." (*Baker.*)
- 5178. ERVUM LENS.** **Lentil.**
From Leitmeritz, Bohemia. Received through Messrs. Lathrop and Fairchild, September, 1899.
"Samples of lentils from Leitmeritz, the noted lentil region of Bohemia." (*Fairchild.*)
- 5179. CUCUMIS METULIFERUS.** **African horned cucumber.**
From Avonpark, Fla. Presented by Mr. S. G. Donaldson.

- 5180. CUCUMIS MELO. Muskmelon.**
 From San Juan, P. R. Presented by Capt. H. R. Lemly, U. S. A., June, 1899.
Valencia. "This melon will keep several months if cut from the vine before fully ripe. It is green in color when ripe and of very fine flavor." (*Lemly.*)
- 5181. PINUS. Pine.**
 From Russia. Received through Mr. M. A. Carleton, December, 1899.
 A pine with edible seeds as large as a coffee berry.
- 5182. AVENA SATIVA. Oat.**
 From Russia. Received through Mr. M. A. Carleton, 1899.
- 5183. PAPAVER SOMNIFERUM. Poppy.**
 From Russia. Received through Mr. M. A. Carleton, 1899.
- 5184. HORDEUM VULGARE. Barley.**
 From Russia. Received through Mr. M. A. Carleton, 1899.
 Best for beer-brewing purposes.
- 5185. SECALE CEREALE. Rye.**
 From Russia. Received through Mr. M. A. Carleton, 1899.
- 5186. CITRULLUS VULGARIS. Watermelon.**
 From Prim, Ark. Received from Mr. F. P. Hynds, December 14, 1899.
 "This melon is a rank grower of surpassing sweetness." (*Hynds.*)
- 5187. BASELLA RUBRA. Malabar nightshade.**
 From Buenos Ayres, Argentina. Received through Messrs. Lathrop and Fairchild, 1899.
 "A very vigorous salad vine; grows over low trellises and forms dense masses of thick, succulent leaves of very crisp texture. These leaves are cooked and make an excellent salad or greens. Introduced into Argentina by General Roca, President of the Republic." (*Fairchild.*)
- 5188. CASTILLOA ELASTICA. Rubber.**
 From Port Limon, Costa Rica. Presented by Mr. F. C. Nicholas, June 18, 1900.
 A lofty forest tree of the bread-fruit family, native of America. Lately introduced into Ceylon and some parts of India. It has been found easy to grow this tree from cuttings and it does well on slopes of hills. Distributed.
- 5189-5216.**
 From Manila, P. I. A collection of seeds secured by Lieut. A. P. Hayne, California Heavy Artillery, U. S. V., and Mr. Jeremiah Rebmann, private, Company B, First Nebraska Volunteers, while serving under an honorary commission from the Secretary of Agriculture, during the period from January 7, 1899, to July 1, 1899. The seeds were received January 15, 1900.
- 5189.** Distributed.
- 5190. CINNAMOMUM.**
 "An ornamental shrub with very fragrant flowers. Common in Manila." (*Rebmann.*)
- 5191. CARICA PAPAYA. Papaw.**
 "This is the papaw of the tropics, producing a fine, edible fruit. Common in the Philippines." (*Rebmann.*)

5189-5216—Continued.

5192. MIRABILIS.

"A little herbaceous flowering plant cultivated in gardens as an ornamental. Common in Manila." (*Rebmann.*)

5193. CÆSALPINIA PULCHERRIMA.

Tagal name, *Caballero* or *Tilor de fuego*.

5194. ARECA CATECHU.

Betel nut.

Tagal name, *Bonga*.

5195. CALOPHYLLUM INOPHYLLUM.

Tagal name, *Palo María*.

5196. ALBIZZIA PROCERA.

Tagal name, *Acle*.

5197. CEIBA.

Cotton tree.

Tagal name, *Taglinao*.

5198. TERMINALIA LATIFOLIA.

Tagal name, *Talisay*.

5199. GOSSYPIUM.

Cotton.

Tagal name, *Bulacana muti*.

5200. MIMOSA.

Tagal name, *Ipil*.

5201. ACHRAS SAPOTA.

Sapodillo.

Tagal name, *Chico*. This tree is an evergreen with dark-green, shining leaves. The fruit is about the size of a hen's egg and much of the same shape, dark-brown, with a mealy surface. It is eaten to a limited extent by the natives.

5202. ANACARDIUM OCCIDENTALE.

Cashew nut.

Tagal name, *Casoy*. A tree 30 to 40 feet high. The gum, sap, bark, and seed are all employed either for dyeing, tanning, or medicine. The fruit is eaten by the natives and the wood used for packing cases, boat building, and charcoal.

5203. ACACIA FARNESIANA.

Cassie.

Tagal name, *Aroma*. (See No. 3349, Inventory No. 7; and No. 3528, Inventory No. 8.)

5204. CANANGA ODORATA.

Ilang-ilang.

Tagal name, *Ilang-ilang*. (See No. 3793, Inventory No. 8.)

5205. SANDORICUM INDICUM.

Sandal tree.

Tagal name, *Santol*. This evergreen glabrous tree is a native of the Moluccas and extensively cultivated in the tropics. Leaves trifoliate and numerous; flowers yellow, sparse, and glomerate. The apple-shaped fruit is fleshy, acid, and edible.

5206. SPONDIAS DULCIS.

Ciruela.

Tagal name, *Sirihuelas*. A tree from 50 to 60 feet high. The deep-amber colored fruit is egg-shaped, measures a foot in circumference, and weighs 1 or more pounds. The rind tastes of turpentine, but the pulp has an apple-like smell and an agreeable flavor.

5189-5216—Continued.

5207. POINCIANA REGIA.

Royal poinciana.

Tagal name, *Árbol de fuego* (fire tree). This is a beautiful ornamental tree. It is especially desirable for streets and parks. (See No. 808, Inventory No. 1.)

5208. CARYOTA URENS.

Fish-tail palm.

One of the finest ornamental palm trees. It is one of the hardiest varieties known, growing in the Himalayas at an altitude of 5,000 feet. Some claim that it will grow at an altitude of 7,500 feet, where the temperature sometimes approaches the freezing point.

5209. SESBANIA GRANDIFLORA.

Tagal name, *Caturay*. Called in Australia the corkwood tree. Valuable for various purposes. The red-flowered variety is very ornamental. The fruit sometimes attains a length of 3 feet.

5210. ANONA RETICULATA.

Custard apple.

Tagal name, *Anonas*. A small tree, the leaves of which are used in dyeing and tanning, the bark for medicine and fiber, and the fruit as a food. The timber also has commercial value.

5211. STERCULIA HELICTERES.

Tagal name, *Dungan*. (See No. 3804, Inventory No. 8.) Distributed.

5212. ACACIA.

Tagal name, *Acacia*.

5213. TABERNÆMONTANA PANDACAQUI. Distributed.

5214. ARTABOTRYS ODORATISSIMUS.

Tagal name, *Hang-ilang de China*.

5215. POINCIANA REGIA.

Royal poinciana.

Tagal name, *Árbol de fuego*. (See No. 5207.)

5216. CITRUS DECUMANA.

Pomelo.

Tagal name, *Naranja*. Red-fleshed. Bears fruit throughout the year. (See No. 3409, Inventory No. 8.)

5217. COLA ACUMINATA.

Kola nut.

From Jamaica. Received June 30, 1900.

An African tree growing to a height of from 30 to 60 feet and containing many valuable properties. The plant resembles the chestnut, and is especially adapted to low, damp lands, but can be grown at an altitude of 1,000 feet. It is easily cultivated and yields a large crop twice a year. It begins to fruit when 4 or 5 years old. The large trees bear flowers and fruit at the same time. The nut is used in making a beverage which is considered by some to be superior to coffee or cocoa. Distributed.

5218. ASPARAGUS HORRIDUS.

From Algeria. Received through Mr. W. T. Swingle, June 30, 1900.

A wild species considered by some to be superior to the best cultivated asparagus. Distributed.

5219. CARICA PAPAYA.

Papaw.

From Mexico. Presented by Mr. J. Lawton Taylor, of Santa Cruz de Alaya, Sinaloa, June 30, 1900.

Hawaiian. "An immensely productive variety. It bears crops several times during the year." (*Taylor*.)

- 5220. CARICA PAPAYA.** **Papaw.**
 From Mexico. Presented by Mr. J. Lawton Taylor, of Santa Cruz de Alaya, Sinaloa, June 30, 1900.
Mexican. "This tree bears only one crop of fruit during the season." (*Taylor.*)
- 5221. LUFFA ACUTANGULA.** **Gourd.**
 From Mexico. Presented by Mr. J. Lawton Taylor, of Santa Cruz de Alaya, Sinaloa, June 30, 1900.
Suqua. "A native of Asia. Eaten cooked as a vegetable or raw." (*Taylor.*) (See No. 5122.)
- 5222. VIGNA CATJANG.** **Cowpea.**
 From Mexico. Presented by Mr. J. Lawton Taylor, of Santa Cruz de Alaya, Sinaloa, June 30, 1900.
Ankok. "A black climbing bean, a native of Asia. It makes a good arbor for grapes. The pods grow here to a length of 40 inches. They are tender and are eaten like string beans." (*Taylor.*) (See No. 5118.)
- 5223. MOMORDICA CHARANTIA.** **Gourd.**
 From Mexico. Presented by Mr. J. Lawton Taylor, of Santa Cruz de Alaya, Sinaloa, June 30, 1900.
Laqua. "A kind of gherkin, cooked with roast meat." (*Taylor.*) (See No. 5121.)
- 5224. PHENIX DACTYLIFERA.** **Date.**
 From Cora, near Biskra, Algeria. Received through Mr. W. T. Swingle (No. 2), July 2, 1900.
Ksiba.
- 5225-5341. PHENIX DACTYLIFERA.** **Date.**
 A collection of date palms obtained by Mr. W. T. Swingle in northern Africa, to be described in a separate publication.
- 5342. TRITICUM VULGARE.** **Wheat.**
 From Tokyo, Japan. Received July 5, 1900.
Onigara. An early ripening, soft, bearded wheat, rather hardy, and with a fair gluten content. Is of yellowish-green color in the autumn. Grain of medium size, light-brown; straw tall, erect; a fair stooler
- 5343. TRITICUM VULGARE.** **Wheat.**
 From Tokyo, Japan. Received July 5, 1900.
Yemide. An early-ripening, bearded winter wheat with very large, coarse, erect straw. Grain of medium size, soft, and light-brown in color.
- 5344. CRYPTOMERIA JAPONICA.** **Cryptomeria.**
 From Yokohama, Japan. Received July 5, 1900.
 A very beautiful Japanese evergreen. Distributed.
- 5345. BAMBUSA.** **Bamboo.**
 From Yokohama, Japan. Received July 5, 1900.
Matake. Distributed.

- 5346. BAMBUSA.** **Bamboo.**
 From Yokohama, Japan. Received July 5, 1900.
Moso. Distributed.
- 5347. ERIOBOTRYA JAPONICA.** **Loquat.**
 From Italy. Received July 5, 1900. (See Nos. 4566 and 4567.) Distributed.
- 5348. BROMUS UNIOLOIDES RUPESTRIS.** **Rescue grass.**
 From La Plata, Argentina. Received through Messrs. Lathrop and Fairchild,
 July 14, 1900. Presented by Dr. Carlos Spegazzini. Distributed.
- 5349. LOLIUM BRASILIANUM.** **Rye grass.**
 From La Plata, Argentina. Received through Messrs. Lathrop and Fairchild,
 July 14, 1900. Presented by Dr. Carlos Spegazzini. Distributed.
- 5350. CEREUS CHALIBÆUS.**
 From La Plata, Argentina. Received through Messrs. Lathrop and Fairchild,
 July 14, 1900. Presented by Dr. Carlos Spegazzini. (See No. 3424, Inventory
 No. 8.)
- 5351-5355. TRITICUM DURUM.** **Wheat.**
 From Marseille, France. Received through Mr. W. T. Swingle, July 18, 1900.
 "These five numbers comprise a collection of the different types of macaroni wheat
 for sale at the Marseille stock exchange June 17, 1900. They were procured
 through the kindness of Dr. Bendit after consultation with many of the wheat
 brokers and millers of Marseille." (*Swingle.*)
- 5351.** BERDEANSKA.
5352. NOVOROSSISK.
5353. ALGERIAN.
5354. ARGENTINE.
5355. TAGANROG.
- 5356. RAPHANUS SATIVUS.** **Radish.**
 From Kagoshima, Japan. Presented by Mr. T. Okohira, of the Japanese Lega-
 tion. Received July 16, 1900.
Daikon. (See No. 3876, Inventory No. 8.)
- 5357-5359. ARACHIS HYPOGÆA.** **Peanut.**
 From Marseille, France. Received through Mr. W. T. Swingle, July 28, 1900.
 A collection of the best oil varieties of peanuts, purchased in the Marseille market
 by the United States consul. They are as follows:
- 5357.** From Senegal.
5358. *Gambia.*
5359. *Coromandel.*
- 5360. PHORMIUM TENAX EGMONTIANA.** **New Zealand flax.**
 From New Brighton, Canterbury, New Zealand. Received July 30, 1900.
 Presented by Mr. L. Cockayne.
 The brown or purple leaved New Zealand flax. Distributed.

- 5361. PHORMIUM COOKIANUS.** **New Zealand flax.**
 From New Brighton, Canterbury, New Zealand. Received July 30, 1900.
 Presented by Mr. L. Cockayne.
 A form growing on limestone rocks at sea level. Distributed.
- 5362. ORYZA SATIVA.** **Rice.**
 From Java. Received through Messrs. Lathrop and Fairchild, July 30, 1900.
 A small sample of the most noted Javan rice, the *Indra Mayoe*, secured from the
 Holland exhibit at the Paris Exposition, 1900. Distributed.
- 5363. CUCURBITA MAXIMA.** **Pumpkin.**
 From Forestburg, S. Dak. Received August 2, 1900. Presented by Hon. H. C.
 Warner.
Hungarian honey. Seed grown at Forestburg two years from the original No. 14,
 Inventory No. 1, imported by Prof. N. E. Hansen.
- 5364. ATRIPLEX NUMMULARIA.** **Old man saltbush.**
 From Coolabah, New South Wales. Presented by Mr. R. W. Peacock, August
 3, 1900. (See No. 5082.)
- 5365. ATRIPLEX HALIMOIDES.** **Saltbush.**
 From Coolabah, New South Wales. Presented by Mr. R. W. Peacock, August
 3, 1900. (See No. 5083.)
- 5366. ATRIPLEX LEPTOCARPA.** **Saltbush.**
 From Coolabah, New South Wales. Presented by Mr. R. W. Peacock, August
 3, 1900.
 A much-branched trailing perennial. The whole plant is covered with glaucous
 bloom. The leaves are very variable in shape, but mostly oblong, and from 1 to 2
 inches in length. The fruit is small, narrow, cylindrical, and prominently two-
 pointed at the apex. This species was introduced into California in 1891 and has
 become widely distributed. (See Farmers' Bulletin No. 108.) Distributed.
- 5367. ATRIPLEX ANGULATA.** **Saltbush.**
 From Coolabah, New South Wales. Presented by Mr. R. W. Peacock, August
 3, 1900.
 "A dwarf shrubby plant with spreading branches more or less covered with a
 mealy whiteness. It withstands very dry weather, is easily cultivated, and makes
 a valuable hay for feeding stock. The seeds should be sown in early autumn, after
 a rainfall." (*Turner.*) Distributed.
- 5368. ATRIPLEX VESICARIA.** **Bladder saltbush.**
 From Coolabah, New South Wales. Presented by Mr. R. W. Peacock, August
 3, 1900.
 An erect, bushy shrub, 18 inches to 2 feet high, and covered with a white, scaly
 dust. The leaves are about three-fourths of an inch long and oblong in shape. The
 fruit is membranous, with large, inflated, angled, bladder-like appendages on each
 side, hence the name "bladder saltbush." In Australia this species is considered
 one of the most valuable forage plants, because of the abundance of seed which it
 produces and the ease with which the seeds are spread about. It withstands the
 utmost extremes of drought. (See Farmers' Bulletin No. 108.)
- 5369. ATRIPLEX LEPTOCARPA.** **Saltbush.**
 From Coolabah, New South Wales. Presented by Mr. R. W. Peacock, August
 3, 1900. Distributed.
 (See No. 5366.)

- 5370. ASTREBLA TRITICOIDES.** **Mitchell grass.**
 From Coolabah, New South Wales. Presented by Mr. R. W. Peacock August 3, 1900.
 A perennial grass found on rich soils.
- 5371. ASTREBLA PECTINATA.** **Mitchell grass.**
 From Coolabah, New South Wales. Presented by Mr. R. W. Peacock, August 3, 1900.
 This is one of the famous Mitchell grasses and is regarded by some as the best of all native grasses, both for its drought enduring qualities and for its fattening properties. Distributed.
- 5372. ERAGROSTIS PILOSA.** **Love grass.**
 From Coolabah, New South Wales. Presented by Mr. R. W. Peacock, August 3, 1900.
 This grass is common in the warm and temperate regions of the northern hemisphere, chiefly in the Old World. When conditions are favorable it grows about 3 feet high. It reproduces itself from falling seeds and often grows during the entire winter. Little attention is required in its cultivation. Distributed.
- 5373. DIPLACHNE FUSCA.** **Swamp grass.**
 From Coolabah, New South Wales. Presented by Mr. R. W. Peacock, August 3, 1900.
 This annual grass grows plentifully in damp and swampy places and is worth cultivating on low-lying waste lands. It makes desirable hay and ensilage. The plant produces an abundance of seeds which ripen late in the winter.
- 5374. ENCHYLENA TOMENTOSA.** **Barrier saltbush.**
 From Coolabah, New South Wales. Presented by Mr. R. W. Peacock, August 3, 1900.
 This procumbent or divaricately branched undershrub has been cultivated for many years and produces seed nearly all the year round, but more abundantly in the summer months. Owing to its free seeding and the easy germination of its seed, it grows quite plentifully. Sheep feed greedily on this shrub. The seeds should be sown during the early autumn months, after a rainfall, if possible. Distributed.
- 5375. CHLETOCHLOA.**
 From Roebourne, West Australia. Presented by Mr. W. D. Cusack, August 3, 1900.
 An annual grass affording good feed.
- 5376. CYDONIA SINENSIS.** **Chinese quince.**
 From Washington, D. C. Presented by Mr. Henry F. Blount, August 10, 1900.
- 5377. CASTILLOA ELASTICA.** **Rubber.**
 From Managua, Nicaragua. Received August 10, 1900. Distributed.
- 5378. LACTUCA ACUMINATA.** **Wild lettuce.**
 From Kerrsville, Tex. Presented by Mr. E. K. Carr, August 13, 1900.
 "This plant grows wild in sheltered places and will endure a temperature of zero, Fahrenheit. Never known by oldest settlers to be cultivated. It commences to grow with the fall rains and makes an excellent winter salad, being free from a bitter taste. It is eaten greedily by cattle. Is never found on open ranges." (Carr.) Distributed.

- 5379. ASTRAGALUS CRASSICARPA.** **Ground plum.**
From Kerrsville, Tex. Presented by Mr. E. K. Carr, August 13, 1900.
This is a perennial legume, which grows throughout the entire prairie region. It is well known on account of its fleshy plums or pods, which are produced in the greatest abundance during the early spring months. The forage is rich and is relished by all kinds of stock. There are several closely related species, which are all equally useful, and an effort should be made to prevent their complete extermination, at least until something equally good is found to take their places. Distributed.
- 5380. TRITICUM DURUM.** **Wheat.**
From Mustapha-Alger, Algeria. Received through Mr. W. T. Swingle, August 14, 1900.
Pellissier.
- 5381. HEVEA PAUCIFLORA.** **Rubber.**
From Georgetown, British Guiana. Presented by Prof. J. B. Harrison, through Dr. H. W. Wiley, Chemist. Received August 15, 1900. Distributed.
- 5382. HEVEA CONFUSA.** **Rubber.**
From Georgetown, British Guiana. Presented by Prof. J. B. Harrison, through Dr. H. W. Wiley, Chemist. Received August 15, 1900. Distributed.
- 5383. PHYSALIS VIOLACEA.**
From Los Angeles, Cal. Presented by Mr. Elmer Stearns, August 24, 1900.
"Various species of *Physalis* are always to be seen in the Mexican markets. The fruits are called 'tomatoes' and are used to make a dressing for meats, etc., or are combined with red peppers to make a chili sauce." (*Rose.*) Distributed.
- 5384-5392.**
From Mount Lindhurst, South Australia. Received August 28, 1900.
A collection of seeds of some of the native forage plants of this region, secured by Mr. Max Koch.
- 5384. CLIANTHUS DAMPIERI.** **Sturt's desert pea.**
- 5385. ACACIA CIBARIA.** Distributed. **Mulga.**
- 5386. POLYCALYMNIA STURTII.**
- 5387. LAVATERA PLEBEIA.** **Marshmallow.**
- 5388. TRIGONELLA SUAVISSIMA.** **Scented clover.**
- 5389. ERODIUM CYGNORUM.** **Geranium.**
- 5390. GOSSYPIUM STURTII.**
- 5391. HELIPTERUM POLYGALIFOLIUM.**
- 5392. KOCHIA SEDIFOLIA.** **Bluebush.**
- 5393. NICOTIANA TABACUM.** **Tobacco.**
From Cuba. Received August 23, 1900.
True Havana.
- 5394-5457.**
From Calcutta, India. A collection of seeds of Indian economic plants presented by Prof. D. Prain, Superintendent Royal Botanic Garden. Received August 30, 1900.
- 5394. ÆSCHYNOMUM CANNABINA.**
- 5395. AMARANTHUS POLYGAMUS.** Distributed. **Amaranth.**
- 5396. ANETHUM SATIVA.** Distributed. **Fennel.**

5394-5457—Continued.

5397.	ARACHIS HYPOGÆA.	Peanut.
5398.	BASELLA ALBA.	Malabar nightshade.
5399.	BENINCASA CERIFERA.	Wax gourd.
5400.	CAJANUS INDICUS. Distributed.	Dâl.
5401.	CANAVALIA GLADIATA.	Knife bean.
5402.	CANAVALIA VIROSA.	Knife bean.
5403.	CAPSICUM FRUTESCENS.	Bird pepper.
5404.	CICER ARIETINUM.	Garbanzo.
5405.	CITRULLUS VULGARIS.	Watermelon.
5406.	CORCHORUS OLITORIUS.	Jute.
5407.	CORIANDRUM SATIVUM.	Coriander.
5408.	CUCUMIS SATIVUS.	Cucumber.
5409.	CUCUMIS UTILISSIMUS.	
5410.	CUCURBITA PEPO.	Squash.
5411.	CUMINUM CYMINUM.	Cumin.
5412.	DOLICHOS LABLAB. <i>Falcatum majus.</i>	Madagascar bean.
5413.	DOLICHOS LABLAB. <i>Falcatum minus.</i>	Madagascar bean.
5414.	DOLICHOS LABLAB. <i>Purpurascens.</i>	Madagascar bean.
5415.	VIGNA CATJANG (red).	Cowpea.
5416.	VIGNA CATJANG (white).	Cowpea.
5417.	ELEUSINE CORACANA.	Ragi millet.
5418.	ERVUM HIRSUTUM.	Lentil.
5419.	ERVUM LENS.	Lentil.
5420.	FENICULUM VULGARE.	Fennel.
5421.	HIBISCUS ESCULENTUS.	Okra.
5422.	INDIGOFERA TINCTORIA.	Indigo.
5423.	LAGENARIA VULGARIS.	Gourd.
5424.	LATHYRUS SATIVUS.	Bitter vetch.
5425.	LINUM USITATISSIMUM.	Flax.
5426.	LUFFA ACUTANGULA.	Dish-rag gourd.
5427.	LUFFA PENTANDRA.	Gourd.
5428.	MOMORDICA CHARANTIA.	Gourd.
5429.	MOMORDICA MURICATA.	Gourd.
5430.	NIGELLA SATIVA.	Fennel flower.
5431.	PANICUM ITALICUM.	Millet.
5432.	PHALARIS CANARIENSIS.	Canary grass.
5433.	PAPAVER SOMNIFERUM.	Poppy.
5434.	PENNISETUM SPICATUM.	Pearl millet.
5435.	PHASEOLUS AUREUS.	Bean.
5436.	PHASEOLUS MAX.	Bean.
5437.	PHASEOLUS MUNGO.	Green gram.

5394-5457—Continued.

5438. PHASEOLUS PILOSUS. Bean.
5439. PHASEOLUS ROXBURGHII. Bean.
5440. PHYSALIS PERUVIANA. Ground cherry.
5441. PLANTAGO ISPAGHULA.
5442. PTYCHOTIS AJOWAN.
5443. RAPHANUS SATIVUS. Radish.
5444. SESAMUM INDICUM. Sesame.
5445. SINAPIS DICHOTOMA.
5446. SOLANUM MELONGENA. Egg plant.
5447. SUEDA MARITIMA.
5448. TRICHOSANTHUS ANGUINA.
5449. TRIGONELLA CORNICULATA.
5450. TRIGONELLA FENUM-GRÆCUM. Fenugreek.
5451. TRITICUM VULGARE. Distributed. Wheat.
5452. ZEA MAYS. Corn.
5453. AMARANTHUS POLYGAMUS.
5454. CROTALARIA JUNCEA. Sunn-hemp.
5455. PANICUM COLONUM.
5456. PHASEOLUS ACONITIFOLIUS.
5457. CARTHAMUS TINCTORIUS. Distributed.
5458. SECALE CEREALE. Rye.
From London, Ontario. Presented by Darch & Hunter, August 31, 1900.
Thousandfold.
5459. SECALE CEREALE. Rye.
From London, Ontario. Presented by Darch & Hunter, August 31, 1900.
Giant Winter.
5460. TRITICUM VULGARE. Wheat.
From London, Ontario. Presented by Darch & Hunter, August 31, 1900.
Diamond Grit.
5461. TRITICUM VULGARE. Wheat.
From London, Ontario. Presented by Darch & Hunter, August 31, 1900.
Canadian Pearl.
5462. TRITICUM VULGARE. Wheat.
From London, Ontario. Presented by Darch & Hunter, August 31, 1900.
Paramount.
5463. TRITICUM VULGARE. Wheat.
From London, Ontario. Presented by Darch & Hunter, August 31, 1900.
Gold Coin.

5464. TRITICUM VULGARE.**Wheat.**

From Argentina. Received September 1, 1900.

Chubut. This variety comes from the valley of the Chubut River, in southern Argentina. It is a semihard, red-grained wheat of very good quality. It is probably the best wheat for bread flour in South America. It is best known as a winter wheat, but will probably not stand our hard winters north of the thirty-fifth parallel. It should be sown about March 1.

5465. TRITICUM DURUM.**Wheat.**

From Argentina. Received September 1, 1900.

Candéal. This wheat is rather commonly grown in Chile and Argentina. It has long, compact, bearded heads, and yellowish-white, hard grains. It will probably be resistant to drought and to orange-leaf rust. Adapted for growing in dry, hot districts, such as west Texas and the drier portions of Colorado, Kansas, and Oklahoma. South of the thirty-fifth parallel it should be grown as a winter wheat, sown October 15 to November 15. North of this line it will probably not stand the winter and should be sown February 15 to March 1.

5466. TRITICUM VULGARE.**Wheat.**

From Argentina. Received September 1, 1900.

Francés. This variety is a soft or semihard, reddish-grained wheat, originally introduced into Argentina from France. It is a bald variety of only fair milling quality and not at all hardy. It is adapted for trial in the Southern States. Should be sown in October. It is one of the two chief varieties of all Argentina.

5467. TRITICUM VULGARE.**Wheat.**

From Argentina. Received September 1, 1900.

Barletta. A bearded winter variety. Chaff brown to black, smooth; beards very strong and ordinarily divergent; grain soft, red to amber; head rather loose and flattish; straw partially full.

5468. TRAPA BICORNIS.**Horn chestnut.**

From China. Seed purchased in the Chinese market, San Francisco, Cal. Received September 1, 1900.

5469. CASSIA FISTULA.

From Honolulu, H. I. Presented by Prof. Wm. C. Stubbs. Received September 4, 1900.

This tree can be grown in all tropical countries.

5470. CITRUS LIMONUM.**Lemon.**

From Honolulu, H. I. Presented by Prof. Wm. C. Stubbs. Received September 4, 1900.

5471. AVENA SATIVA.**Oat.**

From Svalof, Sweden. Received through Messrs. Lathrop and Fairchild (No. 453), March 11, 1901.

Ligowo. "A pedigreed variety, selected by the Seed Breeding Institute of Svalof, which has been very well received in Sweden, Russia, Germany, and Belgium. It possesses an unusually full, white kernel, making it especially adapted for the manufacture of oatmeal. It is earlier and possesses a stronger straw than the varieties generally grown in Sweden. It is of remarkable uniformity and a heavy yielder." (Fairchild.) Distributed.

- 5472. HORDEUM DISTICHUM ERECTUM. Barley.**
 From Svalof, Sweden. Received through Messrs. Lathrop and Fairchild (No. 450), March 11, 1901.
Princess. "A pedigreed variety, originated on the Seed Breeding Society's grounds and grown in quantity by the General Swedish Limited Seed Company of Svalof. It was selected from trial plots of the variety 'Prentice' and is characterized by an especially strong straw and an excellent quality of grain. It is remarkably well suited for heavy clay soils of a wet character. It deserves a thorough trial in all regions where the soil is heavy or wet and there is danger of the grain falling." (*Fairchild.*)
- 5473. HORDEUM DISTICHUM NUTANS. Barley.**
 From Svalof, Sweden. Received through Messrs. Lathrop and Fairchild (No. 451), March 11, 1901.
Chevalier II. "A pedigreed variety, selected by Dr. Nillsson from 'Horsford Chevalier.'" (*Fairchild.*)
- 5474. HORDEUM DISTICHUM ERECTUM. Barley.**
 From Svalof, Sweden. Received through Messrs. Lathrop and Fairchild (No. 472), March 11, 1901.
Scanhals. "A very early ripening variety, pedigreed at the Seed Breeding Institute of Svalof. It is suited to cold, wet, and even swampy land. Not comparable with No. 5472 or No. 5473 as a brewers' barley. Worthy of trial in a similar climate in America." (*Fairchild.*)
- 5475. VICIA SATIVA TYPICA. Sweet vetch.**
 From Svalof, Sweden. Received through Messrs. Lathrop and Fairchild (No. 454), March 11, 1901.
Fordlade Sotvicker. "A pedigreed variety, bred by the Seed Breeding Society of Svalof, Sweden. The seeds of this vetch are much heavier than those of ordinary varieties and the yield of seed surer and larger. This variety has just come on the market and the supply is limited." (*Fairchild.*)
- 5476. VICIA SATIVA TYPICA. Gray vetch.**
 From Svalof, Sweden. Received through Messrs. Lathrop and Fairchild (No. 455), March 11, 1901.
Fordlade Gravicker. "A pedigreed variety selected by the Seed Breeding Society of Sweden and characterized by much heavier seeds and very much larger yield of seed than the ordinary variety." (*Fairchild.*)
- 5477. (Blank.)**
- 5478. CASTILLOA ELASTICA. Rubber.**
 From Heneratgoda, Ceylon. Presented by J. P. William & Bros. Received September 6, 1900.
Cervantes. (See Nos. 5188 and 5377.) Distributed.
- 5479. HEVEA BRASILIENSIS. Para rubber.**
 From Heneratgoda, Ceylon. Presented by J. P. William & Bros. Received September 6, 1900. Distributed.
- 5480. LILIUM HARRISSII. Easter lily.**
 From Bermuda. Received September 5, 1900. Distributed.

5481. VACCINIUM VITIS IDÆA. Cranberry.

From Kiovikko, Finland. Received through Messrs. Lathrop and Fairchild (No. 438), September 10, 1900.

"A wild cranberry from the moors of North Finland. This species, so far as I can learn, has never been cultivated in Sweden and Finland. It is, however, of considerable commercial importance and many carloads of the fruit are shipped yearly to Germany. The berries are one-fourth as large as those of *V. macrocarpon*, but Europeans claim they are more aromatic." (*Fairchild.*) Distributed.

5482. RUBUS CHAMÆMORUS. Raspberry.

From Kiovikko, above Uleåborg, Finland. Received through Messrs. Lathrop and Fairchild (No. 440), September 10, 1900.

"An orange-fruited Arctic raspberry, the English name of which is unknown to me. In Finland the fruits of this species are dried and kept for months. They have a peculiar acid taste, highly appreciated. Never cultivated in Finland. A true moor plant, suitable only for Alaskan moors." (*Fairchild.*) Distributed.

5483. RUBUS ARCTICUS. Arctic raspberry.

From Uleåborg, Finland. Received through Messrs. Lathrop and Fairchild (No. 439), September 10, 1900.

"A wild arctic and subarctic plant which is very abundant on the moors. It is nowhere cultivated and may be very difficult to grow from seed. The only region where it might succeed is Alaska, where, presumably, the same species occurs. The fragrance of these Finnish berries is something delicious, and in Sweden and Finland exceptionally fine jam is made from them." (*Fairchild.*) Distributed.

5484. LUPINUS ALBUS. White lupine.

From France. Received September 14, 1900.

The white lupine is an excellent green-manure crop and winter soil cover. The seed should be sown by October 1, in time for the early rains and while the ground is yet warm. The crop should be plowed under when the lupines are in blossom." (*Hilgard.*)

5485. RUBUS ARCTICUS. Arctic raspberry.

From Abo, Finland. Received through Messrs. Lathrop and Fairchild (No. 424), September 12, 1900.

"A wild species growing in the swamps of northern Finland especially. The fruit is orange yellow, with a red blush, and has a refreshing flavor. This plant is not cultivated in Finland, but is highly prized for preserves. Should be sown in moss or very moist soil." (*Fairchild.*) (See No. 5483.) Distributed.

5486. TRITICUM VULGARE. Wheat.

From Ithaca, N. Y. Presented by Prof. I. P. Roberts, Director of the Cornell Experiment Station. Received September 12, 1900.

Dawson's Golden Chaff. "Under very unfavorable conditions and a winter so severe that there was almost an entire failure of wheat on the surrounding farms, this wheat yielded 41 bushels per acre." (*Roberts.*)

5487. ALLIUM CEPA. Onion.

From Woodhaven, N. Y. Presented by Mr. H. Beaulieu, seedsman and florist, September 6, 1900.

"A white onion, hardy in New York, which will stand the coldest weather without protection. Sow from August 15 to September 15. Comes about three weeks earlier than the sets and does not go to seed the first year. Similar in color and shape to the White Portugal, but much earlier." (*Beaulieu.*)

5488. CYPHOMANDRA BETACEA.**Tree tomato.**

From Ceylon. Received through Messrs. Lathrop and Fairchild, September 19, 1900.

"This species has been introduced into Ceylon very extensively from the West Indies and has proven a great success. It is used by many European families and is a very palatable fruit." (*Fairchild.*) (See Nos. 5112, 5115, 5116, 5191, 5219, and 5220.)

5489. CARICA PAPAYA?**Papaw.**

From Ceylon. Received through Messrs. Lathrop and Fairchild.

"A very interesting species which I was not able to determine, but which is cultivated quite extensively in the mountain regions of Ceylon, which are subject to occasional frosts. The plants are, therefore, hardier than the ordinary *Carica papaya* and should be widely distributed in Florida. The fruits of this species are much smaller than the ordinary *Carica*, but are very much relished by the natives and are often eaten by Europeans. They have a refreshing acid flavor quite different from that of the ordinary species. For papayin extraction this species may prove valuable." (*Fairchild.*) Distributed.

5490. LINUM USITATISSIMUM.**Flax.**

From Paris, France. Received through Messrs. Lathrop and Fairchild, September 19, 1900.

Specimen furnished by the Stockholm Economic Museum. Reported to be seed grown in Sweden, and therefore may prove hardier than varieties grown farther south." (*Fairchild.*)

5491. ROSA CANINA.**Wild rose.**

From Sweden. Received through Messrs. Lathrop and Fairchild, September 19, 1900. (See No. 880, Inventory No. 1.) Distributed.

5492. TRITICUM DURUM.**Wheat.**

From France. Received October 12, 1900.

Medeah. This wheat is from stock selected and grown by Vilmorin-Andrieux & Cie., of Paris. It is suitable for fall planting in the South or spring planting in the North. It is heavily bearded, with a smooth, brown chaff, small but rather strong, solid straw, and very hard, light-amber colored grain. It is one of the best-known varieties of the hard French wheats, and, although not especially valuable for bread making, is a heavy yielder, and is particularly adapted for macaroni manufacture. Distributed.

5493. TRITICUM VULGARE.**Wheat.**

From Collegepark, Md. Received September 21, 1900.

Fultz. A winter wheat grown at the Maryland Agricultural College.

5494. CUCUMIS.

From Tiger Mill, Tex. Received September 25, 1900. Presented by Mr. H. T. Fuchs.

Genuine Field Pomegranate. "Very fine eating, either raw or cooked." (*Fuchs.*)

5495. CITRULLUS VULGARIS.**Watermelon.**

From Tiger Mill, Tex. Received September 25, 1900. Presented by Mr. H. T. Fuchs.

Best of All. Distributed.

- 5496. TRITICUM VULGARE.** **Wheat.**
From Budapest, Austria-Hungary. Received September 27, 1900.
Banat.
- 5497. TRITICUM VULGARE.** **Wheat.**
From Budapest, Austria-Hungary. Received September 27, 1900.
Theiss.
- 5498. TRITICUM VULGARE.** **Wheat.**
From Budapest, Austria-Hungary. Received September 27, 1900.
Bacska.
- 5499. TRITICUM VULGARE.** **Wheat.**
From Budapest, Austria-Hungary. Received September 27, 1900.
Weissenburg.
- 5500. TRITICUM VULGARE.** **Wheat.**
From Budapest, Austria-Hungary. Received September 27, 1900.
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U. S. DEPARTMENT OF AGRICULTURE.

BUREAU OF PLANT INDUSTRY—BULLETIN NO. 66.

B. T. GALLOWAY, *Chief of Bureau.*

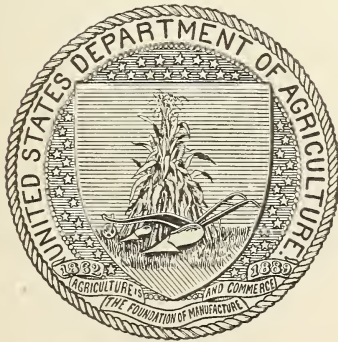
SEEDS AND PLANTS IMPORTED

DURING THE PERIOD FROM SEPTEMBER, 1900,
TO DECEMBER, 1903.

INVENTORY No. 10; Nos. 5501—9896.

SEED AND PLANT INTRODUCTION AND DISTRIBUTION.

ISSUED FEBRUARY 8, 1905.



WASHINGTON:
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1905.

BUREAU OF PLANT INDUSTRY.

B. T. GALLOWAY,
Pathologist and Physiologist, and Chief of Bureau.

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SEED AND PLANT INTRODUCTION AND DISTRIBUTION.

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GEORGE W. OLIVER, *Expert.*

LETTER OF TRANSMITTAL.

U. S. DEPARTMENT OF AGRICULTURE,
BUREAU OF PLANT INDUSTRY,
OFFICE OF THE CHIEF,
Washington, D. C., May 5, 1904.

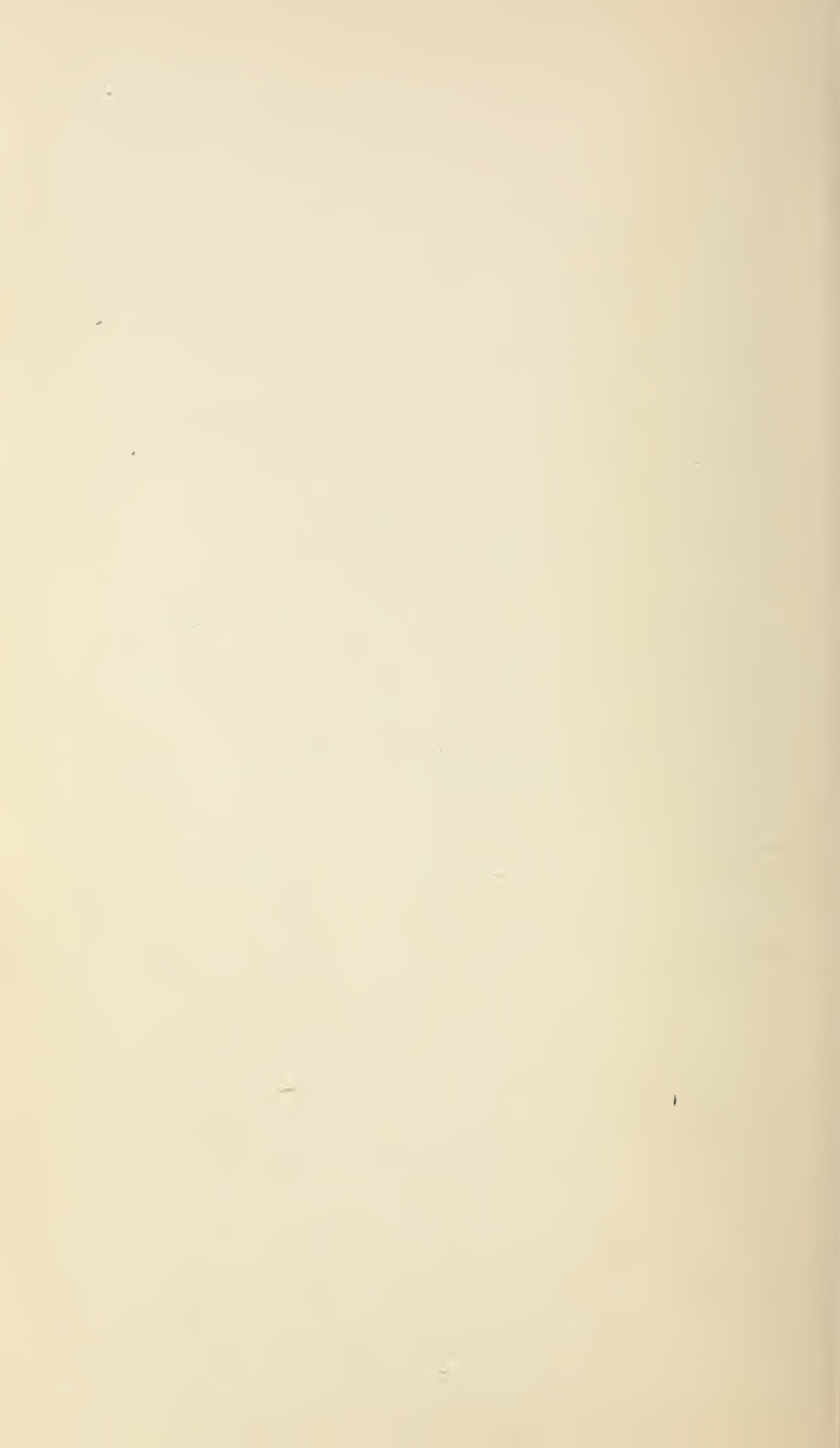
SIR: I have the honor to transmit herewith, and to recommend for publication as Bulletin No. 66 of the series of this Bureau, the accompanying manuscript entitled "Seeds and Plants Imported During the Period from September, 1900, to December, 1903."

This manuscript has been submitted by the Botanist in Charge of Seed and Plant Introduction and Distribution with a view to publication.

Respectfully,

B. T. GALLOWAY,
Chief of Bureau.

HON. JAMES WILSON,
Secretary of Agriculture.



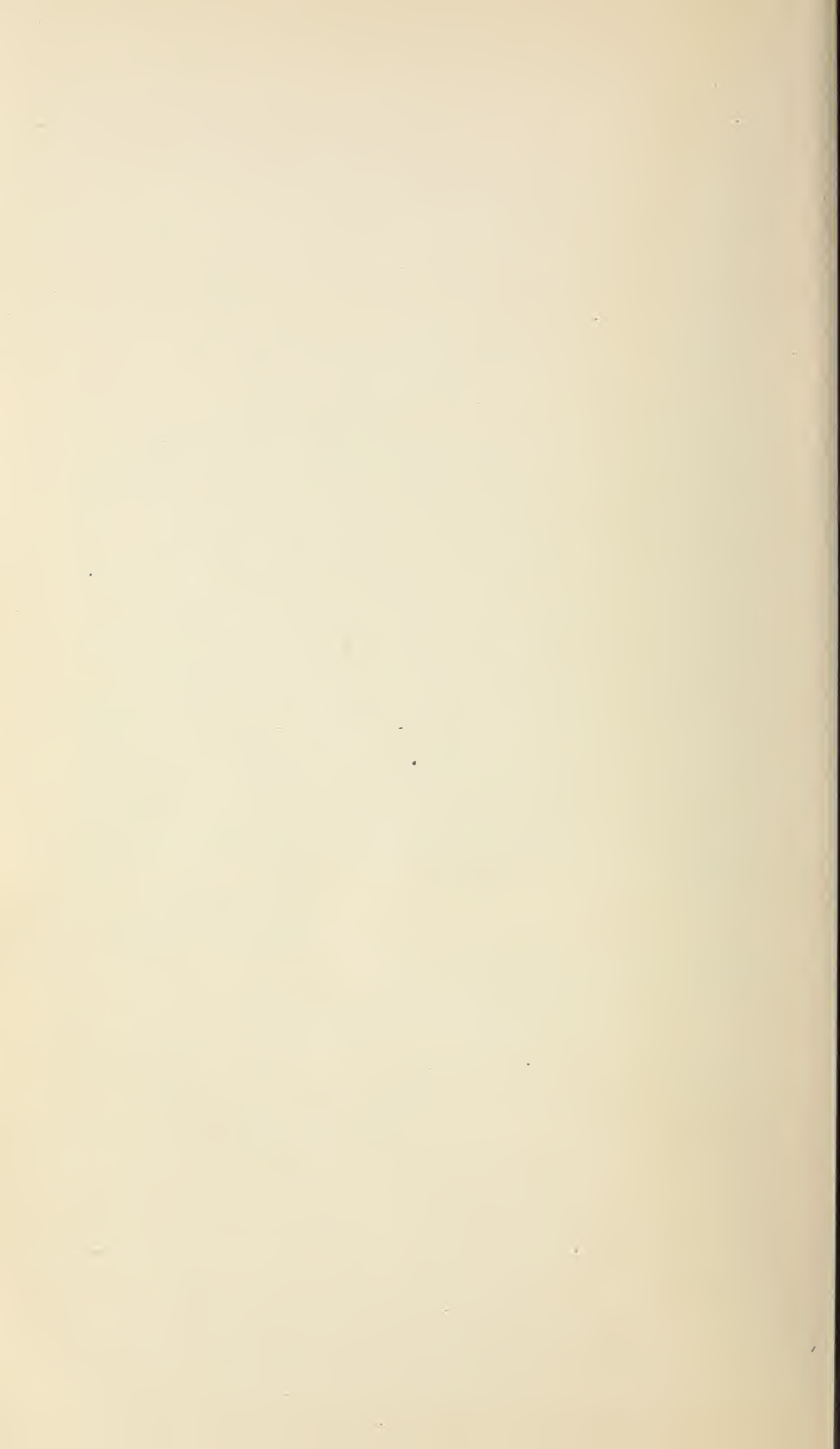
P R E F A C E.

The present inventory, No. 10 of our series, covers a number of introductions almost equal to the entire number included in the previous nine inventories. It is put forth as the first part of the record of the permanent work of this office with these introductions, and shows what seeds and plants have been introduced. The completion of the record requires a report of the disposition made of these seeds and the results obtained from the experimental work done in this country. Such records will appear from time to time as our different introductions are tested and either discarded or found to be valuable additions to the plants cultivated by American farmers and gardeners.

The introductory statement by Mr. Fairchild covers the general information in regard to the sources from which these introductions have been obtained, and I wish in addition to emphasize the fact that the seeds and plants represented by this inventory have all been distributed, and that the inventory is in no sense intended as a check list to enable persons to call for seeds and plants with which they would like to experiment.

A. J. PIETERS,
Botanist in Charge.

OFFICE OF SEED AND PLANT
INTRODUCTION AND DISTRIBUTION,
Washington, D. C., May 4, 1904.



SEEDS AND PLANTS IMPORTED DURING THE PERIOD FROM SEPTEMBER, 1900, TO DECEMBER, 1903.

INTRODUCTORY STATEMENT.

This inventory of seeds and plants which have been collected by agricultural explorers, or received through other sources by this Office, covers the period from September, 1900, to December, 1903. It includes 4,396 accession inventory numbers. Since the last inventory was published in 1901 the explorers and special agents of this Office have continued their extensive searches after new and promising varieties of plants for introduction into this country. The notes furnished regarding the different introductions vary greatly with regard to their completeness and it is desired to point out clearly that this inventory makes no pretenses to being an embodiment of all the information we possess regarding the various seeds and plants listed. It is merely a collection, largely for use in this Office and by members of the State experiment stations, of the notes which accompanied the various seeds and plants when they were sent in. Their value will in many cases be more historical than explanatory. For some of the most important numbers, separate detailed reports have been issued in the form of bulletins or are being prepared for publication.

It will be noticed that no attempt has been made to follow the latest reforms in nomenclature, the Kew Index having been taken in most cases as a convenient guide in the spelling of the different scientific names.

The quantities of seeds or plants represented by these different numbers are, as a rule, small, and in the vast majority of cases it has been necessary to distribute them as soon as possible after arrival to competent experimenters throughout the country. It will therefore be, in most cases, impossible to furnish seeds or plants described in this inventory. If, however, special reasons can be shown by reputable experimenters why further introductions of certain species or varieties should be made, this Office will be glad to take the matter up, for it is desirous of introducing any new variety which may be called to its attention by plant breeders or others in a position to carry out consecutive and careful plant-introduction experiments.

Of the nearly 4,400 new introductions, a very large number represent work accomplished by the explorations of Mr. Barbour Lathrop, of Chicago, with whom the writer had the pleasure of being associated as Agricultural Explorer. Mr. Lathrop's explorations, which have required about four years of travel abroad, were carried out with the one practical object of making a reconnoissance of the useful plant possibilities of the world, and have successfully covered every continent and touched every important archipelago. Owing to the very out-of-the-way parts of the world visited by Mr. Lathrop, a large number of the seeds and plants secured by him are so rare that they will be exceedingly difficult to replace, and the Office considers itself extremely fortunate to have enlisted the cooperation of such a public-spirited man as Mr. Lathrop, who has conducted these various explorations almost entirely at his own expense, with no other idea than that of benefiting the American public through this branch of the work of the Department of Agriculture. No stronger evidence is needed of the practical value of plant-introduction work than that furnished by Mr. Lathrop's devotion to its study.

The collections of the several Department agricultural explorers which are represented in this inventory have also been gathered from a wide range of the earth's surface. The explorations of Dr. S. A. Knapp, the results of which are represented in the inventory, covered his second voyage to the Orient in 1901-2, and comprised a trip to Hawaii, Japan, China, Manila, the Straits Settlements, and British India in search of information bearing on the rice question of the South. Bavaria, Austria, Dalmatia, Greece, Egypt, Tunis, Algeria, and Spain were explored by the writer for brewing barleys, hops, fruits, and forage crops. Mr. C. S. Scofield made a careful survey of the leguminous fodder and green manure crops of Algeria and incidentally a study of the wheat varieties of France. Mr. M. A. Carleton made a second trip in 1900 through Austria and Roumania, into Russia and Central Asia, and returned through Turkey and Servia in search of cereals and forage crops. Mr. E. R. Lake, a specialist on American prunes, was sent in 1900 on a short trip to the prune-growing regions of France. Dr. J. N. Rose, of the U. S. National Museum, assisted us in 1901 in his botanizing trips in Mexico to secure a collection of desert plants and varieties of other plants of economic importance. Mr. Ernst A. Bessey was sent as agricultural explorer on two expeditions in search of hardy alfalfas and more resistant fruits for the Northwest. The first was through Russia to Turkestan in 1902, and the second to the Caucasus in 1903. Mr. Thomas H. Kearney and Mr. T. H. Means, the latter of the Bureau of Soils, were sent as explorers to the arid regions of Algeria, Tunis, and Egypt in search of better strains of Egyptian cotton and alkali-resistant grains and fodder plants. Mr. P. H. Rolfs, in charge of the Subtropical

Laboratory at Miami, Fla., visited for this Office in 1903 several islands in the West Indies in search of varieties of cassava and other suitable agricultural plants for southern Florida. Mr. G. Onderdonk, of Nursery, Tex., a specialist on stone fruits, made a trip to Mexico for this Office in search of varieties of this class of fruits for the Southern States.

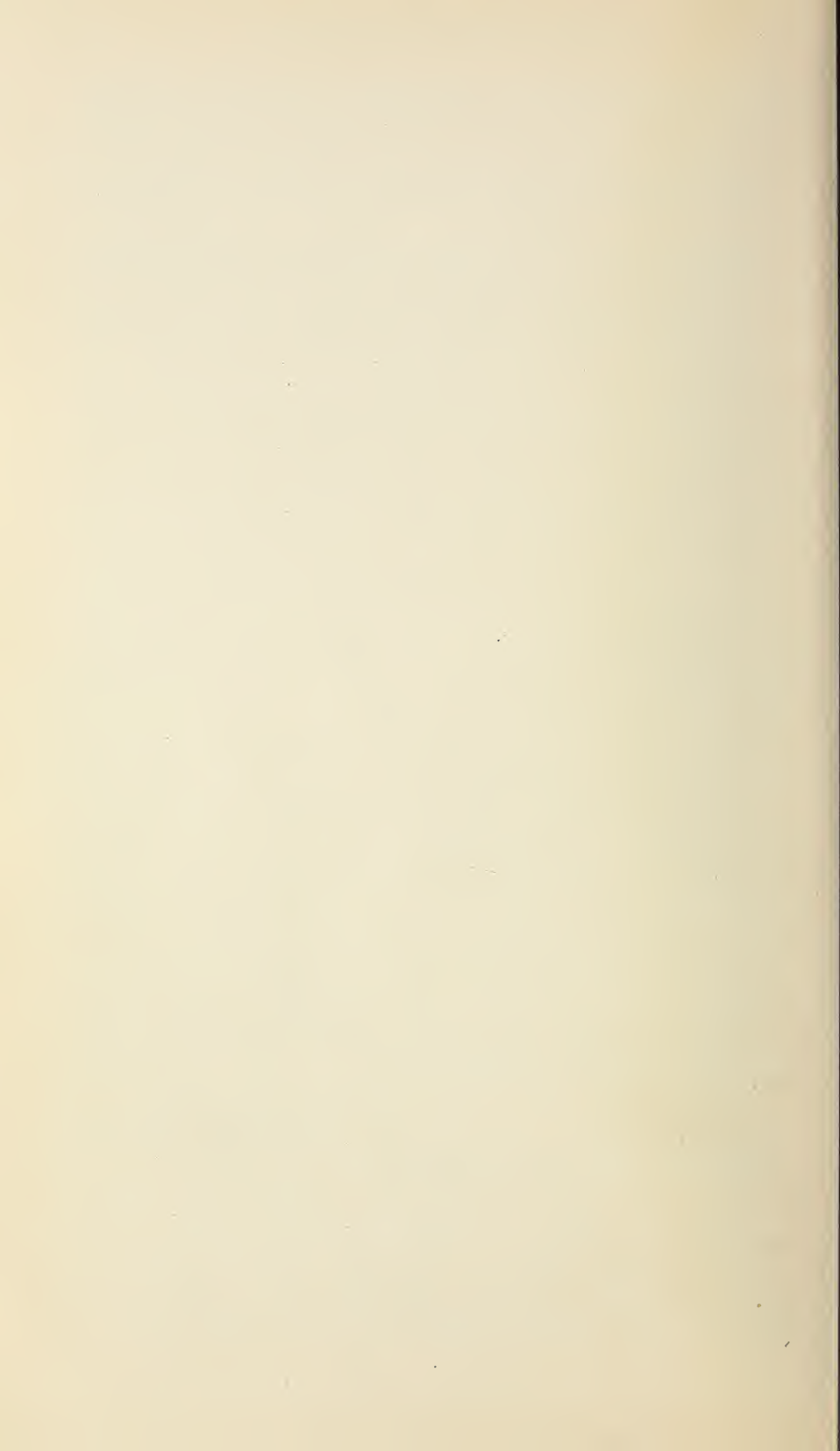
In addition to the seeds and plants which these various exploring trips have brought in, the Office is indebted to correspondents all over the world for numerous interesting things which have been presented to it and for which credit is given in each separate instance under the various numbers.

It is desired to urge strongly in this introductory statement that the numbers which accompany these seeds and plants when they are sent out should be carefully preserved by those who receive them. By means of these inventory numbers the seeds and plants can always be identified. The machinery of the Office is so arranged that a permanent record is kept on file of all seeds and plants sent out, and the addresses of the experimenters to whom they are sent. This feature is considered essential, and unless carefully carried out there will be nothing on record to prevent reintroductions of plants which have proved by extensive trials to be unworthy of a place in American agriculture, and much annoyance and delay will be caused in the handling of those things which are successful.

While it is one of the aims of plant introduction to encourage those who can afford it to try new plants, such an object would not be gained by any attempt to supply those who—misguided, perhaps, by exaggerated newspaper accounts—apply for seeds or plants which they are not in a position to test successfully. All seeds are sent out with the idea that those who receive them are willing to take the pains to reply to queries from this Office regarding the success of their trial and to supply on request reasonable quantities of seeds, scions, or plants produced from the imported material. A failure on the part of an experimenter to respond to repeated inquiries or his refusal to assist in giving new introductions a wide distribution will affect unfavorably his standing in the list of capable experimenters which it is one of the objects of this plant introduction work to create.

DAVID G. FAIRCHILD,
Agricultural Explorer.

WASHINGTON, D. C., *April 18, 1904.*



INVENTORY.

5501 to 5512.

From Washington, D. C. Seeds from a number of crab-apple trees growing on the grounds of the Department of Agriculture. These trees were imported from Russia, by Prof. N. E. Hansen, in 1898. The numbers in parentheses are those under which the trees were received from Professor Hansen. They are as follows:

5501. PYRUS PRUNIFOLIA EDULIS. (No. 4.)

5502. PYRUS PRUNIFOLIA PURPUREA. (No. 5.)

5503. PYRUS PRUNIFOLIA. (No. 6.)

Transparent.

5504. PYRUS PRUNIFOLIA. (No. 7.)

Transparent.

5505. PYRUS PRUNIFOLIA MOSCOWIENSIS. (No. 8.)

5506. PYRUS PRUNIFOLIA PURPUREA. (No. 9.)

5507. PYRUS PRUNIFOLIA MACROCARPA. (Nos. 10 and 11.)

5508. PYRUS PRUNIFOLIA BACCATA. (No. 12.)

5509. PYRUS PRUNIFOLIA BACCATA. (No. 15.)

5510. PYRUS PRUNIFOLIA BACCATA. (No. 16.)

5511. PYRUS PRUNIFOLIA. (No. 17.)

5512. PYRUS PRUNIFOLIA. (No. 18.)

5513. AVENA SATIVA.

Oat.

From Torneå, Finland. Received through Messrs. Lathrop and Fairchild (No. 435), September 27, 1900.

North Finnish Black. "This seed is from the north province of Finland, and being grown at this high latitude should be early ripening. It is not, however, of first quality because the recent crops have been very poor." (*Fairchild.*)

5514. AVENA SATIVA.

Oat.

From Torneå, Finland. Presented by F. O. U. Nordberg, through Messrs. Lathrop and Fairchild (No. 435a, Aug. 6, 1900). Received September 27, 1900.

North Finnish Black. "One liter of black oats of the 1897 crop, which was so highly prized here that I could only get this small quantity. It should ripen earlier than No. 5513." (*Fairchild.*)

5515. TRITICUM VULGARE.

Wheat.

From Michaux, Va. Received September 27, 1900.

Banat. Grown in Virginia from seed imported by this Department in 1899.

- 5516. PASSIFLORA EDULIS.** **Passion flower.**
From New South Wales, Australia. Presented by Dr. N. A. Cobb. Received September 27, 1900.
"This plant grows best in good soil at some distance from the coast, where there is little frost and an annual rainfall of about 50 inches. The plants are usually trellised about 6 feet apart, grow rapidly, and bear fruit the second year." (*Cobb.*) (See No. 1906, Inventory No. 5.)
- 5517. GLYCINE HISPIDA.** **Soy bean.**
From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild (No. 336, Jan., 1900), October 8, 1900.
Katjang-Koro.
- 5518. PHASEOLUS MUNGO.** **Gram.**
From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild (No. 337, Jan., 1900), October 8, 1900.
"A small bean used in soups." (*Fairchild.*)
- 5519. DOLICHOS sp.** **Ussi bean.**
From Lombok, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 338, Jan., 1900), October 8, 1900.
Katjang Ussi.
- 5520. CUCURBITA sp.** **Squash.**
From Amboina, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 339 Jan. 15, 1900), October 8, 1900.
"Native-grown squash, suited to a moist, warm climate. Said to be very sweet when cooked." (*Fairchild.*)
- 5521. PHASEOLUS LUNATUS.** **Lima bean.**
From Lombok, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 340, January 7, 1900), October 8, 1900.
"A peculiar white and black striped lima bean." (*Fairchild.*)
- 5522. ARACHIS HYPOGAEA.** **Peanut.**
From Matarum, Lombok, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 341, January 7, 1900), October 8, 1900.
"A large rough-shelled, three-seeded peanut, having thin shells and a good flavor." (*Fairchild.*)
- 5523. ORYZA SATIVA.** **Rice.**
From Surabaya, Java. Received through Messrs. Lathrop and Fairchild (No. 342, January, 1900), October 8, 1900.
"Short-grained Java rice." (*Fairchild.*) (Injured in transit.)
- 5524. CAPSICUM ANNUM.** **Red pepper.**
From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild (No. 343, January 10, 1900), October 8, 1900.
"A small variety of very hot red pepper generally used green in Macassar. Probably the same as that used in Java and other parts of the Dutch East Indies." (*Fairchild.*)

5525. CAPSICUM ANNUM.

Red pepper.

From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild (No. 344, January 10, 1900), October 8, 1900.

"A long red pepper of the shape of the so-called Guinea pepper." (*Fairchild.*)

5526. CAPSICUM ANNUM.

Red pepper.

From Bali Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 345, January 7, 1900), October 8, 1900.

A long red variety.

5527. SOLANUM sp.

From Bali, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 346, January 7, 1900), October 8, 1900.

"A white-fruited species which is used on the *Rijstafel* or rice table of Europeans. Much like an eggplant, of which it may be only a variety." (*Fairchild.*)

5528. MOMORDICA sp.

From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild (No. 347, January 11, 1900), October 8, 1900.

"A fruit called *Paparé* here. It is eaten raw. When mature it is very showy, with bright-red endocarp. Said by Paillieux and Bois to grow well in France." (*Fairchild.*)

5529. CITRUS LIMETTA.

Lime.

From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild (No. 348, January 11, 1900), October 8, 1900.

"A very thin-skinned, juicy lime of inferior flavor." (*Fairchild.*)

5530. CAPSICUM ANNUM.

Red pepper.

From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild (No. 349, January 11, 1900), October 8, 1900.

A long red variety.

5531. CITRUS LIMONUM.

Lemon.

From Banda, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 350, February 8, 1900), October 8, 1900.

"*Sauerbier*, a very large, thin-skinned, exceedingly juicy lemon of good flavor, sent through the kindness of Mr. Sauerbier from his own garden. The fruit examined was 3 inches in diameter, with smooth skin, not over one-quarter of an inch thick, and large oil glands. The flesh is composed of large cells which are much elongated in shape and therefore easily broken by pressure. The amount of juice is exceptionally large. Nearly three-fourths of an ordinary glassful was squeezed by hand from a single fruit. Juice of good flavor, somewhat aromatic, but the fruit was too ripe to judge fairly. The tree is said to be small. This is the finest lemon seen by us on the expedition, and its discovery was made by Mr. Lathrop." (*Fairchild.*)

5532. CITRUS LIMONUM.

Lemon.

From Banda, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 351, February 8, 1900), October 8, 1900.

From the garden of Mr. Sauerbier. "Seeds from the remarkable lemon described in No. 5531. Its seedlings may produce its like." (*Fairchild.*)

5533. CITRUS LIMONUM.

Lemon.

From Banda, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 352, February 8, 1900), October 8, 1900.

"Seeds from lemon said to have come from the same tree as No. 5531. The fruits from which these seeds were taken were smaller, but still of unusual size and excellence." (*Fairchild.*)

- 5534. CANARIUM AMBOINENSE. Amboina almond.**
 From Amboina, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 353, February 8, 1900), October 8, 1900.
 "This is possibly the stateliest avenue tree in the world and forms in the famous garden of Buitenzorg, Java, the '*Canarium Allé*,' which is noted as the most beautiful avenue in existence. A valuable table oil is made from the kernels of the fruits and these are highly prized by Europeans, being eaten like almonds. If introduced into the Philippines they might be made to pay as a secondary crop." (*Fairchild.*)
- 5535. SOLANUM MELONGENA. Eggplant.**
 From Amboina, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 354, February 8, 1900), October 8, 1900.
 "Fruit long, striped with red, purple, and white." (*Fairchild.*)
- 5536. CAPSICUM ANNUM. Red pepper.**
 From Amboina, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 355, February 14, 1900), October 8, 1900.
 "An excellent variety of egg-shaped red pepper." (*Fairchild.*)
- 5537. CAPSICUM ANNUM. Red pepper.**
 From Singapore. Received through Messrs. Lathrop and Fairchild (No. 356, January 24, 1900), October 8, 1900.
 "A long, slender variety of red pepper." (*Fairchild.*)
- 5538. CAPSICUM ANNUM. Red pepper.**
 From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild (No. 357, January 11, 1900), October 8, 1900.
 "A small red pepper." (*Fairchild.*)
- 5539. Forest tree.**
 From Boela, Ceram Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 358, January 18, 1900), October 8, 1900.
 "Seeds from a single fruit of a beautiful orange-red color; borne by a small forest tree with lanceolate dark-green leaves. Fruits borne in pairs, and are pulpy, jelly-like, and almost transparent. One of the showiest fruits I have ever seen. I do not know whether or not it is edible." (*Fairchild.*)
- 5540. Forest tree.**
 From Boela, Ceram Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 359, January 18, 1900), October 8, 1900.
 "Fruit oblate spheroid, dark green, several-seeded with hard, smooth exocarp. Flesh brown and spongy. Not known to be edible." (*Fairchild.*)
- 5541. Forest tree.**
 From Boela, Ceram Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 360, January 18, 1900), October 8, 1900.
 "One-seeded, purple-fleshed fruit, from clearing in virgin forest. Said to be poisonous." (*Fairchild.*)
- 5542. VICIA FABA. Broad bean.**
 From Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 361, January 11, 1900), October 8, 1900.
 "Sample of a variety of broad bean which is canned and sent from Holland to India, where it is cooked in water and eaten as a great delicacy by Europeans. Most excellent eating." (*Fairchild.*)

5543.

Shade tree.

From Toeal, Kei Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 362, January 20, 1900), October 8, 1900.

"A rapidly growing shade tree resembling *Albizia lebbek*, but with long cylindrical pods of dark-brown color. Suitable for Florida, Porto Rico, or any tropical region." (Fairchild.)

5544. MOMORDICA sp.

From Toeal, Kei Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 363, January 20, 1900), October 8, 1900.

"A small-fruited species growing wild in the island. Said to be eaten raw by the natives." (Fairchild.)

5545. SOLANUM MELONGENA.

Eggplant.

From Toeal, Kei Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 364, January 20, 1900), October 8, 1900.

"A yellow-fruited species of *Solanum*, cooked and eaten by the natives. May prove valuable for breeding purposes." (Fairchild.)

5546. CAPSICUM ANNUM.

Red pepper.

From Gisser Island (a typical atoll near Ceram), Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 365, February 3, 1900), October 8, 1900.

"A large oblong variety of red pepper." (Fairchild.)

5547. CITRUS DECUMANA.

Pomelo.

From Sekar, Dutch New Guinea. Received through Messrs. Lathrop and Fairchild (No. 366, February 1, 1900), October 8, 1900.

"Seeds of a large and very sour variety of pomelo or shaddock presented by the Radja of Sekar, a village on the coast of Dutch New Guinea. The shaddock is native of the islands of the Malay Archipelago, being more particularly abundant in the Friendly Isles and Fiji. Introduced into India from Java and into the West Indies by Captain Shaddock, hence the name *Shaddock*. It is cultivated in most tropical countries." (Fairchild.)

5548.

From Wetter Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 367, January 23, 1900), October 8, 1900.

"Long purple fruit found on the shore of the island of Wetter. The pulp is soft like that of a plum. It is said not to be edible." (Fairchild.)

5549. CONVULVULUS sp. (?)

From Dammer Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 368, January 22, 1900), October 8, 1900.

"A large vigorous vine with curious seed pods." (Fairchild.)

5550. CONVULVULUS sp. (?)

From Dammer Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 369, January 22, 1900), October 8, 1900.

"Small-fruited vine which covers low trees and shrubs." (Fairchild.)

5551.

From Dammer Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 370, January 22, 1900), October 8, 1900.

"From vine not in flower, but of luxuriant growth, covering trees and shrubs." (Fairchild.)

5552. CUCURBITA sp. (?)

From Dammer Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 371, January 22, 1900), October 8, 1900.

"A vigorous cucurbitaceous vine, covering trees and shrubs and bearing large numbers of curious dry fruits resembling *Luffa*." (*Fairchild*.)

5553. CAPSICUM ANNUUM.**Red pepper.**

From Gisser Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 372, February 4, 1900), October 8, 1900.

"A cherry-shaped red pepper." (*Fairchild*.)

5554. CITRUS LIMETTA.**Lime.**

From Gisser Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 373, February 3, 1900), October 8, 1900.

"Seeds from a lime of very peculiar shape. Long and slender, with a decided beak at the lower end. Flavor inferior." (*Fairchild*.)

5555. CAPSICUM ANNUUM.**Red pepper.**

From Gisser Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 374, February 3, 1900), October 8, 1900.

"A small red pepper."

5556. CAPSICUM ANNUUM.**Red pepper.**

From Toeal, Kei Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 375, January 31, 1900), October 8, 1900.

"A small cherry-shaped red pepper." (*Fairchild*.)

5557. CONVULVULUS sp. (?)

From Dobbo, Aru Islands, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 376, January 28, 1900), October 8, 1900.

"Seed from vine growing in the mangrove swamps near the town. Ornamental." (*Fairchild*.)

5558. CONVULVULUS sp. (?)

From Dobbo, Aru Islands, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 377, January 28, 1900), October 8, 1900.

"Seeds from a plant growing near mangrove swamps on sandy soil." (*Fairchild*.)

5559. CUCURBITA sp.**Squash.**

From Sekar, Dutch New Guinea. Received through Messrs. Lathrop and Fairchild (No. 378, February 2, 1900), October 8, 1900.

"Seeds from a squash presented by the Radja of Sekar, a small village on the coast of New Guinea." (*Fairchild*.)

5560. ZEA MAYS.**Maize.**

From Amboina, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 379, February 7, 1900), October 8, 1900.

"A variety of Indian corn which is of such superior quality that it is shipped from the island of Amboina to many other points in the archipelago. A hard flinty variety, and worthy of trial in Porto Rico, Hawaii, and the Philippines." (*Fairchild*.)

5561. ARACHIS HYPOGAEA.**Peanut.**

From the Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 380, February 7, 1900), October 8, 1900.

"A very large peanut, one of the most delicious we have ever tasted, probably from the island of Ternate." (*Fairchild*.)

5562.

From Letti Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 381, January 25, 1900), October 8, 1900.

"Small fruits with lemon-yellow pulp, very sour. Brought on board and sold by natives of Letti." (*Fairchild.*)

5563. CHAVICA OFFICINARUM.

Long pepper.

From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild (No. 382, January 22, 1900), October 8, 1900.

"A sample of so-called *Tjابه aroij*, used in the Dutch East Indies as a condiment. It is very hot, and is much used by the natives in their curries. It is also used in medicine." (*Fairchild.*)

5564. CICCА NODIFLORA.

From Amboina, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 383, February 7, 1900), October 8, 1900.

"Seeds from fruit tree, the sap of which is used for poisoning arrows. The roots are used as a medicine for asthma. Syphilis is treated with a decoction of the leaves, and the sour fruits are used for making preserves. The seeds act as a purgative. The tree grows about 25 feet high." (*Fairchild.*)

5565. CAPSICUM ANNUM.

Red pepper.

From Fack Fack, Dutch New Guinea. Received through Messrs. Lathrop and Fairchild (No. 384, February 1, 1900), October 8, 1900.

"Very small red pepper found growing on a bush 4 feet high." (*Fairchild.*)

5566. CALOPHYLLUM sp.

From Saparoea Island, Dutch East Indies. Received through Messrs. Lathrop and Fairchild (No. 385, February 8, 1900), October 8, 1900.

"A giant tree growing in front of the Controlleur's house at Saparoea. One of the most beautiful shade trees I have ever seen." (*Fairchild.*)

5567. CUCUMIS SATIVUS.

Cucumber.

From Macassar, Dutch East Indies. Received through Messrs. Lathrop and Fairchild, October 8, 1900.

"An excellent variety of uniform size and shape, especially suited for cultivation in the Tropics." (*Fairchild.*)

5568. STUARTIA PENTAGYNA.

From Gage, Tenn. Presented by Mr. J. H. H. Boyd, through Mr. Lyster H. Dewey, of the Division of Botany. Received October 17, 1900.

5569. HUMULUS LUPULUS.

Hop.

From Auscha, Bohemia. Received through Mr. E. R. Lake, October 18, 1900.
Auscha Red.

5570. HUMULUS LUPULUS.

Hop.

From Auscha, Bohemia. Received through Mr. E. R. Lake, October 18, 1900.
Saaz.

5571. THEA VIRIDIS.

Tea.

From Ceylon. Received October 30, 1900.
Highest class "Jat," a wild indigenous tea.

5572 to 5585.

Leguminous forage plants.

From Algeria. Presented by Doctor Trabut, Government Botanist of Algeria, through Mr. W. T. Swingle. Received November 2, 1900.

"This valuable collection comprises small amounts of the seed of a number of forage plants which are cultivated by Doctor Trabut at the Algerian experiment station at Rouïba. Many of these were introduced into culture by Doctor Trabut, and are now sent out of North Africa for the first time. Some of the plants occur in other parts of the Mediterranean region, but in general the forms of these species found growing in Algeria are more resistant to drought than those obtained elsewhere. This has proved true of the common vetch from Tunis, the narrow-leaved lupine or naturalized form of the Corsican lupine. All of these species are adapted for planting in autumn in the warmer regions of the South and Southwest. Unfortunately, only a small amount of seed of these species could be obtained. It is hoped that enough can be grown in this country to give a fair trial another year. There can be no doubt that all of the native North African forage plants deserve a most careful trial in the arid and semiarid regions on the Pacific slope. All of these are winter crops and should be sown in early autumn, since at that time there is sufficient moisture in the soil to enable the seed to germinate. The climate of North Africa is very mild in winter, and probably most of these species would be injured by severe frosts. They could, however, be grown in spring in Washington State and Oregon, where the winter would probably prove too severe to permit of their being sown in autumn." (*Swingle.*)

5572. VICIA CALCARATA.

Vetch.

"This vetch is native to the Mediterranean region. The seed of this particular sort was obtained at Boghar in Algeria where the climate is very dry. This is one of the species introduced into culture by Doctor Trabut." (*Swingle.*)

5573. VICIA HIRTA.

Vetch.

"This plant, which is usually considered to be a hairy form of *Vicia lutea*, occurs very commonly in Algeria and has been introduced into cultivation by Doctor Trabut. It reaches a height of 16 to 18 inches at the experiment station at Rouïba." (*Swingle.*)

5574. VICIA FULGENS.

Scarlet vetch.

"An Algerian vetch with handsome red flowers. It is an annual and grows with extraordinary vigor, reaching a height of 6 to 8 feet and yielding an abundance of excellent forage. Doctor Trabut, who introduced the species into culture, reports that at the experiment station at Rouïba, near Algiers, it yields 40 tons of green fodder to the acre. The great drawback of this most promising vetch is that the pods when ripe snap open, especially under the influence of hot winds, and scatter the seed, rendering its collection very difficult and the seed in consequence high priced. It is sown in autumn before the first rains in Algeria, either alone or with winter oats. It occasionally produces seed abundantly. It is to be hoped that some region may be found in the United States which has a sufficiently humid atmosphere during the ripening period of the pods to prevent their scattering the seeds. It might be possible to breed varieties which would hold the seed better. This vetch is most likely to succeed in the Southern States and on the Pacific slope." (*Swingle.*) (See Nos. 3825 and 4336, inventory No. 8.)

5575. VICIA SATIVA.

Common vetch.

"Doctor Trabut has been making comparative tests of all obtainable varieties of the common vetch at the Algerian Experiment Station at Rouïba. The one which proves best adapted to Algerian conditions is the present number, which is from the dry regions of Tunis." (*Swingle.*)

5576. VICIA BENGALENSIS.

Bengal vetch.

"This name is given by the Kew Index as a synonym of *V. nissoliana*. It is one of the best of the numerous species of vetch grown at the Algerian Experiment Station at Rouïba. It somewhat resembles the scarlet vetch, attaining a considerable height." (*Swingle.*)

5572 to 5585—Continued.

5577. VICIA FABA.

Horse bean.

"This is a dwarf form of horse bean which Doctor Trabut reports as growing wild 25 miles south of Teniat. He considers it to be undoubtedly the wild form of the cultivated broad beans and horse beans. It is utilized by the Arabs, but is probably of little value compared with the improved form, though it may resist drought better, since it comes from a dry region in Algeria." (*Swingle.*)

5578. MELILOTUS MACROSTACHYS.

Melilot.

"This species of melilot, native to Algeria, differs from most of the sweet clovers in having no pronounced odor. In consequence of this it is readily eaten by cattle. It has succeeded very well at the Experiment Station at Rouïba, where it attains a height of from 3 to 6 feet." (*Swingle.*)

5579. TRIGONELLA CORNICULATA.

Small fenugreek.

"This species, which has the same strong odor as fenugreek, from which it differs, however, in having very much smaller pods and seeds, grows very vigorously at the Experiment Station at Rouïba, where it attains a height of from 3 to 5 feet. It could not be used for feeding milch cows, as the strong odor would make the milk unsalable. It is, however, used for fattening stock and as a green manure. It is said to resist drought very well." (*Swingle.*)

5580. TRIGONELLA GLADIATA.

Trigonella.

"This plant also resembles fenugreek in odor. It has been cultivated with some success at the Experiment Station at Rouïba." (*Swingle.*)

5581. SCORPIURUS VERMICULATA.

Rabbit's ear.

"This plant is a half-prostrate annual and grows wild all through northern Algeria. It is said to furnish an excellent forage on good land and the Arabs eat the seeds. The pods, which are bent more or less into a circle, are as large as one's finger and lie on the ground. They are eaten greedily by the sheep and constitute one of their important foods on the plains of northern Algeria." (*Swingle.*)

5582. ONONIS AVELLANA.

Ononis.

"This is said by Doctor Trabut to be a good green manure for heavy soils. It is found only in Algeria, where it occurs in few localities on clay hills." (*Swingle.*)

5583. LUPINUS ANGUSTIFOLIUS.

Narrow-leaved lupine.

"This species is commonly grown by the Kabyles and Arabs, and is used by them as a substitute for coffee. It is the earliest maturing species grown in North Africa and is good for green manure. It is said to dislike an excess of lime in the soil." (*Swingle.*)

5584. LUPINUS TERMIS.

Egyptian or Corsican lupine.

"This is considered by Doctor Trabut to be the best species for culture in North Africa. It is sown at the rate of about 100 pounds to the acre, in autumn, and it grows rapidly, and in February or March can be plowed under. It much resembles the white lupine, but is said to be taller and have larger seeds. It is a very promising species for culture in California." (*Swingle.*)

5585. LATHYRUS TINGITANUS.

Tangier flat pea.

"This species, which is a native of North Africa, is considered by Doctor Trabut to be one of the best forage plants in Africa. It reaches a height of from 3 to 4 feet and drives out all other plants. Sown in autumn it prevents the growth of all weeds, and on the 16th of May gives a crop of $3\frac{1}{2}$ tons of dry hay to the acre. It is sown at the rate of about 50 pounds of seed per acre and is sometimes sown with one-third the weight of winter oats. It is a beautiful plant, very vigorous, and probably has a great future as a forage plant in the South and Southwest." (*Swingle.*)

5586. NEOWASHINGTONIA sp.**Fan palm.**

From San Diego, Cal. Presented by Mr. T. S. Brandegee; collected in Cajon de Santa Maria, near Calamaguet, on the eastern shore of Lower California.

5587. HUMULUS LUPULUS.**Hop.**

From Spalt, Bavaria, Germany. Received through Mr. D. G. Fairchild (No. 461), November 19, 1900.

Spalt City. "Cuttings or 'Fächser' of the finest Spalt hops grown in the restricted area of Spalt, Bavaria. These Spalt hops are renowned throughout Germany as next to the Saaz and Auscha, the best in the world. They are exported from here in considerable quantities to America where they are used by the large brewers in the manufacture of their finest beers. In planting these cuttings it should be remembered that they have been taken in October and transported to America and may suffer in vigor by this unusual treatment. The cuttings are planted here four or five together in one hill, being placed upright in the ground some 3 inches apart and covered about 1½ to 2 inches with soil. The hills are from 3 to 4 feet apart each way. The soil, which is the most important item of any in hop culture, must be a sandy loam. In Spalt it is a disintegrated red sandstone, similar to the soil in the Bohemian hop region of Saaz. Only in the small region about the little village of Spalt do these famous hops develop their fine aroma and valuable lupulin contents. Before planting, the soil should be carefully worked to a depth of 2¼ to 3 feet and the culture should be scrupulously clean during the season. This is not a heavy bearer, one pound per pole being a maximum. Its value lies in its superior quality of aroma. The best grade of hop from which these cuttings are taken brings this year on the Spalt market over 15 cents per pound. Great care should be taken that no male hop plants are grown near these Spalt hops, as their presence induces a heavy seed production and an immediate lowering of the quality of the yield. Harvesting, sulphuring, etc., as usual." (*Fairchild.*)

5588. HUMULUS LUPULUS.**Hop.**

From Spalt, Bavaria, Germany. Received through Mr. D. G. Fairchild (No. 462, October 24, 1900), November 19, 1900.

Seed from the best *Spalt hops*, grown in the village of Massendorf. "This variety of hop produces very few seeds indeed, and these may be of distinct value for breeding purposes and for the selection of a more vigorous strain of superlative quality." (*Fairchild.*)

5589. COCHLEARIA ARMORACIA.**Horse-radish.**

From Biersdorf, Bavaria. Received through Mr. D. G. Fairchild (No. 457, October 19, 1900), November 12, 1900.

"Cuttings of a variety of Bavarian horse-radish which ranks among the best in Europe. It is much milder in flavor than the malin variety, and its method of cultivation is different." (*Fairchild.*) (See S. P. I. Circular No. 21.)

5590. HORDEUM DISTICHUM.**Barley.**

From Kitzing, Bavaria. Received through Mr. D. G. Fairchild (No. 458), November 26, 1900.

Lower Frankish *Kitzing* brewing barley. "The most noted Bavarian variety, and one of the best brewing barleys in the world. It is a heavy, thin-skinned sort containing a large percentage of starch. It was grown on a *heavy clay soil*, and should, according to the growers in Bavaria, be tried on a *light but not too sandy soil*. A change of soil is considered essential." (*Fairchild.*)

5591. HORDEUM DISTICHUM.**Barley.**

From Kitzing, Bavaria. Received through Mr. D. G. Fairchild (No. 459, October 22, 1900), November 26, 1900.

"This is the same as No. 5590, except that it was grown on light soil, and should, therefore, be tried on heavy clay soils in America." (*Fairchild.*)

5592. HORDEUM DISTICHUM. Barley.

From Würzburg, Bavaria. Received through Mr. D. G. Fairchild (No. 460, October 22, 1900), November 26, 1900.

Lower Frankish brewing barley. Essentially the same as Nos. 5590 and 5591. Suited to fairly light soils.

5593. HUMULUS LUPULUS. Hop.

From Wolnzach, Bavaria. Received through Mr. D. G. Fairchild (No. 462, October 25, 1900), November 19, 1900.

Cuttings from the Wolnzach hops. "These are late-ripening hops of excellent quality, but not so highly prized as those from Saaz or Spalt. Cuttings from 6-year-old stocks, suited to a friable loam; yield from $\frac{1}{4}$ to $\frac{1}{3}$ pound per pole; probably not so susceptible to soil conditions as the Saaz." (*Fairchild.*)

5594. HUMULUS LUPULUS. Hop.

From Wolnzach, Bavaria. Received through Mr. D. G. Fairchild (No. 463, October 25, 1900), November 19, 1900.

Seeds from Wolnzach hops.

5595 to 5608.

From the Government Laboratory, Georgetown, Demerara, British Guiana. Received through the Division of Chemistry, October 19, 1900.

A collection of sugar-cane arrows with fertile seeds sent by Mr. J. B. Harrison.

5595. (J. B. H. 74.)	5602. (J. B. H. 5044.)
5596. (J. B. H. 116.)	5603. (J. B. H. 5201.)
5597. (J. B. H. 790.)	5604. (J. B. H. 5443.)
5598. (J. B. H. 1485.)	5605. (J. B. H. 5444.)
5599. (J. B. H. 1850.)	5606. (J. B. H. 5454.)
5600. (J. B. H. 2093.)	5607. (J. B. H. 5717.)
5601. (J. B. H. 5041.)	5608. (J. B. H. 5774.)

5609. MELINIS MINUTIFLORA. Molasses grass.

From São Paulo, Brazil. Presented by the Brazilian minister, the Hon. Dr. J. F. de Assis-Brasil, through the U. S. Consul at São Paulo, September, 1900.

5610. VILLEBRUNEA INTEGRIFOLIA. Assam rhea.

From Calcutta, India. Presented by D. Prain, Superintendent of the Royal Botanic Garden, Calcutta. Received November 16, 1900.

(See Agric. Ledg., Calcutta, 1898, No. 15, for description of this fiber plant.)

5611. HUMULUS LUPULUS. Hop.

From Wolnzach, Bavaria. Received through Mr. D. G. Fairchild, November 19, 1900.

"A mixture of hop seeds from the drying room of Wolnzach." (*Fairchild.*)

5612. PASSIFLORA EDULIS. Passion flower.

From Auckland, New Zealand. Presented by J. P. Carolin, through Mr. George William Hill, Chief of the Division of Publications. Received November 21, 1900.

5613. ATRIPLEX LEPTOCARPA. Saltbush.

From Berkeley, Cal. Presented by the California Experiment Station, through Prof. Chas. H. Shinn. Received November 21, 1900.

- 5614.** ATRIPLEX HALIMOIDES. **Saltbush.**
From Berkeley, Cal. Presented by the California Experiment Station, through Prof. Chas. H. Shinn. Received November 21, 1900.
- 5615.** CINNAMOMUM CAMPHORA. **Camphor.**
From Berkeley, Cal. Presented by the California Experiment Station, through Prof. Chas. H. Shinn. Received November 21, 1900.
- 5616.** VITIS VINIFERA. **Grape.**
From Saonara, Italy. Received through Mr. D. G. Fairchild, November 23, 1900, from Fratelli Sgaravatti.
Sultanina rosea.
- 5617 to 5621.**
From Manila, P. I. Received July 1, 1900.
No descriptions furnished.
- 5617.** ERYTHRINA CARNEA. **Dap-dap.**
- 5618.** BIXA ORELLANA. **Achiote.**
- 5619.** SOLANUM MELONGENA. **Eggplant.**
- 5620.** COIX LACHRYMA-JOBI. **Job's tears.**
- 5621.** INGA LANCEOLATA.
- 5622.** HUMULUS LUPULUS. **Hop.**
From Tetschen, Bohemia. Received through Mr. D. G. Fairchild, November 30, 1900.
"Seed from wild hops growing on the grounds of the Experiment Station at Tetschen-Liebwerd." (*Fairchild.*)
- 5623.** CLIANTHUS DAMPIERI. **Hop.**
From Roebourne, West Australia. Presented by Mr. W. F. Cusack. Received December 3, 1900.
"A beautiful garden flower and also good feed for stock. It will grow with 6 inches of rain per annum, or one day good rain in the year. The seed requires scorching or soaking in hot water." (*Cusack.*)
- 5624.**
From Roebourne, West Australia. Presented by Mr. W. F. Cusack. Received December 3, 1900.
"A leguminous shrub 6 feet high. Splendid feed for horses, cattle, and sheep. It is smaller than 5623, erect instead of prostrate. A beautiful garden flower." (*Cusack.*)
- 5625.**
From Roebourne, West Australia. Presented by Mr. W. F. Cusack. Received December 3, 1900.
Mundle bundle. "A good perennial tussock grass. Grows where the annual average rainfall is 14 inches, and the thermometer sometimes shows temperatures up to 127° F. in the shade." (*Cusack.*)
- 5626.** **Pela.**
From Roebourne, West Australia. Presented by Mr. W. F. Cusack. Received December 3, 1900.
"A good annual. It grows on sandy soil very well with small rainfall." (*Cusack.*)

5627. RUBUS NUTKANUS.**Salmon berry.**

From Blaine, Wash. Presented by Mr. C. E. Flint. Received November 6, 1900.

A large red raspberry growing on the Pacific Coast of North America.

5628. TRITICUM VULGARE.**Wheat.**

From Portland, Oreg. Presented by Mr. R. C. Judson. Received December 4, 1900.

Yaroslaf winter wheat. Grown from No. 2792; imported from the Government of St. Petersburg, Russia, in March, 1899, by Mr. M. A. Carleton. Considered objectionable for Oregon because of bearded character.**5629. TRITICUM VULGARE.****Wheat.**

From Portland, Oreg. Presented by Mr. R. C. Judson. Received December 4, 1900.

Banatka winter wheat. Grown from No. 2956; imported by Mr. M. A. Carleton in March, 1899.**5630. TRITICUM VULGARE.****Wheat.**

From Portland, Oreg. Presented by Mr. R. C. Judson. Received December 4, 1900.

Sandomir winter wheat. Grown from No. 2958, imported by Mr. M. A. Carleton in March, 1899.**5631. HUMULUS LUPULUS.****Hop.**

From Schwetzingen, Germany. Received through Mr. D. G. Fairchild (No. 456, Nov. 6, 1900), December 5, 1900.

"Cuttings of the Schwetzingen hop, one of the best early varieties, ripening the middle of August. Not considered by Professor Braungart as so delicate as the 'Saaz' or 'Spalt,' and on this account may thrive better on American soils." (*Fairchild.*)**5632. CAESALPINIA BONDUCELLA.**

From Manila, P. I. Received July, 1900.

This genus of leguminosæ contains some 40 species; inhabitants of the Tropics of both hemispheres. Robust, erect trees, shrubs, or woody prickly climbers; leaves large; flowers showy, yellow. In some parts of India it grows at an altitude of 2,500 feet. Oil from the seeds is useful in convulsions and palsy, debility after fever, and other diseases. Is said to soften the skin and remove pimples. The seeds are used instead of quinine, and also as an ointment. In disorders of the liver the leaves are considered very efficacious. The nuts are used for making bracelets and necklaces. The seeds are used by children in place of marbles and in other games. The root is also used for medical purposes.

5633. JUGLANS REGIA.**Walnut.**

From Mettmnenstetten, Switzerland. Presented by Hon. A. Lieberknecht, U. S. Consul at Zürich.

5634. GARCINIA MANGOSTANA.**Mangosteen.**

From Ceylon. Received through Mr. D. G. Fairchild, December 7, 1900. Presented by Dr. Valentine Duke, of Newara, Eliya.

Fruits covered with a coating of paraffin to preserve the germinative power of the seeds.

5635. TRITICUM VULGARE.**Wheat.**

From Kurman-Kemelchi, Central Crimea. Received through Mr. M. A. Carleton, December 12, 1900.

Crimean. "A hard red winter wheat, one of the best in the world. Adapted for trial in Kansas, Oklahoma, northern Texas, Missouri, and southern portions of Iowa and Nebraska." (*Carleton.*)

5636. TRITICUM VULGARE.**Wheat.**

From Altonau, near Melitopol, in northern Taurida. Received through Mr. M. A. Carleton, December 12, 1900.

"Similar to No. 5635, but from a rather colder latitude and not ripening quite so early. Adaptation like No. 5635." (*Carleton.*)

5637. TRITICUM VULGARE.**Wheat.**

From Altonau, near Melitopol, in northern Taurida. Received through Mr. M. A. Carleton, December 12, 1900.

Girka winter wheat. "A beardless variety, soft-grained, but very hardy. Adaptation like No. 5635." (*Carleton.*)

5638. TRITICUM VULGARE.**Wheat.**

From Constantinovskol, 40 miles east of Stavropol, in north Caucasus. Received through Mr. M. A. Carleton, December 12, 1900.

Uta. "A hard, red-grained, bearded, winter variety, very resistant to cold and drought. Adapted for trial as a winter wheat in Iowa, Nebraska, and the southern portions of Wisconsin, Minnesota, and South Dakota, and eastern Colorado. An excellent variety for all of Kansas and northern portions of Missouri and Oklahoma." (*Carleton.*)

5639. TRITICUM DURUM.**Wheat.**

From Uralsk Territory, Russia. Received through Mr. M. A. Carleton, December 12, 1900.

Kubanka. "One of the best macaroni wheats known. Sown in the spring. Admirably adapted for growing in the semiarid regions, between the one hundredth meridian and the Rocky Mountains, and North Dakota to Texas, and also in New Mexico, Arizona, Utah, eastern Oregon, and the Palouse country." (*Carleton.*)

5640. TRITICUM VULGARE.**Wheat.**

From Padi, Saratov, Russia. Received through Mr. M. A. Carleton, December 12, 1900.

Padi. "A beardless, soft, or semihard winter wheat. Adapted to all the northern winter wheat States, from New York to Kansas and southward to the thirty-fifth parallel." (*Carleton.*)

5641. TRITICUM VULGARE.**Wheat.**

From Starobelsk, Kharkof, Russia. Received through Mr. M. A. Carleton, December 12, 1900.

Kharkof. "A bearded, hard, red, winter wheat, similar to No. 5635, but coming from a region much farther north and therefore extremely hardy. Especially resistant to piercing, dry, winter winds, where there is little snowfall. Admirably adapted for trial as a winter wheat in Minnesota, South Dakota, Iowa, northern Nebraska, Wisconsin, and perhaps southern North Dakota." (*Carleton.*)

5642. TRITICUM DURUM.**Wheat.**

From Ambrocievka, 20 miles northeast of Taganrog, in the Don Territory, Russia. Received through Mr. M. A. Carleton, December 12, 1900.

Yellow Gharnovka. "A macaroni wheat similar to No. 5643, but having yellow grains. Sown in the spring. Adapted for trial in the most arid portions of the United States." (*Carleton.*)

5643. TRITICUM DURUM.**Wheat.**

From Ambrocievka, 20 miles northeast of Taganrog, in the Don Territory, Russia. Received through Mr. M. A. Carleton, December 12, 1900.

Gharnovka. "The best macaroni wheat from the vicinity of Taganrog. Sown in the spring. Adapted for trial in the most arid portions of the United States." (*Carleton.*)

5644. TRITICUM DURUM.**Wheat.**

From Ambrocievka, 20 miles northeast of Taganrog, in the Don Territory, Russia.
Received through Mr. M. A. Carleton, December 12, 1900.

Velvet Don. "An excellent macaroni wheat with *black beards*. Sown in the spring.
Adaptation same as for No. 5643." (*Carleton.*)

5645. TRITICUM DURUM.**Wheat.**

From Ambrocievka, 20 miles northeast of Taganrog, in the Don Territory, Russia.
Received through Mr. M. A. Carleton, December 12, 1900.

Black Don. "A *black-chaff* macaroni wheat. Sown in the spring. This wheat and the two preceding numbers, however, might be sown in November or December with good results in Texas, New Mexico, Arizona, and southern California. Adaptation same as for No. 5643." (*Carleton.*)

5646. TRITICUM DURUM.**Wheat.**

From Taganrog, Don Territory, Russia. Received through Mr. M. A. Carleton,
December 12, 1900.

Gharnovka. "A spring wheat, but may be sown in late autumn south of the 35th parallel. This and No. 5643 are the best of the Taganrog macaroni wheats. Adaptation same as for three preceding numbers." (*Carleton.*)

5647. PANICUM MILIACEUM.**Proso.**

From Uralsk Territory, Russia. Received through Mr. M. A. Carleton, December 12, 1900.

White Ural. "The best sort for milling and extremely drought resistant. Adapted to growing in all semiarid districts west of the Mississippi River." (*Carleton.*)

5648. PANICUM MILIACEUM.**Proso.**

From Uralsk Territory, Russia. Received through Mr. M. A. Carleton, December 12, 1900.

Yellow Ural. "A variety of excellent quality, yielding heavily, and very resistant to drought. Adaptation same as No. 5647." (*Carleton.*)

5649 to 5686. PRUNUS DOMESTICA.**Prune.**

From France. Received through Mr. E. R. Lake, December 8, 1900. A collection of French grafted stock, as follows:

5649.

Cœur de bœuf. From Salvetat, Carcassonne, France. (Lake No. 1.)

5650.

Chaproni. From Vallerand, Traverny, France. (Lake No. 2.)

5651.

Giant. From Barbier, Orleans, France. (Lake No. 3.)

5652.

Isjum Erik. From Barbier, Orleans, France. (Lake No. 4.)

5653.

Des Béjonniens. From Barbier, Orleans, France. (Lake No. 5.)

5654.

Quetsche sucré. From Barbier, Orleans, France. (Lake No. 6.)

5655.

Mirabelle de Metz. From Barbier, Orleans, France. (Lake No. 7.)

5649 to 5686—Continued.

5656.

Sainte Catherine. From Barbier, Orleans, France. (Lake No. 8.)

5657.

Bleu de Belgique. From Rothberg, Gennevilliers, France. (Lake No. 9.)

5658.

Jaune d'Agen. From Rothberg, Gennevilliers, France. (Lake No. 10.)

5659.

The Czar. From Rothberg, Gennevilliers, France. (Lake No. 11.)

5660.

Grand Duc. From Rothberg, Gennevilliers, France. (Lake No. 12.)

5661.

Atesse. From Rothberg, Gennevilliers, France. (Lake No. 13.)

5662.

Big rose. From Croux et Fils, Paris, France. (Lake No. 14.)

5663.

Quetsche de Letricourt. From Croux et Fils, Paris, France. (Lake No. 15.)

5664.

Belle de Louvain. From Croux et Fils, Paris, France. (Lake No. 16.)

5665.

Surpasse monsieur. From Croux et Fils, Paris, France. (Lake No. 17.)

5666. (Number not occupied.)

5667.

Tardive musque. From Baltet Frères, Troyes, France. (Lake No. 19.)

5668.

Mirabelle grosse. From Baltet Frères, Troyes, France. (Lake No. 20.)

5669.

Mirabelle petite. From Baltet Frères, Troyes, France. (Lake No. 21.)

5670.

Mirabelle précoce. From Baltet Frères, Troyes, France. (Lake No. 22.)

5671.

Mirabelle tardive. From Baltet Frères, Troyes, France. (Lake No. 23.)

5672.

De Norbet. From Baltet Frères, Troyes, France. (Lake No. 24.)

5673.

Monsieur hâtif. From Baltet Frères, Troyes, France. (Lake No. 25.)

5674.

Précoce de Tours. From Baltet Frères, Troyes, France. (Lake No. 26.)

5675.

Prince Englebert (strain). From Baltet Frères, Troyes, France. (Lake No. 27.)

5649 to 5686—Continued.

5676.

Reine Claude d'Ouillins. From Baltet Frères, Troyes, France. (Lake No. 28.)

5677.

Reine Claude d'Althau. From Baltet Frères, Troyes, France. (Lake No. 29.)

5678.

De Montfort. From Baltet Frères, Troyes, France. (Lake No. 30.)

5679.

D'Agen améliorée. From Baltet Frères, Troyes, France. (Lake No. 31.)

5680.

Quetsche de Dorel. From Baltet Frères, Troyes, France. (Lake No. 32.)

5681.

Reine des Mirabelles. From Baltet Frères, Troyes, France. (Lake No. 33.)

5682.

Reine Victoria. From Fleury-Meudon, near Paris, France. (Lake No. 34.)

5683.

Violet prune. From Fleury-Meudon, near Paris, France. (Lake No. 35.)

5684.

Sannois quetsche. From Sannois, France. (Lake No. 36.)

5685.

Reine Claude violette (strain). From Sannois, France. (Lake No. 37.)

5686.

Gloire d'Épinay. From Epinay, France. (Lake No. 38.)

5687. PYRUS MALUS.

Apple.

From France. Received through Mr. E. R. Lake, December 8, 1900.

Transparente de Croncels. (Lake No. 39.)

5688. PYRUS MALUS.

Apple.

From France. Received through Mr. E. R. Lake, December 8, 1900.

Transparente de Zurich. (Lake No. 40.)

5689. VITIS VINIFERA.

Grape.

From France. Received through Mr. E. R. Lake, December 8, 1900.

Gamay. (Lake No. 41.)

5690 to 5744. PYRUS spp.

Apple.

From France. Received through Mr. E. R. Lake, December 8, 1900. A collection of ornamental apples, as follows:

5690. SEROTINA.

5702. FLAVA.

5691. IILLENT ARGENTE.

5703. INTERMEDIA.

5692. OBLONGA.

5704. TURBINATA.

5693. JOHN DOWNIE.

5705. COERULESCENS.

5694. PAUL'S IMPERIAL.

5706. HALLEANA.

5695. SPECTABILIS IMPERIAL.

5707. VESPER ROSE.

5696. PULCHELLA.

5708. MARENGO.

5697. SPECIOSA.

5709. TENORII CARNEA PLENA.

5698. SULFUREA.

5710. AMPLA.

5699. ATROPURPUREA.

5711. PRUNIFOLIA PENDULA.

5700. NIVEA POLYPETALA.

5712. MINNESOTA.

5701. FASTIGIATA.

5713. SPHAEROCARPA.

5690 to 5744—Continued.

5714. GENERAL GRANT.	5730. LONGIFOLIA.
5715. TARDIV D'HIVER.	5731. MAXIMA.
5716. RINGO.	5732. À FLEUR DOUBLE.
5717. PULCHRA.	5733. FASTIGIATA BIFERA.
5718. KAIDO.	5734. WHITNEY.
5719. MAGNIFICA.	5735. À FRUIT BLANC.
5720. NIGRA.	5736. QUAKER BEAUTY.
5721. EDULIS.	5737. IBRIC?
5722. ORANGE.	5738. SPECTABILIS IMPERIAL RE- VENI.
5723. LADY ELGIN.	5739. NIKITA FLORIBUNDA.
5724. TRANSLUCENS.	5740. VAN WYCK.
5725. MONTREAL BEAUTY.	5741. HYSLOP.
5726. LUTESCENS.	5742. THE FAIRY.
5727. MAGNIFICA.	5743. TORINGO.
5728. FLAVESCENS.	5744. YELLOW SIBERIAN.
5729. CIRE.	

5745. EUCALYPTUS GLOBULUS.

From San Francisco, Cal. Received through Trumbull and Beebe, July 14, 1900.

5746 to 5750. TRIFOLIUM PRATENSE.

Red clover.

From Hamburg, Germany. Received December 14, 1900. A collection of seeds of various European strains, as follows:

5746. ENGLISH.	5749. RUSSIAN.
5747. HUNGARIAN.	5750. SILESIAN.
5748. ITALIAN.	

5751. ANDROPOGON RUFUS.

Jaragua.

From Matto Grosso Province, Brazil. Presented by the Brazilian minister, Hon. J. F. de Assis-Brasil, December 1, 1900.

A native fodder grass called by the Portuguese "provisorio." Described by Mr. Assis-Brasil in his book on Brazilian agriculture. (See letter of October, 1899.)

5752. ARCTOSTAPHYLOS sp.

Pendicuas.

From Celaya, Mexico. Presented by Prof. Felix Foëx. Received December 10, 1900.

"The brown berries of this plant are edible. When fresh they are not disagreeable, having a fresh subacid flavor. When dried they are nearly tasteless, but are used in great quantities medicinally. An infusion is used for catarrh and headaches. The tree which produces them is very ornamental." (Foëx.)

5753. CARICA HETEROPHYLLA.

Jarrilla.

From Celaya, Mexico. Presented by Prof. Felix Foëx. Received December 10, 1900.

"A curious fruit, being drunk as one would swallow a raw egg, and not eaten. The name is Jarrilla or 'little pitcher,' because it is shaped like a pitcher and is always full of water. The water contained in it is fresh and slightly acid, resembling lemon juice. When the fruit is taken from the plant it acquires in a few days a bitter taste, something like lemon peel, but without its aroma. The plant is a perennial, half climber, and grows wild on the hills around Celaya." (Foëx.)

5754. TRITICUM DURUM.**Wheat.**

From Matagalpa, Nicaragua. Presented by Hon. Isaac A. Manning, U. S. consular agent. Received December 17, 1900.

Nicaragua. Grown at an elevation of 2,200 feet.

5755. CUCUMIS MELO.**Muskmelon.**

From Erfurt, Germany. Received December 13, 1900.

Coral Reef. This is a cantaloupe of very striking appearance, the rind being studded with warty excrescences. The melon is bright yellow, with reddish markings, small seed cavity, and greenish yellow flesh. If planted in frames in winter it ripens fruit in early summer.

5756. HORDEUM DISTICHUM.**Barley.**

From Pilsen, Austria. Received through Mr. D. G. Fairchild (No. 466, November 7, 1900), February 9, 1901.

Mixed barley used for brewing the original Pilsen beer; said by the brewing master of the great Pilsen "Urquelle" Brewery to compare favorably with *Hanna* barley.

5757. HUMULUS LUPULUS.**Hop.**

From Polepp, Bohemia. Received through Mr. D. G. Fairchild (No. 469, November 14, 1900), December 18, 1900.

Seed from the drier in Polepp of the *Semsch Red* variety.

5758. HUMULUS LUPULUS.**Hop.**

From Polepp, Bohemia. Received through Mr. D. G. Fairchild (No. 470), December 18, 1900.

Red Semsch. "This variety originated in the immediate neighborhood of Polepp. It was discovered in 1853 as a sport among the so-called 'Tschims' hops, which were then grown here in Polepp, by Wenzel Semsch, a hop grower then only 20 years of age. This hop is earlier than the Saaz variety and more productive. It is remarkably uniform in time of blooming and ripening, and has been sent all over Bohemia and Alsatia, and thousands of cuttings go every year to Saaz, where they are planted. The largest proportion of Saaz hops comes from these cuttings. The exact locality of the garden from which these cuttings were taken I can not positively affirm further than that it is in the renowned Polepp or Polepp-Platte region, which is famous through its production of a quality of hop which often in good years approaches very closely to that of the best Saaz variety. The important facts are that it is an August-ripening hop of very uniform maturity and possessed of a very fine aroma and 'bitter' (so fine in fact that it is everywhere reported as being used for mixing with Saaz hops as a substitute), and a productiveness which stands to the Saaz hop as 5 to 3 in proportion; 180 poles will yield 110 pounds of hops, while it requires about 300 poles of the Saaz to yield as much. The soil upon which these hops are grown is a dark friable loam with a subsoil of gravel, in strong contrast with the soil of Saaz or Spalt, which is so-called perm or disintegrated red sandstone. The whole Polepp region, which is the largest single stretch of hop country in Bohemia, has this dark, rich, alluvial soil. Formerly the whole valley bottom was a peat bog. Fine sand is often used to lighten the soil. It is strewn along the rows and worked in. For further particulars regarding the origin of this Semsch hop, see No. 5759." (*Fairchild.*)

5759. HUMULUS LUPULUS.**Hop.**

From Werbitz, Bohemia. Received through Mr. D. G. Fairchild (No. 471), December 18, 1900.

Semsch red. "Cuttings of the original specimen from the garden of the son of Wenzel Semsch, to whose efforts the production and distribution of this remarkable hop are due." (*Fairchild.*)

5760. HUMULUS LUPULUS.**Hop.**

From Saaz, Bohemia. Received through Mr. D. G. Fairchild (No. 475, November 19, 1900), December 18, 1900.

Saaz. One-year-old plants of the original *Saaz* hop. This variety has without doubt the finest "bitter" and best "aroma" of any known sort, but its small yield makes it an unprofitable kind to raise. It requires often from 300 to 480 plants to produce 110 pounds of hops, while 180 poles of the *Semsch red* will produce the same amount. These plants come from the city region of Saaz, where the soil is a brick-red broken-down sandstone of the Lower Permian formation.

5761. COCHLEARIA ARMORACIA.**Horse-radish.**

From Malin (Kuttenberg), Bohemia. Received through Mr. D. G. Fairchild (No. 479, November 22, 1900), December 18, 1900.

Malin. The finest flavored, sharpest horse-radish in the world, being cultivated in a different way from that generally practiced in America. The marketable shoots are only one season old instead of several. (See Circular No. 1, Section of Seed and Plant Introduction.)

5762. CYDONIA VULGARIS.**Quince.**

From Carlovitz, Slavonia. Presented by Director Hess, of the Agricultural School of Laun, Bohemia, through Mr. D. G. Fairchild (No. 473, November 15, 1900). Received December 18, 1900.

Cuttings from a tree that bore fruit weighing 14 ounces, of excellent shape, and of a deeper yellow than most quinces seen in America. Said to be an indigenous Slavonian variety.

5763. ARACHIS HYPOGAEA.**Peanut.**

From Washington, D. C. Seed of No. 4253, grown during the season of 1900 on the Potomac Flats.

5764 to 5766. GLYCINE HISPIDA.**Soy bean.**

From Washington, D. C. Three varieties of soy beans from Japan, grown during the season of 1900 on the Potomac Flats.

5764. COMMON. (S. P. I., No. 4912.)

5765. BEST WHITE. (S. P. I., No. 4913.)

5766. BEST GREEN. (S. P. I., No. 4914.)

5767. PISTACIA VERA × P. TEREBINTHUS.

From San Francisco, Cal. Presented by Mr. G. P. Rixford, through Mr. W. T. Swingle. Received December, 1900.

"This number comprises the fruits of the terebinth tree ripened near San Francisco. Most of these fruits contain no seed, although they look very plump and have a perfectly developed pit or stone. According to Mr. Rixford, the fruits which are decayed or with dark-purple exteriors are the ones which most often contain seeds. The majority of the fruits vary from wine color to pink and are more or less studded over with white specks. The flesh is very thin, probably only about one thirty-second of an inch." (*Swingle.*)

5768. HUMULUS LUPULUS.**Hop.**

From Tettngang, Bavaria. Received from Mr. J. A. Bueble, through Mr. D. G. Fairchild (No. 464, November 4, 1900), December 26, 1900.

"Sets of the earliest ripening hop variety in Europe, often maturing by the end of July. They occupy a special place on the European hop market, being used by many breweries for brewing their first summer beer." (*Fairchild.*)

- 5769. BETA VULGARIS. Sugar beet.**
 From Paris, France. Received February, 1900.
Vilmorin's French Very Rich.
- 5770. BETA VULGARIS. Sugar beet.**
 From Germany. Received February, 1900.
Strandes Kleinwanzleben.
- 5771. BETA VULGARIS. Sugar beet.**
 From Germany. Received February, 1900.
Hoernings Kleinwanzleben.
- 5772. BETA VULGARIS. Sugar beet.**
 From Germany. Received February, 1900.
Dippes Kleinwanzleben Elite.
- 5773. BETA VULGARIS. Sugar beet.**
 From Utah. Received February, 1900.
 American-grown seed. From Lehi, Utah.
- 5774. CUCUMIS MELO. Winter muskmelon.**
 From Arizona. Received December 29, 1900.
 Seed grown at Phoenix, Ariz., from No. 149, originally imported from New Bokhara, Turkestan, by Prof. N. E. Hansen, February, 1898.
- 5775. VACCINIUM VITIS-IDAEA. Foxberry.**
 From Finland. Presented by Dr. Gösta Grotenfeld. Received December 31, 1900.
- 5776. OXYCOCCUS PALUSTRIS. Small cranberry.**
 From Finland. Presented by Dr. Gösta Grotenfeld. Received December 31, 1900.
- 5777. QUEBRACHIA LORENTZII. Quebracho colorado.**
 From La Plata, Argentina. Presented by Dr. Carlos Spegazzini. Received January 4, 1900.
 "A magnificent slow-growing tree, with a wood like iron, containing much tannic acid. Last year's seeds from Salta Province." (*Spegazzini.*)
- 5778. MACHAERIUM TIPU. Tipu.**
 From La Plata, Argentina. Presented by Dr. Carlos Spegazzini. Received January 4, 1900.
 "Leguminosæ; beautiful tree for gardens and forest, rapid grower, producing excellent wood for building purposes." (*Spegazzini.*)
- 5779. ELYMUS ANDINUS. Coiron flor.**
 From La Plata, Argentina. Presented by Dr. Carlos Spegazzini. Received January 4, 1901.
 29861—No. 66—05—3

5780. LIBOCEDRUS CHILENSIS.

From La Plata, Argentina. Presented by Dr. Carlos Spegazzini. Received January 8, 1901.

Cipres de Patagonia.

5781. ASPIDOSPERMA QUEBRACHO BLANCO. Quebracho blanco.

From La Plata, Argentina. Presented by Dr. Carlos Spegazzini. Received January 8, 1901.

"A very rapidly growing tree, with medicinal properties." (*Spegazzini.*)

5781a. GOMPHOCARPUS sp. Buluba.

From La Plata, Argentina. Presented by Dr. Carlos Spegazzini. Received December, 1900.

5782. LATHYRUS MAGELLANICUS.

From La Plata, Argentina. Presented by Dr. Carlos Spegazzini. Received January, 1901.

Mixed seeds of this and *Vicia macraei*.

5783. PROSOPIS DENUDANS.

From La Plata, Argentina. Presented by Dr. Carlos Spegazzini. Received January 5, 1901.

Algarroba orozi?

5784. BERBERIS DULCIS.

From La Plata, Argentina. Presented by Dr. Carlos Spegazzini. Received January 5, 1901.

Calafata parra. From Chubut.

5785. PHYSALIS FRANCHETI (?).

From Tokyo, Japan. Presented by Mr. T. Watase, of Tokyo Plant and Seed Co. A variety with very large fine fruits.

5786. GOMPHOCARPUS sp. Buluba.

From the Soudan, Africa. Presented by Doctor Trabut, Government Botanist of Algeria, through Mr. Lyster H. Dewey, Assistant Botanist, U. S. Department of Agriculture.

"I have cultivated this species of gomphocarpus for several years under the name 'Buluba.' It attains a large growth, and yields a beautiful fiber closely resembling silk." (*Trabut.*)

5787. HUMULUS LUPULUS. Hop.

From Bohemia, Austria-Hungary. Received through Mr. D. G. Fairchild (No. 483), January, 1901.

Semsch. "Cuttings of this noted hop, from the neighborhood of the most famous locality of the Platte, where it is known to yield almost as fine hops as the best Saaz variety and in much larger quantity. It is this variety which the growers of the Saaz variety have imported in large quantities into Saaz to replace the old Bohemian variety, which has so fallen off in yield that its culture no longer pays, unless a fancy price can be secured. These hops possess an aroma that is really fine. Professor Chodounsky, of the Experiment Station for Brewing Industries in Prague, one of the best-known and most careful judges of hop varieties, says of this *Semsch* hop:

"This red hop, which gives a much larger yield than the old Bohemian red hop (Saaz variety), is to be reckoned among the very good hops. It has an oval form, a well-shaped spindle, and an agreeable aroma. It is considered as an intermediate type approaching the Rakonitz-Saaz hop, standing next to it as regards worth. This is probably the best yielder of all the really fine European varieties."

"As these cuttings have been secured with great difficulty, and as it will be more and more difficult to obtain others, they should be given especial attention. In order to propagate them as rapidly as possible, the young shoots should be layered next spring and cut into lengths when rooted. These cuttings have been taken from one of the best hop gardens in the Platte region in Bohemia, but being cut during the winter they are not as thrifty as if taken in the spring. The rule in Bohemia is to place a single cutting in a hill, but if small and weak it might be better to put two together.

"These hops produce the finest aroma when planted on yellow clay soils. The vines are light yellow when grown in sandy or clayey soil, but darker when grown where the soil has more humus, or is of a peaty or swampy character—what the Germans call '*moor Erde.*'" (*Fairchild.*)

5788 to 5792. HORDEUM DISTICHUM.

Barley.

From Munich, Bavaria. Received through Mr. D. G. Fairchild (No. 467), January 16, 1901.

A collection of prize-winning barleys from the Barley and Hop Exposition, 1900. Forwarded by Hon. James H. Worman, U. S. Consul at Munich, as follows:

5788. (467b.)	5791. (467f.)
5789. (467d.)	5792. (467g.)
5790. (467e.)	

5793. HORDEUM DISTICHUM NUTANS.

Barley.

From Kwassitz, Moravia, Austria. Received through Mr. D. G. Fairchild (No. 481), January 16, 1901.

Moravian or Hanna. "The noted *Hanna* brewing barley from the breeder or selector, Emanuel Ritter von Proskowitz, of Kwassitz. This is unquestionably one of the best brewing barleys in the world and is noted for its qualities of early ripening, unusual heavy yields, and special mealiness, which latter, together with other qualities of kernel, renders it one of the great favorites among German as well as Austrian brewers. Notwithstanding a duty in Bavaria of 22 marks per German ton on brewing barleys and an increased cost of transportation, the best Bavarian breweries import this *Hanna* barley. In the Thirty-ninth Session of the Bavarian House of Deputies (1899) the purchase of these *Hanna* barleys among other foreign sorts by the famous Hofbrauhaus was made the reason of an attack upon the director of this State institution and, although the claim was not sustained that the *Hanna* barley is superior to the best Bavarian, the inference which is drawn is that on the average it is more satisfactory and economical from the brewer's standpoint. The former director of the Brauhaus Staubwasser claimed in his defense that the *Hanna* barley, especially that grown in Hungary, was ready for malting earlier than Bavarian varieties, which speaks for the earliness of the variety claimed by the producer. Von Proskowitz claims for the variety a *pedigree* and says that it was selected as a single plant from some barley which he knew to be of very old Moravian origin. Through careful selection he has been able to bring its productivity up to 3,700 kilos per hectare and shorten its period of growth by over a week. It is a light straw producer suited especially to light or sandy loams. Owing to its early ripening quality it is especially valuable in Hungary, where the hot season occurs the latter part of July, but after the *Hanna* barley has so far matured as to be little influenced by it. Sow in March, or earlier if possible, providing soil is in proper condition. On light soil drill in rows 5 inches apart, on heavier soils 6 to 7 inches. If it can be made to follow a beet root or potato crop so much the better. Owing to its heavy yielding capacity, earliness, and high grade as a brewing grain, this variety is driving out all other sorts in Austria and every year large quantities of seed grain are imported into Hungary. So far as I can ascertain this is the first importation of this variety ever made into America." (*Fairchild.*)

5794. HORDEUM DISTICHUM.

Barley.

From Leneschitz, Bohemia. Received from Prof. Frantisek Hess, of the Laun Ag. School, through Mr. D. G. Fairchild (No. 472, November 15, 1900), January 16, 1901.

An excellent brewing barley, probably not a pure stock. A part of the same lot which took the first prize in the Austrian section of the Paris Exposition. From the estate of Josef Pisoft.

5795. PHASEOLUS VULGARIS.**Adler bean.**

From Sachsenfeld, Styria, Austria. Received through Mr. D. G. Fairchild (No. 484, December 21, 1900), January 16, 1901.

Adler. A sample. "One of the finest varieties known in Austria. It is indige- nous to Styria, where it is considered by connoisseurs an exceptionally fine table bean. I have eaten it and found it unusually good, though the skin is somewhat tough. It is, however, worth a trial by experiment stations." (*Fairchild.*)

5796. PAPAVER SOMNIFERUM.**Poppy.**

From Sachsenfeld, Styria, Austria. Received through Mr. D. G. Fairchild (No. 485, December 20, 1900), January 16, 1901.

A large-podded variety of poppy, grown in Styria exclusively for the production of oil. The pods are collected in autumn, dried, their tops cut off, and the seed shaken out. The seed is then ground and an oil is pressed out of it. This oil is extensively used in cooking and as a table oil. It is said not to grow rancid, and is very highly esteemed by the Styrians. The pods are often 2 inches in diameter." (*Fairchild.*)

5797. COFFEA ARABICA.**Coffee.**

From Macassar, Celebes. Presented by Mr. Karl Auer, U. S. consular agent, Macassar, through Messrs. Lathrop and Fairchild (No. 485a, February 11, 1900), January 22, 1901.

Patjoe or *Bonthain* coffee. "A superior local variety from south Celebes, which was formerly exported in large quantities to Europe." (*Fairchild.*)

5798. BROMELIA sp.**Timbiriche.**

From Celaya, Mexico. Presented by Prof. Felix Foëx. Received January 22, 1901.

"Like the Jarilla (No. 5753), it is a fruit to be drunk, not eaten. It is ground or crushed in water. The Mexicans prefer this as a refreshing drink to lemonade made from lemons. It is especially valuable for improving hard water, i. e., calcareous or magnesian waters, because the acid in the fruit precipitates these salts. The fruit does not grow in this vicinity, but in an arid region higher up. The plant is said to resemble the Yucca, but I have not seen it. The fruits sell in the markets here at 1 cent each, while other fruits have no value because of their abundance." (*Foëx.*)

5799. TRITICUM POLONICUM.**Polish wheat.**

From France. Received January 23, 1901.

Polish or *Astrakhan.*

5800. TRITICUM DURUM.**Wheat.**

From Paris, France. Received January 23, 1901.

Belotourka.

5801. LAVANDULA VERA.**Lavender.**

From Paris, France. Received January 23, 1901.

5802. LAVANDULA SPICA.**Spike lavender.**

From Paris, France. Received January 23, 1901.

5803. SESAMUM INDICUM.**Sesame.**

From Paris, France. Received January 23, 1901.

White seeded.

5804. SESAMUM INDICUM.

Sesame.

From Paris, France. Received January 23, 1901.

Yellow seeded.

5805 to 5809. ANDROPOGON SORGHUM.

Sorghum.

From Medicine Lodge, Kans. Received February, 1901. Seed of the following varieties:

5805.

Amber.

5808.

Kansas orange.

5806.

Collier.

5809.

Minnesota early amber.

5807.

Colman.

5810 to 5823. PYRUS MALUS.

Apple.

From Stockholm, Sweden. Presented by Director Axel Pihl, of the Swedish Horticultural Society, Rosendal, through Messrs. Lathrop and Fairchild (Nos. 400-413, July 18, 1900). Received February 4, 1901.

5810.

Astrachan sparreholms (Svensk Pomologi Applen, p. 73). "Originated in 1859. Ripens late in September; not commonly cultivated even in Sweden; as good as any ripening at this time; believed to be a hybrid between White Astrakhan and Rosenhäger." (*Fairchild.*)

5811.

Bjorkvicks (Svensk Pomologi, p. 93). "A fall apple; well known; first described in 1862; original tree in middle Sweden, at Bjorkvicks." (*Fairchild.*)

5812.

Fagerö (Svensk Pomologi, p. 91). "A new sort worthy of trial. Not well known, even in Sweden." (*Fairchild.*)

5813.

Frösåkers. "A fall apple, little known, even in Sweden. Director Pihl says it is a good sort; has been introduced into Finland within the last ten years, and is cultivated there with great success." (*Fairchild.*)

5814.

Gimmersta. "Of unknown origin. Little known, even in Sweden. An excellent early (September) table apple; very hardy; a first-rate market apple." (*Fairchild.*)

5815.

Hampus. "A summer apple of the very first quality; rather small; trees hardy, but of slow growth; probably of Swedish origin; very commonly grown; one of the best known and most extensively grown sorts." (*Fairchild.*)

5816.

Oranic. "A well-known summer or early autumn sort, in color not very attractive, but in flavor next to "Humus," the best in Sweden; very heavy and early bearer; hardy; largely cultivated in Sweden. Director Pihl recommends it heartily for trial." (*Fairchild.*)

5817.

Svensk vinterpostof. "One of the oldest and commonest sorts; late autumn and early winter variety of medium quality; most used as a table apple, but is suitable for kitchen use; does not keep late into winter." (*Fairchild.*)

5810 to 5823—Continued.

5818.

Ringstads. "A showy red-cheeked table apple of excellent quality; a good market sort; largely planted in Sweden and Finland; quite hardy. Highly recommended by Director Pihl." (*Fairchild*.)

5819.

Stenkyrke. "One of the very best Swedish sorts. Excellent keeper. A very good table apple. Originated on the chalky soil of Gottland. It does well on clay soil and is heartily recommended by Director Pihl." (*Fairchild*.)

5820.

Stäringe. "Late summer or early autumn variety. Ripens in September. A table apple of very fine quality. Origin unknown. Ranks very high, though it is not very commonly cultivated." (*Fairchild*.)

5821.

Säfstaholms. "Ripens in September. A most popular sort and one Director Pihl thinks would be very highly prized in America. A table sort made known by the well-known Swedish pomologist, Olof Eneroth. Quite hardy." (*Fairchild*.)

5822.

Åkerö. "This variety is considered, at the present time, to be the best of all the Swedish apples. The tree is one of the hardiest and of uncommonly strong growth. Not liable to disease. A winter table apple of excellent quality. Keeps until spring. A heavy bearer only at advanced age. Grows well in any kind of soil. The original tree is standing at Åkerö, although planted more than one hundred years ago. Much propagated in last twenty-five years." (*Fairchild*.)

5823.

Olands Kungs. "Closely related to *Scharlakansparmän*, but is not the same. A small, very bright red table apple. Sold in very large quantities as a Christmas-tree apple, for which it is especially suited, as it keeps well until Christmas. Hardy and tolerably productive." (*Fairchild*.)

5824. PRUNUS DOMESTICA.

Plum.

From Stockholm, Sweden. Presented by Director Axel Pihl through Messrs. Lathrop and Fairchild (No. 414, July 18, 1900). Received February 4, 1901.

Allmänna gul. "A very good cooking plum. Extremely hardy, but not a very heavy bearer. Almost always propagated by root division. Grown as far north as any plum." (*Fairchild*.)

5825. CERATONIA SILIQUA.

Carob.

From Lissa Island, Dalmatia. Received through Mr. D. G. Fairchild (No. 499, January 7, 1901), February 5, 1901.

"Bud sticks of a variety with large sweet pods." (*Fairchild*.)

5826. LATHYRUS PLATYPHYLLUS.

From Stockholm, Sweden. Presented by Prof. V. Wittrock, director of the botanic gardens, Frescati, through Messrs. Lathrop and Fairchild (No. 441, August 11, 1900). Received February 5, 1901.

"A species of *Lathyrus* named by Retzius *L. platyphyllus*. Its origin is uncertain. In Professor Wittrock's garden, at Frescati, are plants which have been growing for twelve years. One of these is planted against a wall 12 feet or more high, and the plant has spread over a large surface and overtops the wall by several feet. The

vigor of this plant is remarkable and the amount of fodder produced apparently great. So far no experiments with the plant have been made in the field. As it is a perennial and makes a comparatively little growth in the first three years, such experiments as have been started do not as yet show results. A few seeds only are obtainable here, as the plant seldom ripens its seeds in this latitude. Director Wittrock thinks it is quite possible that this plant is a different variety from that described by Retzius. So far as I am aware it is quite unknown as a fodder plant outside of southern Sweden, where Professor Wittrock has sent seeds. It deserves careful attention." (*Fairchild.*)

5827. BROMUS INERMIS. Smooth brome-grass.

From Stockholm, Sweden. Presented by Prof. V. Wittrock through Messrs. Lathrop and Fairchild (No. 442, August 10, 1900). Received February 5, 1901.

5828. CEPHALARIA TATARICA.

From Stockholm, Sweden. Presented by Prof. V. Wittrock through Messrs. Lathrop and Fairchild (No. 443, August 10, 1900). Received February 5, 1901.

"A new fodder plant of exceptionally vigorous growth. Professor Wittrock thinks it is worthy of extensive trial." (*Fairchild.*)

5829. HEDYSARUM OBSCURUM.

From Stockholm, Sweden. Presented by Prof. V. Wittrock through Messrs. Lathrop and Fairchild (No. 445, August 10, 1900). Received February 5, 1901.

"A high Alpine fodder plant which occurs above the timber line and is especially suited to mountain climates, although growing well in deep soil in the valleys or on the plains. The root system is very long; grows readily from seed if latter has been passed through a 'preparator' or rubbed with sandpaper. Otherwise it will take one to three years to germinate. Has been grown here twelve years on same spot. Yield is good. Highly ornamental. Professor Wittrock says it is the best Alpine fodder plant he knows." (*Fairchild.*)

5830. CALAMAGROSTIS PHRAGMITOIDES.

From Stockholm, Sweden. Presented by Prof. V. Wittrock through Messrs. Lathrop and Fairchild (No. 446, August 11, 1900). Received February 5, 1901.

"An excellent fodder grass for moist localities. It very seldom seeds, but spreads rapidly when once planted. Yields a heavy, nutritious fodder." (*Fairchild.*)

5831. AMMOPHILA ARENARIA. Beach-grass.

From Stockholm, Sweden. Presented by Prof. V. Wittrock through Messrs. Lathrop and Fairchild (No. 447, August 11, 1900). Received February 5, 1901.

"An excellent fodder grass for moist localities in high latitudes. The plant has a wandering habit. It dies out in one place after a few years, but spreads from a center in all directions. It yields a large quantity of valuable fodder, according to Professor Wittrock." (*Fairchild.*)

5832. GLYCERIA SPECTABILIS.

From Stockholm, Sweden. Presented by Prof. V. Wittrock through Messrs. Lathrop and Fairchild (No. 448, August 11, 1900). Received February 5, 1901.

"A forage plant grown extensively in some parts of Sweden. Adapted to moist places. Baron von Pijkull Volloesäby, of Kništa, Sweden, has large cultures of this plant and can supply rhizomes in quantity for trial if desired." (*Fairchild.*)

5833. VERBASCUM SPECIOSUM.

From Stockholm, Sweden. Presented by Prof. V. Wittrock through Messrs. Lathrop and Fairchild (No. 449, August 11, 1900). Received February 5, 1901.

"An East European or West Asiatic biennial that has just been determined by Professor Wittrock. It is quite new, and one of the most gorgeous yellow decora-

tive plants I have ever seen. The immense flower spikes, of which there are many branches, remain covered with blossoms for more than a month. Caution should be taken with it as, like others of the same genus, it may prove a weed. Professor Wittrock says it is very easily rooted out and will probably never be a bad weed." (*Fairchild.*)

5834. TRIFOLIUM PANNONICUM.

From Stockholm, Sweden. Presented by Prof. V. Wittrock. Received February 5, 1901.

5835. FESTUCA ARUNDINACEA.

From Stockholm, Sweden. Presented by Dr. V. Wittrock. Received February 3, 1901.

5836. HUMULUS LUPULUS.

Hop.

From Polepp, Bohemia. Received through Mr. D. G. Fairchild (No. 470a), 1901. *Red Semsch.* Same as No. 5758.

5837. COCHLEARIA ARMORACEA.

Horse-radish.

From Polepp, Bohemia. Received through Mr. D. G. Fairchild, January, 1901.

5838. ELEUSINE CORACANA.

Ragi millet.

From Rhodesia, South Africa. Presented by Dr. Wm. L. Thompson, of Oberlin, Ohio.

Upoka or *Ngoza*. "This is the most important food plant of the natives of Rhodesia and its yield of seed is said to be something phenomenal." (*Fairchild.*)

5839. CUCUMIS SATIVUS.

Cucumber.

From Znaim, Austria. Received through Mr. D. G. Fairchild (No. 480), January 10, 1901.

Znaim. "A variety largely grown for salting and pickling. Said by Mr. W. W. Tracy, sr., to be a mixture of strains probably deriving its name merely from the noted locality where cucumber growing is largely practiced." (*Fairchild.*)

5840. ACTINIDIA.

From Ichang, China. Received through Mr. G. D. Brill (No. 1), December, 1900.

"Large fruited. Chinese name *Yang Tao*." (*Brill.*)

5841. ASTRAGALUS CICER.

From Stockholm, Sweden. Presented by Dr. V. Wittrock through Messrs. Lathrop and Fairchild (No. 444, August 10, 1900). Received February 6, 1901.

"Considered by Doctor Wittrock to be a very important forage plant. It spreads with great rapidity and should be watched as it may become a weed. Suited to both sandy and clay soils. A true Steppe plant. Better for prairies than for cultivated lands." (*Fairchild.*)

5842. HORDEUM DISTICHUM.

Barley.

From Binsbach, Bavaria. Received from Mr. D. G. Fairchild, through the kindness of Hon. James H. Worman, United States Consul at Munich, 1901.

Chevalier.

5843. HORDEUM VULGARE.

Barley.

From Binsbach, Bavaria. Received from Mr. D. G. Fairchild, through the kindness of Hon. James H. Worman, United States Consul at Munich, 1901.

Webs.

5844. HORDEUM VULGARE. Barley.

From Binsbach, Bavaria. Received from Mr. D. G. Fairchild, through the kindness of Hon. James H. Worman, United States Consul at Munich, 1901.

Franken.

5845. HORDEUM DISTICHUM. Barley.

From Thalham, Bavaria. Received from Mr. D. G. Fairchild, through the kindness of Hon. James H. Worman, United States Consul at Munich, 1901.

Bohemian.

5846. HORDEUM DISTICHUM var. NUTANS. Barley.

From Binsbach, near Gonheim, Bavaria. Received through Mr. D. G. Fairchild (No. 478), February, 1901.

“This barley was awarded the gold medal as the best of 680 exhibits of brewing barley at the Bavarian Barley and Hop Exposition, held at Munich, September 29 to October 3, 1900.” (*Fairchild.*)

5847 to 5899. HORDEUM DISTICHUM. Barley.

From Paris. Received through Mr. D. G. Fairchild, February, 1901. Samples of barley obtained at the exposition, as follows:

5847. <i>Kitzinger.</i>	5859. (No. 479.)
5848. <i>Pilsen.</i>	5860. (No. 108.)
5849. <i>Laniger.</i> (No. 573.)	5861. <i>Lower Bavarian.</i> (No. 476.)
5850. <i>Kwassitzer.</i>	5862. <i>Hanna.</i> (No. 149.)
5851. <i>Landgerste.</i> (No. 442.)	5863. <i>Melon.</i> (No. 325.)
5852. <i>Scottish pearl.</i> (No. 159.)	5864. <i>Imperial.</i> (No. 48.)
5853. <i>Chevalier.</i> (No. 47.)	5865. <i>Chevalier.</i> (No. 64.)
5854. <i>Fünfstettener.</i> (No. 551.)	5866. <i>Chevalier.</i> (No. 198.)
5855. <i>Fünfstettener.</i> (No. 63.)	5867. <i>Bohemian.</i> (No. 135.)
5856. <i>Saal or Kaiser.</i> (No. 167.)	5868. <i>Bohemian.</i> (No. 454.)
5857. <i>Frankish.</i> (No. 608.)	5869. <i>Goldthorpe.</i> (No. 1.)
5858. <i>Common two-rowed.</i> (No. 238.)	5870. <i>Frankish.</i> (No. 356.)

5847 to 5899—Continued.**5871.***Frankish.* (No. 300.)**5872.***Lower Bavarian.* (No. 417.)**5873.***Mittelgerste Thürengen.* (No. 599.)**5874.***Christensen's Goldthorpe.*
(No. 43.)**5875.***Juwel.* (No. 324.)**5876.***Bavarian.* (No. 567.)**5877.***Hanna.* (No. 79.)**5878.***Laninger.* (No. 670.)**5879.**

(No. 683.)

5880.*Frankish.* (No. 220.)**5881.***Hanna.* (No. 152.)**5882.***Webbs.* (No. 191.)**5883.***Lower Bavarian.* (No. 107.)**5884.***Tauber.* (No. 310.)**5885.**

(No. 3.)

5886.

Bohemian. (A.)

5887.*Poppenheim.***5888.**

(Probably not a pure variety.)

5889.

(No. 2.)

5890.*Poppenheim.***5891.***Hanna.***5892.***Kützingen.***5893.** (Number not used.)**5894.***Hanna.***5895.***Bohemian.***5896.***Bohemian.***5897.***I Schwarzenberg.***5898.***II Schwarzenberg.***5899.***III Schwarzenberg.***5900. CUCUMIS SATIVUS.****Cucumber.**

From Auburn, N. Y. Received through Mr. G. W. Boynton, February 6, 1901.
Aksel dwarf, grown from No. 8, Inventory No. 1.

5901. RAPHANUS SATIVUS.**Radish.**

From Amite City, La. Received through Mr. W. O. Posey, February 6, 1901.
Seed grown from No. 1189, Inventory No. 2.

5902. CAPSICUM ANNUM.**Sweet pepper.**

From Anna Maria Key, Fla. Received through Mr. W. C. Berg, February 9, 1901.
Seed grown from No. 3976, Inventory No. 8.

5903. HORDEUM DISTICHUM.**Barley.**

From Saaz, Bohemia. Received through Mr. D. G. Fairchild (No. 477, Nov. 20, 1900), February 9, 1901.

"Bohemian brewing barley from the estates of Prince Schwarzenberg, at Jinovic, near Saaz. From sandy loam, soil rich in lime. Much exported to Norway. This is an excellent representative Bohemian barley, though probably not a pure variety." (*Fairchild.*)

5904. CUCUMIS MELO.**Muskmelon.**

From Elgin, Utah. Received through Mr. J. F. Brown, February 9, 1901.

Khiva. Seed grown from No. 114, Inventory No. 1.

5905. SECALE CEREALE.**Rye.**

From Tenmile, W. Va. Received through Mr. F. Spiker, February 12, 1901.

Winter Ivanof, grown from No. 1342, Inventory No. 2.

5906. CUCURBITA MAXIMA.**Honey pumpkin.**

From Eden, Nebr. Received through Mr. D. J. Wood, February 14, 1901.

Seed grown from No. 14, Inventory No. 1.

5907. CHAETOCLOA ITALICA.**Millet.**

From Brookings, S. Dak. Received through Prof. D. A. Saunders, February 15, 1901.

Seed grown from No. 2798, Inventory No. 7.

5908. CUCUMIS MELO.**Muskmelon.**

From Waterloo, Kans. Received through Mr. J. W. Riggs, February 14, 1901.

Maroussia Lessevitsky, grown from No. 27, Inventory No. 1.

5909 to 5918. VITIS VINIFERA.**Grape.**

From Lesina Island, Dalmatia. Received through Mr. D. G. Fairchild (Nos. 486-495), February 20, 1901. A collection of grape cuttings of the following varieties:

5909.

Boglich. "A dark-colored sweet table grape having a thick skin. The bunches are said to grow to a very large size, sometimes weighing as much as fourteen pounds. Suitable for limestone soils." (No. 486.) (*Fairchild.*)

5910.

Marascina. "A small light-brown translucent grape, of unusual sweetness. It is a shy bearer and subject to *Peronospora*. Originated near Sebenico on mainland. A high-grade dessert wine, known as *Marascina*, is made from this grape. This wine somewhat resembles Marsala, but is considered by some as superior, and sells for a much higher price than any of the other wines of this region." (No. 487.) (*Fairchild.*)

5911.

Stronzo di Gallo. "One of the three best grapes grown on this island. It is a thin-skinned white grape of a peculiar long shape and contains but one seed. It will keep until January. Suitable for poor limestone soils." (No. 488.) (*Fairchild.*)

5909 to 5918—Continued.

5912.

Kurtelaska. "A white wine grape, native of the island, producing medium-sized crowded clusters. A wine known as 'Apollo,' highly prized in Germany and Austria, is made by extracting the juice from the fresh grapes and fermenting it, separated from the skins. Suitable for limestone soils." (No. 489.) (*Fairchild.*)

5913.

Dernekusa. "The black grape from which the common wine of Lesina is made. It is a thin-skinned grape of medium size, and is said to be a fair table grape. It is a heavy producer." (No. 490.) (*Fairchild.*)

5914.

Ugava. "A white grape serving for the production of a bottled wine exported from Lesina. Only a few plantations of this variety exist on the island because the plants require a *rich* soil. The wine is sold for 1.20 to 1.30 florins a liter, which is high, considering that ordinary wines bring from .25 to .50 florin a liter." (No. 491.) (*Fairchild.*)

5915.

Banjoska. "A variety of wine grape brought to the island from a neighboring small island, called 'San Clementi,' according to accounts given me. It makes a strong wine, which is imported especially into Hungary. Berries small. Heavy bearer. Suitable for dry, strong, calcareous situations." (No. 492.) (*Fairchild.*)

5916.

Palarusa. "A white wine variety from which much of the Lesina wine is produced. One hundred kilos of grapes yield, it is said, 90 kilos of wine. Not particular as to soil." (No. 493.) (*Fairchild.*)

5917.

Puiska. "A thick-skinned, firm-fleshed white grape, originally from Apulia, Italy, but grown here many years. Said to be a very heavy bearer." (No. 494.) (*Fairchild.*)

5918.

Trojka. "A very large table grape of excellent flavor. It is a heavy bearer and keeps well. It is a native of Lesina and requires a rich soil." (No. 495.) (*Fairchild.*)

5919. FIGUS CARICA.

Fig.

From Lesina Island, Dalmatia. Received through Mr. D. G. Fairchild (No. 496, Jan. 7, 1901), February 20, 1901.

San Pietro. "The figs of the small island of Lesina, which lies off the Dalmatian coast, are noted in Triest as the most delicate of any which come to that port, except the high-priced Smyrna sorts. They have not the size or the flavor of the Smyrnas, but, considering the fact that they do not require fertilization with the caprifig insect, they are certainly worthy of a trial in the California fig plantations. This variety is a very early one, ripening here in June. It is also reported to be exceptionally large." (*Fairchild.*)

5920. FIGUS CARICA.

Fig.

From Lesina Island, Dalmatia. Received through Mr. D. G. Fairchild (No. 497, January 7, 1901), February 20, 1901.

Zarniza. "Cuttings of one of the ordinary figs grown on this island. Dark in color, produces crops twice a year. It is sometimes dried and packed in small barrels and exported." (*Fairchild.*)

5921. FICUS CARICA.**Fig.**

From Lesina Island, Dalmatia. Received through Mr. D. G. Fairchild (No. 498, January 7, 1901), February 20, 1901.

Zamožujč'a. "A good fig with unusually tender skin, far superior to the dried Italian or Greek figs. Many maintain that as far as tenderness of skin is concerned it is really superior to the Smyrna figs. It is not fertilized by the caprifig insect and may prove a superior sort if once fertilized seed are produced. Worthy of trial. This fig is shipped in large quantities to Trieste." (*Fairchild.*)

5922. AMYGDALUS PERSICA.**Peach.**

From Lesina Island, Dalmatia. Received through Mr. D. G. Fairchild (No. 500, January 8, 1900), February 20, 1901.

Giallo. "Cuttings of one of the best peaches of Dalmatia, and, although a cling-stone, is worth trying in any variety test. Suitable for stony hillsides of a calcareous nature." (*Fairchild.*)

5923. AMYGDALUS PERSICA.**Peach.**

From Lesina Island, Dalmatia. Received through Mr. D. G. Fairchild (No. 501, January 8, 1900), February 20, 1901.

Bianca. "Cuttings of a white-fleshed freestone peach of excellent quality, maturing in August. Suitable for stony hillsides of a calcareous nature." (*Fairchild.*)

5924. PYRUS COMMUNIS.**Pear.**

From Lesina Island, Dalmatia. Received through Mr. D. G. Fairchild (No. 502, January 8, 1901), February 20, 1901.

Nyoko. "Cuttings of a variety of pear said to be of superior quality. Somewhat similar to the Bartlett. Suitable for calcareous hillsides in warm climates like Arizona and southern California." (*Fairchild.*)

5925. BRASSICA OLERACEA.**Cabbage.**

From Osage, Iowa. Received through Mr. George Phillips, February 12, 1901.

Earliest white, grown from No. 6. Inventory No. 1.

5926. BRASSICA OLERACEA.**Cabbage.**

From Osage, Iowa. Received through Mr. George Phillips, February 13, 1901.

White Reval, grown from No. 4. Inventory No. 1.

5927. PHASEOLUS VULGARIS.**Bean.**

From Waynesville, N. C. Received through Dr. G. D. Green, February 13, 1901.

Flageolet, grown from No. 2069. Inventory No. 5.

5928. CICER ARIETINUM.**Garbanzo.**

From Tenino, Wash. Received through Mr. J. F. Cannon, February 25, 1901.

Seed grown from No. 2376. Inventory No. 5.

5929. PHASEOLUS VULGARIS.**Bean.**

From Judsonia, Ark. Received through Mr. Jacob C. Bauer, February 23, 1901.

Soissons, grown from No. 2068. Inventory No. 5.

5930. ANDROPOGON SORGHUM.**Sorghum.**

From Scottsville, Ky. Received through Mr. Rupert Huntsman, February, 1901.

Colman, grown from No. 4308. Inventory No. 8.

5931. PRUNUS DOMESTICA.**Plum.**

From Saaz, Bohemia. Presented by Doctor Wolfram through Mr. D. G. Fairchild (No. 476, November 18, 1900). Received February 26, 1901.

Dolan. "Cuttings of a plum originated in the village of Dolan, near Saaz, and said by Doctor Wolfram, one of the best Bohemian horticulturists, to be of superior quality. The dried prunes made from this sort are said to be little, if any, inferior to the famous Bosnian prunes. They are large and sweet, and have a flat stone that separates very easily from the flesh." (*Fairchild.*)

5932. SORBUS EDULIS.**Sorb apple.**

From Saaz, Bohemia. Presented by Doctor Wolfram through Mr. D. G. Fairchild (No. 474, November 18, 1900). Received February 26, 1901.

"Cuttings of a variety of Sorb apple discovered several years ago in the forests of Moravia, and since distributed by the Austrian Government through its agricultural schools. The fruit is small, about the size of *Vaccinium vitis-idaea*, and, when cooked, the 'compot' closely resembles that made from this cranberry." (*Fairchild.*)

5933. PYRUS MALUS.**Apple.**

From Saaz, Bohemia. Received through Doctor Wolfram, February 26, 1901.

Calville Madame Lesans. "Similar to *Calville blanc*, but more resistant to fungous attacks." (*Wolfram.*)

5934. FAGOPYRUM ESCULENTUM.**Buckwheat.**

From Berlin, Conn. Received through Mr. Earl Cooley, February 26, 1901.

Orenburg, grown from No. 2801. Inventory No. 7.

5935. ASTRAGALUS SINICUS.**Genge clover.**

From Yokohama, Japan. Received through Suzuki and Iida, March 2, 1901.

5936. LUPINUS PILOSUS CAERULEUS.**Lupine.**

From Paris, France. Received through Vilmorin-Andrieux & Co., February, 1901.

5937. LUPINUS PILOSUS ROSEUS.**Lupine.**

From Paris, France. Received through Vilmorin-Andrieux & Co., February, 1901.

5938. AVENA SATIVA.**Oat.**

From Proskurow, Russia. Received through Dr. S. de Mrozinski, March 6, 1901.

Sixty-day. Originated by Doctor Mrozinski.

5939. GOSSYPIUM BARBADENSE.**Egyptian cotton.**

From Mansourah, Egypt. Received through Mr. Alfred Dale, March 6, 1901.

Jannovitch.

5940. ORYZA SATIVA.**Rice.**

From Mansourah, Egypt. Received through Mr. Alfred Dale, March 6, 1901.

Fino.

5941. ORYZA SATIVA.**Rice.**

From Mansourah, Egypt. Received through Mr. Alfred Dale, March 6, 1901.

Eyne-il-Bint.

5942. LOTUS ULIGINOSUS.

From Paris, France. Received through Vilmorin-Andrieux & Co., March 9, 1901.

5943. PINUS SYLVESTRIS.

Scottish pine.

From Paris, France. Received through Vilmorin-Andrieux & Co., March 9, 1901.

5944. PINUS SYLVESTRIS.

Scottish pine.

From Paris, France. Received through Vilmorin-Andrieux & Co., March 9, 1901.
Var. *Rigensis*.

5945. PICEA EXCELSA.

Norway spruce.

From Paris, France. Received through Vilmorin-Andrieux & Co., March 9, 1901.

5946 to 5957. LINUM USITATISSIMUM.

Flax.

From Paris, France. Received through Vilmorin-Andrieux & Co., March 9, 1901.
A collection of seed of different varieties, as follows:

5946.

Common flax.

5952.

Improved Russian imported *Pskoff*.

5947.

True imported *Riga*.

5953.

Winter.

5948.

French-grown *Riga*.

5954.

Of Belgian origin.

5949.

White-flowering.

5955.

Of Dutch origin.

5950.

Yellow-seeded.

5956.

Nostrana of Lombardy.

5951.

Pskoff.

5957.

Catanian or Sicilian.

5958. CICHORIUM INTYBUS.

Chicory.

From Görz, Austria. Received through Mr. D. G. Fairchild (No. 515, January 24, 1901), March 11, 1901.

"A white variety of this excellent winter salad plant, which is one of the specialties of Görz." (*Fairchild*.)

5959. BRASSICA OLERACEA.

Cabbage.

From Görz, Austria. Received through Mr. D. G. Fairchild (No. 516, January 24, 1901), March 11, 1901.

"A variety of cabbage which is noted for its remarkable winter-keeping qualities. Recommended by Director Bolley, of the Görz Experiment Station, for trial in the Southern States." (*Fairchild*.)

5960. BRASSICA OLERACEA.

Cabbage.

From Bocche di Cattaro, Dalmatia. Received through Mr. D. G. Fairchild (No. 520, February 2, 1901), March 11, 1901.

"Seed of a perennial cabbage known as *Capuzzo*, which forms the principal food of many hundreds of families in Dalmatia. Grown especially in the regions about Cattaro and Ragusa. It grows to a height of 5 feet and bears in this warm climate tender

leaves throughout the winter. These are picked off singly, or the whole, rather irregular, small head is cut off. The stems sprout out again and furnish, in a few months, a second crop of edible leaves. They require little culture and are allowed to stand in the fields for three or four years. Other crops are cultivated between the rows of *Capuzzo*. The method of planting is precisely similar to that for cabbages. From the ease with which it is grown and its apparent favor among the common people this plant is worthy a trial in the Southern States." (*Fairchild.*)

5961 to 5963. NICOTIANA TABACUM.**Tobacco.**

From Corfu, Greece. Presented by the director of the Corfu Agricultural Experiment Station through Mr. D. G. Fairchild (Nos. 523-525, February 9, 1901). Received March 11, 1901.

"Seeds of the Turkish tobaccos from which the noted Egyptian cigarettes are made, being exported from parts of Turkey where they are grown, into Egypt where they are manufactured. Egyptian cigarettes are said to be made of blends of these three and other tobaccos." (*Fairchild.*)

5961.

Kavala, from the region in Turkey of this name. (No. 523.)

5962.

Xanthe, from the region in Turkey of this name. (No. 524.)

5963.

Trebizond, from the region in Asia Minor of this name. (No. 525.)

5964. CUPRESSUS SEMPERVIRENS.**Cypress.**

From Ragusa, Dalmatia. Received through Mr. D. G. Fairchild (No. 526, February 7, 1901), March 11, 1901.

"The cypresses of Ragusa and vicinity are very beautiful, and seem to be a distinct strain, much more symmetrical in shape than the common pyramidal kind grown in America." (*Fairchild.*)

5965. VICIA FABA.**Broad bean.**

From Corfu, Greece. Received through Mr. D. G. Fairchild (No. 527, February 9, 1901), March 11, 1901.

"Sample of a variety of broad bean originally from the island of Malta. It is a very heavy bearer and is preferred by the planters of Corfu to the native varieties." (*Fairchild.*)

5966. AVENA SATIVA.**Oats.**

From Proskurow, Russia. Received through Dr. S. de Mrozinski, March 8, 1901.

Polish. "Very fruitful and resistant to all changes of temperature. In spite of great drought, it gives comparatively good yields." (*Mrozinski.*)

5967. AVENA SATIVA.**Oats.**

From Proskurow, Russia. Received through Dr. S. de Mrozinski, March 8, 1901.

Polish. The same as No. 5966.

5968. TRIFOLIUM PRATENSE.**Red clover.**

From Proskurow, Russia. Received through Dr. S. de Mrozinski, March 8, 1901.

- 5969. TRIFOLIUM PRATENSE. Red clover.**
 From Proskurow, Russia. Received through Dr. S. de Mrozinski, March 8, 1901.
 Same as No. 5968.
- 5970. KOCHIA SCOPARIA.**
 From Tokyo, Japan. Received through Mr. T. Watase, December 28, 1900.
- 5971. HUMULUS LUPULUS. Hop.**
 From Tett nang, Bavaria. Received through Mr. D. G. Fairchild (No. 482, December 10, 1900), March 12, 1901.
Tett nang late. Seed.
- 5972. VIOLA ODORATA. Violet.**
 From Görz, Austria. Received through Mr. D. G. Fairchild (No. 513, January 23, 1901), March 12, 1901.
Czar. "A single violet from Antonio Ferrant's houses that has been cultivated here for many years. It has a decided perfume, but is inferior to the double varieties." (*Fairchild.*)
- 5973. VIOLA ODORATA. Violet.**
 From Görz, Austria. Received through Mr. D. G. Fairchild (No. 512, January 23, 1901), March 12, 1901.
Conte de Brazza. "A double white violet originated in Italy and brought to Austria by Count de Brazza. It is said to be one of the best white varieties known." (*Fairchild.*)
- 5974. VIOLA ODORATA. Violet.**
 From Görz, Austria. Received through Mr. D. G. Fairchild (No. 511, January 23, 1901), March 12, 1901.
Parmensis. "An unusually large sweet-scented double violet, somewhat similar to the *Neapolitan.* The favorite market sort of Görz. A native of France, being found wild about Grasse." (*Fairchild.*)
- 5975. HORDEUM DISTICHUM. Barley.**
 From Leschkau bei Podersam, Bohemia. Presented by Wilhelm Hoffer & Son, through Mr. D. G. Fairchild. Received February, 1901.
Goldfoil.
- 5976. HORDEUM DISTICHUM. Barley.**
 From Kitzingen, Bavaria. Presented by Nathan Gerste & Son, through Mr. D. G. Fairchild, February, 1901.
Kitzing. "Of the best quality." (*Fairchild.*)
- 5977. UMBELLULARIA CALIFORNICA. California laurel.**
 From San Bernardino, Cal. Received through Mr. S. B. Parish, February, 1901.
- 5978. ACTINIDIA sp.**
 From Ichang, China. Received through Mr. G. D. Brill (No. 2), December, 1900.
Yang tao. "Bears a fruit resembling the gooseberry, about 1½ inches long and 1 inch in diameter. Skin dull purple and quite tough. Eaten raw or cooked and also used for preserves. There are several species, to all of which the Chinese give the name *Yang tao.*" (*Brill.*)

5979. ACTINIDIA sp.

From Ichang, China. Received through Mr. G. D. Brill (No. 3), December, 1900.

Yang tao. "Fruit larger and more pointed than No. 5978. The skin is a lighter purple and thinner, and when eaten raw this has the better flavor." (*Brill.*)

5980. EUCOMMIA ULMOIDES.

From Ichang, China. Presented by Mr. E. H. Wilson, of Kew Gardens, through Mr. G. D. Brill (No. 4). Received December, 1900.

Ti Cheng. "A medium-sized tree growing wild around Ichang. It is said to be cultivated in the mountains of Hupei. The bark is used as a medicine and the glutinous seeds to adulterate silk. It is said that rubber can be extracted from the seeds. No successful experiments have, however, been made in the extraction of this supposed rubber." (*Brill.*)

5981. BENTHAMIA FRAGIFERA.**Strawberry tree.**

From Ichang, China. Received through Mr. G. D. Brill, December, 1900.

"Medium-sized tree, quite showy, fruit very palatable and used for food in some parts of China." (*Brill.*)

5982. CITRUS LIMONUM.**Lemon.**

From Bocce di Cattaro, Dalmatia. Received through Mr. D. G. Fairchild (No. 517, February 1, 1901), March 13, 1901.

Cattaro Giant. "A very large lemon, said to have originated in Mesopotamia. The trees are very vigorous and good bearers. The fruit sometimes weighs four or five pounds, and has a flesh of excellent flavor and juiciness." (*Fairchild.*)

5983. JUGLANS REGIA.**Walnut.**

From Bocce di Cattaro, Dalmatia. Received through Mr. D. G. Fairchild (No. 578, February 2, 1901), March 13, 1901.

Giant of Cattaro. "A very large English walnut of fine flavor, which brings double the price of ordinary walnuts on the Dalmatian market. Specimens, which were said to be smaller than the average, measured $2\frac{1}{2}$ inches long by $1\frac{3}{8}$ inches in diameter. The shell is hard and irregular. The tree grows rapidly and is a free bearer. Scions were taken from a tree on the farm of Francesco Navarin. Called to my attention by Cristoforo Spalatin of Castelnuovo." (*Fairchild.*)

5984. OLEA EUROPAEA.**Olive.**

From Bocce di Cattaro, Dalmatia. Received through Mr. D. G. Fairchild (No. 519, February 2, 1901), March 13, 1901.

Giant of Cattaro. "A very large seedling olive, specimens of which measured $1\frac{3}{4}$ inches in length by 1 inch in diameter. From two trees growing near Castelnuovo. Called to my attention by Cristoforo Spalatin." (*Fairchild.*)

5985. VITIS VINIFERA.**Grape.**

From Corfu, Greece. Received through Mr. D. G. Fairchild (No. 521, February 7, 1901), March 13, 1901.

Sultanina. "A light-yellow, transparent, seedless raisin grape. Considered to be one of the most valuable varieties, and that from which the 'Sultanina' seedless raisins of Greece are made. These raisins must not be confused with the 'Corinths,' for they are twice as large, of a light golden color, semitransparent, and much more valuable." (*Fairchild.*)

5986. CITRUS LIMONUM.**Lemon.**

From Corfu, Greece. Received through Mr. D. G. Fairchild (No. 522, February 7, 1901), March 13, 1901.

A giant-fruited variety of lemon, probably the same as No. 5982.

5987. PUNICA GRANATUM.

Pomegranate.

From Patras, Greece. Presented by the British consul, Mr. F. B. Wood, through Mr. D. G. Fairchild (No. 548, February 16, 1901). Received March 14, 1901.

"A very large pomegranate, sometimes at least 6 inches in diameter. The fruit is red and attractive, and instead of being sweet as most sorts are, this is sour like a lemon." (*Fairchild.*)

5988. PUNICA GRANATUM.

Pomegranate.

From Patras, Greece. Presented by the British consul, Mr. F. B. Wood, through Mr. D. G. Fairchild (No. 549, February 16, 1901). Received March 14, 1901.

"A large sweet-flavored pomegranate of excellent quality." (*Fairchild.*)

5989. CITRUS AURANTIUM.

Blood orange.

From Patras, Greece. Presented by the British consul, Mr. F. B. Wood, through Mr. D. G. Fairchild (No. 550, February 16, 1901). Received March 14, 1901.

Patras blood. "A small, nearly seedless blood orange, the pulp being the most completely blood-red of any orange I have ever seen, the segment partitions especially so. Skin too thin for a good shipping variety, mottled dark and light, with many large oil glands. It is very juicy, of excellent, almost vinous flavor." (*Fairchild.*)

5990. CITRUS AURANTIUM.

Blood orange.

From Corfu, Greece. Received through Mr. D. G. Fairchild (No. 528, February 10, 1901), March 14, 1901.

"A blood variety, the pulp of which is beautifully mottled with light red and the skin with a darker orange color." (*Fairchild.*)

5991. CITRUS LIMONUM.

Lemon.

From Corfu, Greece. Received through Mr. D. G. Fairchild (No. 529, February 10, 1901), March 14, 1901.

"A variety of lemon which bears quite seedless fruits from the flowers which mature in October, and fruits full of seed from the spring flowers. The seedless fruits are called "mules" or "mulas," and differ in shape from the ordinary, being more globose and possessing a persistent pistil which often projects some distance beyond the circumference of the fruit. Often over 10 and sometimes even 20 per cent of the fruits on a tree are seedless, I am told. I am inclined to attribute the seedlessness to lack of fertilization." (*Fairchild.*)

5992. CORYLUS sp.

Hazelnut.

From Corfu, Greece. Presented by Antonio Colla through Mr. D. G. Fairchild (No. 540, February 13, 1901). Received March 14, 1901.

"A large thin-shelled, full-meated hazelnut, growing wild in Corfu. The trees are vigorous and good bearers." (*Fairchild.*)

5993. CITRUS LIMONUM.

Lemon.

From Corfu, Greece. Received through Mr. D. G. Fairchild (No. 530, February 10, 1901), March 14, 1901.

Similar to No. 5991.

5994. POPULUS ALBA (?)

Poplar.

From Patras, Greece. Presented by the British consul, Mr. F. B. Wood, through Mr. D. G. Fairchild (No. 551, February 16, 1901). Received March 14, 1901.

"Cuttings from a poplar of remarkably rapid growth. The tree is 30 years old and over 3½ feet in diameter, while neighboring trees of about the same age are not more than half that size. The tree is very beautiful, of spreading habit." (*Fairchild.*)

5995. TRITICUM VULGARE.**Wheat.**

From San Giovanni a Teduccio, Italy. Received through Dammann & Co. (No. 1),
March 12, 1901.

Scarurso.

5996. TRITICUM VULGARE.**Wheat.**

From San Giovanni a Teduccio, Italy. Received through Dammann & Co. (No. 2),
March 12, 1901.

Iumilio.

5997. TRITICUM VULGARE.**Wheat.**

From San Giovanni a Teduccio, Italy. Received through Dammann & Co. (No. 3),
March 12, 1901.

Biancolilla.

5998. BORONIA MEGASTIGMA.

From Melbourne, Australia. Presented by Carolin & Co. Received March, 1901.

"Sow in spring in seed pans in light, loamy soil. Plant out in autumn from 2 to 4 feet apart. Use no manure. The plants come into bearing the second year, and live six or seven years." (*Carolin.*)

5999. TRITICUM DURUM.**Wheat.**

From Proskurow, Russia. Presented by Dr. S. de Mrozinski. Received March 19, 1901.

Kubanka. A sample packet of this well-known variety of macaroni wheat.

6000 to 6110.

From Russia, Hungary, and Roumania. Received through Mr. M. A. Carleton,
November, 1900.

A collection of seeds secured during the season from June to September, 1900.

6000. TRITICUM VULGARE.**Wheat.**

From Odessa, Russia. "A semihard red wheat; of good quality for milling, but not commonly exported. Adapted for cultivation in the middle States of the Plains." (*Carleton.*)

6001. TRITICUM VULGARE.**Wheat.**

From Odessa, Russia. *Uta.* "A hard or semihard red spring wheat of excellent quality for milling, forming a large part of the wheat that is exported from the Kherson and Ekaterinoslav governments through Odessa." (*Carleton.*)

6002. TRITICUM VULGARE.**Wheat.**

From Odessa, Russia. *Ghirka.* "This is the principal beardless variety of red spring wheat grown in Russia, particularly in south Russia and the Volga River region. It differs from the usual varieties of Russian spring wheat in being beardless and not quite so hard grained. It forms a large part of the wheat exported from Russia." (*Carleton.*)

6003. TRITICUM VULGARE.**Wheat.**

From Berdiansk, Russia. *Berdiansk.* "A red, hard-grained, bearded winter wheat with white chaff, very similar to Crimean. It is grown in the region north of the Sea of Azov. It is an excellent variety for cultivation in the middle prairie States." (*Carleton.*)

6004. TRITICUM VULGARE.**Wheat.**

From Berdiansk, Russia. *Belokoloska.* "A red, hard-grained, beardless spring wheat with white chaff, very similar to No. 6001. Grown in the vicinity of the Sea of Azov." (*Carleton.*)

6000 to 6110—Continued.

6005. TRITICUM DURUM. Wheat.

From Berdiansk, Russia. *Arnautka*. "A very good sample of this variety of wheat commonly grown in the region just north of the Sea of Azov." (*Carleton.*)

6006. TRITICUM VULGARE. Wheat.

From Konstantinovskoe, Russia. *Ulta*. See No. 5638.

6007. TRITICUM VULGARE. Wheat.

From Tsaritsyn, Russia. *Torgova*. "A very hard-grained, hardy winter wheat grown in the extreme northern portion of Stavropol government, well adapted for trial in Iowa, Nebraska, and South Dakota." (*Carleton.*)

6008. TRITICUM DURUM. Wheat.

From Tsaritsyn, Russia. *Black Don or Chernokoloska*. "A very good variety of macaroni wheat, with black chaff, grown in the Don Territory near Poltava, Russia." (*Carleton.*)

6009. TRITICUM DURUM. Wheat.

From Tsaritsyn, Russia. *Kubanka*. "A very good sample of this variety of macaroni wheat commonly grown in south Russia." (*Carleton.*) See No. 5639.

6010. TRITICUM VULGARE. Wheat.

From Berdiansk, Russia. *Belokoloska*. The same as No. 6004.

6011. TRITICUM DURUM. Wheat.

From Saratov, Russia. *Egyptian*. "A very hard-grained variety of macaroni wheat somewhat similar to Kubanka, but having longer grains." (*Carleton.*)

6012. TRITICUM VULGARE. Wheat.

From Rostov-on-Don, Russia. *Beloglino*. "One of the hardiest red winter wheats known. Grown near Beloglinskaya, in the northern portion of the Stavropol Government, a region of great extremes of temperature and moisture. The grain is very hard and makes an excellent quality of flour. It is admirably adapted for trial in Iowa, Nebraska, and South Dakota." (*Carleton.*)

6013. TRITICUM VULGARE. Wheat.

From Rostov-on-Don, Russia. *Beloglino*. "Practically the same as No. 6012, but a poorer quality." (*Carleton.*)

6014. TRITICUM DURUM. Wheat.

From Taganrog, Russia. *Gharnovka*. "A representative sample of the best quality of this macaroni wheat, grown by the peasants in the region south of Taganrog." (*Carleton.*)

6015. TRITICUM VULGARE. Wheat.

From Ambrocievka, Russia. *Crimean*. "A very hard red winter wheat, similar to Nos. 5635 and 5636, but grown in the district about 20 miles north of Taganrog, in the Don Territory." (*Carleton.*)

6016. TRITICUM VULGARE. Wheat.

From Berdiansk, Russia. *Kerch*. "A hard red winter wheat, very similar to *Crimean*, grown near the Sea of Azov. It is very drought-resistant and well adapted for the middle prairie States. It will probably ripen a little earlier than the variety commonly called *Turkey*." (*Carleton.*)

6017. TRITICUM VULGARE. Wheat.

From Kurman-Kemelechi, Russia. *Crimean*. Same as No. 5635.

6000 to 6110—Continued.

- 6018.** TRITICUM DURUM. **Wheat.**
From Berdiansk, Russia. *Arnautka*. "A sample of this excellent macaroni wheat, grown near Taganrog." (*Carleton*.)
- 6019.** TRITICUM DURUM. **Wheat.**
From Berdiansk, Russia. *Arnautka*. "The same variety as No. 6018, but of better quality." (*Carleton*.)
- 6020.** TRITICUM DURUM. **Wheat.**
From Berdiansk, Russia. *Arnautka*. "Similar to Nos. 6018 and 6019, but of better quality." (*Carleton*.)
- 6021.** TRITICUM VULGARE. **Wheat.**
From Stavropol, Russia. "A hard red winter wheat of excellent quality, very similar to No. 5638." (*Carleton*.)
- 6022.** AVENA SATIVA. **Oat.**
From near Stavropol, Russia. "A large white oat having heavy straw and large, well-filled heads." (*Carleton*.)
- 6023.** HORDEUM HEXASTICHUM. **Barley.**
From near Stavropol, Russia. *Six-rowed*. "Apparently a standard variety in this region." (*Carleton*.)
- 6024.** PANICUM MILIACEUM. **Proso.**
From Chaplino, Russia. *White*. "One of the varieties of millet commonly grown in the Don Territory, Russia." (*Carleton*.)
- 6025.** PANICUM MILIACEUM. **Proso.**
From Sarepta, Russia. *White*. "A standard variety of millet grown in the lower Volga region." (*Carleton*.)
- 6026.** PANICUM MILIACEUM. **Proso.**
From Sarepta, Russia. *Grey*. "This variety of millet succeeds quite well in the lower Volga region, but is not so commonly grown as other kinds." (*Carleton*.)
- 6027.** PANICUM MILIACEUM. **Proso.**
From Sarepta, Russia. *Yellow*. "One of the standard sorts of millet grown in the lower Volga region." (*Carleton*.)
- 6028.** ZEA MAYS. **Corn.**
From Bukharest, Roumania. *Red Pignoletto*. "A standard variety of Italian *Pignoletto* corn commonly grown in Roumania. *Pignoletto* is a term which perhaps belongs more properly to a group of varieties than to a single variety. It includes some of the best sorts grown in Italy and to a large extent in Roumania." (*Carleton*.)
- 6029.** ZEA MAYS. **Corn.**
From near Taganrog, Russia. *Czekler*. "One of the best varieties of corn grown in South Russia." (*Carleton*.)
- 6030.** ZEA MAYS. **Corn.**
From near Taganrog, Russia. *Bessarabian*. "This is a standard variety of corn, commonly grown in Bessarabia, where a large proportion of the entire Russian corn crop is grown." (*Carleton*.)

6000 to 6110—Continued.

- 6031. ZEA MAYS. Corn.**
From near Taganrog, Russia. *Chenkvantino*. "A variety of corn grown to a considerable extent in south Russia, Roumania, Hungary, and Italy." (*Carleton*.)
- 6032. ZEA MAYS. Corn.**
From near Taganrog, Russia. *Asiatic*. "A Trans-Caucasian variety of corn considered to be one of the best for south Russia." (*Carleton*.)
- 6033. ZEA MAYS. Corn.**
From Ambrocievka, Russia. *Red Flint*.
- 6034. ZEA MAYS. Corn.**
From Saratov, Russia. "A large-grained variety of sugar corn grown in the lower Volga region." (*Carleton*.)
- 6035. CANNABIS SATIVA. Hemp.**
From Mezohegys, Hungary. "A standard variety of hemp grown in central Hungary." (*Carleton*.)
- 6036. CAMELINA SATIVA. False flax.**
From Bukharest, Roumania. "A plant grown to a considerable extent in Russia and Roumania for the oil. It should be used only experimentally, as it is likely to become a bad weed." (*Carleton*.)
- 6037. CITRULLUS VULGARIS. Watermelon.**
From Berdiansk, Russia. "A rather small, round, red-fleshed melon of very good flavor." (*Carleton*.)
- 6038. CITRULLUS VULGARIS. Watermelon.**
From Berdiansk, Russia. "A red-fleshed melon of average size." (*Carleton*.)
- 6039. CITRULLUS VULGARIS. Watermelon.**
From Taganrog, Russia. "An excellent red-fleshed melon of medium size." (*Carleton*.)
- 6040. CITRULLUS VULGARIS. Watermelon.**
From Taganrog, Russia. "An excellent melon of medium size, dark-green skin, with red flesh and black seeds." (*Carleton*.)
- 6041. CITRULLUS VULGARIS. Watermelon.**
From Rostov-on-Don, Russia. "A very rich melon with red flesh and black seeds." (*Carleton*.)
- 6042. CITRULLUS VULGARIS. Watermelon.**
From Tikhoretskaya, Russia. "A medium or small round melon, very light green on the outside with darker green bands. Red flesh and very small black seeds; flavor, excellent." (*Carleton*.)
- 6043. CITRULLUS VULGARIS. Watermelon.**
From Stavropol, Russia. "A large red-fleshed melon with black seeds. It is peculiarly colored on the outside, being light green with vertical bands of dark green." (*Carleton*.)
- 6044. CITRULLUS VULGARIS. Watermelon.**
From the region about 40 miles east of Stavropol, Russia. "A melon of medium size, dark green outside with light-brown seeds, adapted for cultivation in the semiarid districts." (*Carleton*.)

6000 to 6110—Continued.

- 6045. CITRULLUS VULGARIS. Watermelon.**
From Stavropol, Russia. "A melon of medium size, very light green on the outside with darker vertical stripes, red flesh, and spotted brown seeds. Adapted for cultivation in semiarid districts." (*Carleton.*)
- 6046. CITRULLUS VULGARIS. Watermelon.**
From Ekaterinodar, Russia. "A rather large melon, dark green on the outside, with red flesh and large brown seeds." (*Carleton.*)
- 6047. CITRULLUS VULGARIS. Watermelon.**
From Guiloyaksaiskaya, near Ekaterinodar, Russia. "An excellent melon of rather large size, dark green on the outside, with red flesh, brown seeds, and good flavor." (*Carleton.*)
- 6048. CITRULLUS VULGARIS. Watermelon.**
From Tsaritsyn, Russia. "A rather large melon, very light green or nearly white on the outside, with light-green stripes, very small black seeds. This is one of the most common watermelons grown on a commercial scale in the Volga region." (*Carleton.*)
- 6049. CITRULLUS VULGARIS. Watermelon.**
From Saratov, Russia. Mixed watermelon seeds.
- 6050. CITRULLUS VULGARIS. Watermelon.**
From Uralsk, Russia. "A small round melon, greenish white on the outside, red flesh, red seeds, and very rich flavor. Grown by the Kirghiz on the steppes. Adapted for cultivation in very dry districts." (*Carleton.*)
- 6051. CITRULLUS VULGARIS. Watermelon.**
From Uralsk, Russia. "A good melon of medium or small size, round, greenish white on the outside, with red flesh and small black seeds. Grown by the Kirghiz on the steppes. Adapted for cultivation in very dry districts." (*Carleton.*)
- 6052. CITRULLUS VULGARIS. Watermelon.**
From Saratov, Russia. "An excellent melon of very large size, round, dark green on the outside, with large reddish-brown seeds. Grown in an extremely dry region, therefore adapted for cultivation in dry districts." (*Carleton.*)
- 6053. CITRULLUS VULGARIS. Watermelon.**
From Novokhopersk, Russia. "A very fine rich-flavored melon of unusual appearance. It has the form of a crooked-neck squash, dark green on the outside, netted with lighter green, yellow flesh tinged with salmon-white seeds. Adapted for cultivation in very dry regions." (*Carleton.*)
- 6054. CITRULLUS VULGARIS. Watermelon.**
From Blagodot, Russia. "An excellent melon of average size, green outside, with white flesh and spotted dark-brown seeds." (*Carleton.*)
- 6055. CITRULLUS VULGARIS. Watermelon.**
From Ambrocievka, Russia. "An excellent melon of large size, dark green on the outside, with red flesh and light-brown seeds." (*Carleton.*)
- 6056. CITRULLUS VULGARIS. Watermelon.**
From Dolinskaya, Russia. "A good melon of rather small size, peculiarly colored on the outside, gourd-shaped, with light-brown black-bordered seeds." (*Carleton.*)

6000 to 6110—Continued.

6057. CITRULLUS VULGARIS.

Watermelon.

From Russia. "A very large rich melon, green outside, with red flesh and light-brown seeds." (*Carleton.*)

6058. CUCUMIS MELO.

Muskmelon.

From Odessa, Russia. *Bread melon*. "An Egyptian melon of medium size, somewhat flattened vertically, prominently ribbed with a very rough surface, remaining green on the outside for a long time, but turning considerably yellow when fully ripe; flesh yellow, sometimes slightly tinged with salmon, rather firm. When fully ripe the flavor is excellent. It is sometimes called the Pineapple (*Ananas*) melon." (*Carleton.*)

6059. CUCUMIS MELO.

Muskmelon.

From Sevastopol, Russia. "A melon of average size with greenish-yellow flesh and white seeds." (*Carleton.*)

6060. CUCUMIS MELO.

Muskmelon.

From Berdiansk, Russia. "One of the common varieties of muskmelon grown in the region north of the Sea of Azov." (*Carleton.*)

6061. CUCUMIS MELO.

Muskmelon.

From Berdiansk, Russia. "A round, smooth melon of medium size and fine flavor; flesh greenish yellow." (*Carleton.*)

6062. CUCUMIS MELO.

Muskmelon.

From Taganrog, Russia. "An excellent, smooth-skinned melon; flesh greenish yellow." (*Carleton.*)

6063. CUCUMIS MELO.

Muskmelon.

From Rostov-on-Don, Russia. "An excellent round melon of medium size; very smooth on the outside; flesh white with pink spots." (*Carleton.*)

6064. CUCUMIS MELO.

Muskmelon.

From Rostov-on-Don, Russia. *Kochanka*. "One of the most popular melons grown in South Russia; rather small, round and smooth, yellowish white on the outside, with green bands or splotches; flesh green except near the seed, where it is salmon color; seeds rather large and almost white." (*Carleton.*)

6065. CUCUMIS MELO.

Muskmelon.

From Ekaterinodar, Russia. "A rather large melon, yellowish green on the outside and netted; green flesh, very juicy, and of fairly good flavor." (*Carleton.*)

6066. CUCUMIS MELO.

Muskmelon.

From Ekaterinodar, Russia. The same variety as No. 6064. Grown in North Caucasus.

6067. CUCUMIS MELO.

Muskmelon.

From Tsaritsyn, Russia. *Kalminka*. "Name derived from the word Kalmuck. Melon netted, nearly round, yellow, mottled with green when ripe. Flesh green, very sweet, and good. Seeds light yellow." (*Carleton.*)

6068. CUCUMIS MELO.

Muskmelon.

From Kamishin, Russia. *Krestyanka*. "A rather large, long melon, yellow, slightly netted. Flesh yellow, and fairly good. A popular sort in the north Volga region." (*Carleton.*)

6000 to 6110—Continued.

- 6069.** CUCUMIS MELO. **Muskmelon.**
From Astrakhan, Russia. "A large, round melon of excellent flavor. Seeds below medium size, brownish green in color, rather short and thick." (*Carleton.*)
- 6070.** CUCUMIS MELO. **Muskmelon.**
From Saratov, Russia. *Kalminka.* "A large, rather long melon of light orange color, netted greenish white; flesh very juicy and sweet. Large seeds. One of the best varieties in the Astrakhan government." (*Carleton.*)
- 6071.** CUCUMIS MELO. **Muskmelon.**
From Uralsk, Russia. *Bokhara.* "A rather large melon, yellowish green in color, and netted. Flesh green near the rind; salmon pink near the seeds, with very rich flavor. One of the best sorts grown by the Kirghis farmers on the east side of the Ural River." (*Carleton.*)
- 6072.** CUCUMIS MELO. **Muskmelon.**
From Uralsk, Russia. "A rather long melon, yellow, with dark-green spots; flesh greenish white." (*Carleton.*)
- 6073.** CUCUMIS MELO. **Muskmelon.**
From Povorino, Russia. "A very large melon, yellow, roughly netted with green. Flesh white, or slightly tinged with green, very firm. Flavor good. Seeds nearly white." (*Carleton.*)
- 6074.** CUCUMIS MELO. **Muskmelon.**
From Kharkof, Russia. *Ananas.* "Probably the same as No. 6058." (*Carleton.*)
- 6075.** CUCUMIS MELO. **Muskmelon.**
From Taganrog, Russia, "A melon of medium size, nearly round, yellow, surface considerably netted. Flesh green with very rich, sweet flavor near the rind." (*Carleton.*)
- 6076.** CUCUMIS MELO. **Muskmelon.**
From Taganrog, Russia. *Ananas.* "Similar to No. 6074." (*Carleton.*)
- 6077.** CUCUMIS MELO. **Muskmelon.**
From Taganrog, Russia. "A small melon with smooth surface, netted yellow and green. Flesh green." (*Carleton.*)
- 6078.** CUCUMIS MELO. **Muskmelon.**
From Blagodats, estate of Mr. Rutchenko, about 20 miles north of Taganrog, Russia. *Rostov.* "An excellent melon of medium to large size, elongated or fairly round, smooth, almost white on the outside. Flesh green, very sweet, and juicy." (*Carleton.*)
- 6079.** PISTACIA VERA. **Pistache.**
From Stavropol, Russia. "A variety said to come from Syria bearing unusually large nuts." (*Carleton.*)
- 6080.** CUCUMIS SATIVUS. **Cucumber.**
From Saratov, Russia. *Parlovskii.* "One of the standard varieties of garden cucumbers grown in the lower Volga region of Russia." (*Carleton.*)
- 6081.** CUCUMIS SATIVUS. **Cucumber.**
From Saratov, Russia. *Moscow.* "A long, dark-green variety, grown in the lower Volga region, Russia." (*Carleton.*)

6000 to 6110—Continued.

6082. CUCUMIS SATIVUS. Cucumber.

From Saratov, Russia. "One of the standard varieties of cucumber grown in the lower Volga region." (*Carleton.*)

6083. CUCUMIS SATIVUS. Cucumber.

From Saratov, Russia. *Muron.* "A rather early variety of cucumber, grown in the lower Volga region." (*Carleton.*)

6084. RAPHANUS SATIVUS. Radish.

From Saratov, Russia. *Moscow.* "A rather long, early, white variety, grown in the region near Moscow." (*Carleton.*)

6085. RAPHANUS SATIVUS. Radish.

From Saratov, Russia. *Delicesse.* "An early variety of excellent flavor, grown in the region near Moscow, Russia." (*Carleton.*)

6086. RAPHANUS SATIVUS. Radish.

From Saratov, Russia. *Erfurt.* "A long, white variety of winter radish, grown near Moscow, Russia." (*Carleton.*)

6087. RAPHANUS SATIVUS. Radish.

From Saratov, Russia. "A small, round radish of good quality, grown near Moscow, Russia." (*Carleton.*)

6088. CUCURBITA MAXIMA. Pumpkin.

From Saratov, Russia. "A good variety, grown near Moscow, Russia." (*Carleton.*)

6089. CUCURBITA MAXIMA. Pumpkin.

From Saratov, Russia. *Hundred pound.* "A large yellow pumpkin." (*Carleton.*)

6090. LYCOPERSICUM ESCULENTUM. Tomato.

From Saratov, Russia. "A very large red tomato, grown in north Caucasus, "Russia." (*Carleton.*)

6091. LYCOPERSICUM ESCULENTUM. Tomato.

From Saratov, Russia. *Trophy.* "A large-fruited, late tomato, grown near Tsaritsyn, Russia." (*Carleton.*)

6092. PHASEOLUS VULGARIS. Bean.

From Jassy, Roumania. "A very large, white, kidney-shaped bean, grown in the northern part of Roumania." (*Carleton.*)

6093. HELIANTHUS ANNUUS. Sunflower.

From Taganrog, Russia. "A large, dark, gray-seeded variety, commonly used for eating, grown in southern and central Russia." (*Carleton.*)

6094. HELIANTHUS ANNUUS. Sunflower.

From the District Experimental Farm at Taganrog, Russia. "A variety of sunflower having small-sized, striped seeds which are used for oil." (*Carleton.*)

6095. HELIANTHUS ANNUUS. Sunflower.

From the field near Tikhoretskaya in Kuban Territory, North Caucasus, Russia. "A variety of sunflower having large, rather long, black seeds, much grown in North Caucasus, but not well known in other parts of Russia." (*Carleton.*)

6000 to 6110—Continued.

6096. PRUNUS sp. Cherry.
From Budapest, Hungary. "A small black cherry commonly grown in Hungary." (*Carleton.*)
6097. PRUNUS sp. Cherry.
From Budapest, Hungary. "Seeds of an excellent variety of white cherry grown in the vicinity of Budapest." (*Carleton.*)
6098. PRUNUS sp. Cherry.
From near Budapest, Hungary. *Spanish.* "Seeds of a variety of cherry commonly grown in this vicinity." (*Carleton.*)
6099. PRUNUS sp. Cherry.
From Budapest, Hungary. "Seeds of a large-fruited black cherry extensively grown in this region." (*Carleton.*)
6100. PRUNUS sp. Cherry.
From Budapest, Hungary. "Seeds of a large pink cherry grown in this vicinity." (*Carleton.*)
6101. RIBES RUBRUM. Red currant.
From Budapest, Hungary. "Seeds of a red currant of medium size grown in this vicinity." (*Carleton.*)
6102. PYRUS MALUS. Apple.
From markets of Sevastopol, Russia. *Anis.* "Seeds of one of the best and commonest varieties grown in the Crimea. A very good fruit and quite popular." (*Carleton.*)
6103. PRUNUS sp. Plum.
From Sevastopol, Russia. "A variety very similar to *Green Gage* and grown to a considerable extent in the Crimea." (*Carleton.*)
6104. PRUNUS sp. Plum.
From Sevastopol, Russia. *Ringolot.* "Seeds of one of the best varieties grown extensively in the Crimea." (*Carleton.*)
6105. PRUNUS sp. Plum.
From Sevastopol, Russia. *Mirabelle.* "A large plum of excellent flavor grown to a considerable extent in the Crimea. This and No. 6104 seem to be two of the best varieties in that region." (*Carleton.*)
6106. PRUNUS sp. Plum.
From Sevastopol, Russia. "A green sort grown to a considerable extent in the Crimea." (*Carleton.*)
6107. PRUNUS sp. Cherry.
From Belbek, Russia. "Seeds of a variety of sour cherry commonly grown in the Crimea." (*Carleton.*)
6108. PRUNUS sp. Plum.
From Rostov-on-Don, Russia. "A variety originally from the Crimea, with very large fruit of a delicious flavor when fully ripe. Possibly the same as No. 6105." (*Carleton.*)
6109. AMYGDALUS PERSICA. Peach.
From Rostov-on-Don, Russia. "A small Crimean variety. Fruit round, purple, and very hairy. Flesh sweet near the rind, but sour next the seed." (*Carleton.*)

6000 to 6110—Continued.**6110. PYRUS COMMUNIS.****Pear.**

From Kharkof, Russia. *Yellow Flesh*. "A pear of medium size, yellow and pink in color. Extremely juicy and having an excellent flavor. By far the best pear in the Kharkof markets." (*Carleton*.)

6111. TRITICUM VULGARE.**Wheat.**

From Proskurow, Russia. Received through Dr. S. de Mrozinski, March 19, 1901.

Podolia. An excellent variety, but not so resistant to drought as Nos. 5999 and 6112.

6112. TRITICUM VULGARE.**Wheat.**

From Proskurow, Russia. Received through Dr. S. de Mrozinski, March 19, 1901.

Poltava. "An extremely drought-resistant variety." (*Mrozinski*.)

6113. PYRUS MALUS.**Apple.**

From Corfu, Greece. Presented by Mr. Antonio Colla, through Mr. D. G. Fairchild (No. 539, February 13, 1901). Received March 20, 1901.

Corfu. "Scions of a very large and delicious apple, probably a native of the island. It should be tried in the Southern States, Porto Rico, and Hawaii." (*Fairchild*.)

6114. FICUS CARICA.**Fig.**

From Corfu, Greece. Presented by Mr. Antonio Colla, through Mr. D. G. Fairchild (No. 541, February 13, 1901.) Received March 20, 1901.

Fracatsani of Corfu. "Scions of the largest and finest flavored table fig grown on the island of Corfu. Trees vigorous. Fruit light-colored and unusually large, thin-skinned, and juicy." (*Fairchild*.)

6115. CITRUS LIMONUM.**Lemon.**

From Corfu, Greece. Presented by Mr. Antonio Colla, through Mr. D. G. Fairchild (No. 542, February 13, 1901). Received March 20, 1901.

Colla giant. "Scions from a tree bearing immense fruit, some specimens weighing 2½ pounds. Probably the same as Nos. 5982 and 5986." (*Fairchild*.)

6116. CITRUS AURANTIUM.**Orange.**

From Corfu, Greece. Presented by Mr. Antonio Colla, through Mr. D. G. Fairchild (No. 543, February 13, 1901). Received March 20, 1901.

"Scions of a variety of seedless orange. Possibly the Maltese variety." (*Fairchild*.)

6117. CITRUS LIMONUM.**Lemon.**

From Corfu, Greece. Received through Mr. D. G. Fairchild (No. 544, February 14, 1901), March 20, 1901.

"Scions of a thin-skinned, nearly seedless lemon having salmon-colored flesh. The tree is very ornamental, the leaves being variegated." (*Fairchild*.)

6118. VITIS VINIFERA.**Grape.**

From Castelnuova, Dalmatia, Austria. Received through Mr. D. G. Fairchild (No. 545, February 14, 1901), March 20, 1901.

Marzamina. "Cuttings of a heavy-bearing excellent variety of wine grape, said to have been grown in the Bocche di Cattaro since the time of the Roman occupation; said to make one of the best of Dalmatian wines." (*Fairchild*.)

6119. VITIS VINIFERA.**Grape.**

From Castelnuova, Dalmatia, Austria. Received through Mr. D. G. Fairchild (No. 546, February 14, 1901), March 20, 1901.

Marzamina genuina. "Cuttings of an old variety of wine grape, probably a native of the country. It is like No. 6118, only of superior flavor and not such a heavy bearer." (*Fairchild.*)

6120. CYDONIA VULGARIS.**Quince.**

From Corfu, Greece. Presented by Mr. Antonio Collas, through Mr. D. G. Fairchild (No. 547, February 13, 1901). Received March 20, 1901.

Corfu. "Cuttings of a very large pear-shaped quince. The trees are handsome, vigorous, and coarse growing. The quality of the fruit is poor, but its size and color may make it a desirable sort for breeders. The flesh is milder flavored than American varieties, and can be eaten raw." (*Fairchild.*)

6121. CITRUS LIMONUM.**Lemon.**

From Patras, Greece. Received through Mr. D. G. Fairchild (No. 552, February 17, 1901), March 15, 1901.

"A variety of lemon which has the reputation of being very nearly seedless." (*Fairchild.*)

6122. PISTACIA VERA.**Pistache.**

From Aintab, Syria. Presented by Rev. A. Fuller, through Mr. W. T. Swingle. Received March 26, 1901.

Aintab. "Scions of what is here regarded as the best variety of the pistachio tree. This tree does best on dry, rocky soil on mountains or hillsides." (*Fuller.*)

6123. PISTACIA VERA.**Pistache.**

From Aintab, Syria. Presented by Rev. A. Fuller, through Mr. W. T. Swingle. Received April 1, 1901.

Aintab. "Scions of what is here regarded as the best variety of the pistachio tree. This tree does best on dry, rocky, deep soil on mountains or hillsides." (*Fuller.*)

6124. VITIS VINIFERA.**Grape.**

From Aintab, Syria. Presented by Rev. A. Fuller, through Mr. W. T. Swingle. Received April 1, 1901.

Hunisa. "A large, dark wine-colored and very beautiful table grape, slightly oblong in shape. Flesh firm and fruity; ripens late (November) and has remarkable powers of keeping. Hung in a dry, cool place it will keep perfectly until April, only slightly withering as it is kept, and the flavor rather improving with age. To my mind it is the best all-round food grape I have ever seen." (*Fuller.*)

6125 to 6130. OLEA EUROPAEA.**Olive.**

From Fresno, Cal. Presented by Mr. George C. Roeding, through Mr. W. T. Swingle. Received April 6, 1901.

A collection of rooted olive cuttings as follows:

6125.*Manzanillo.***6126.***Neradillo.***6127.***Rubra.***6128.***Mission.***6129.***Sevillano.***6130.***Pendulina.*

6131. CUCUMIS MELO.**Muskmelon.**

From Marseille, France. Received through Hon. Robert P. Skinner, United States Consul-General, March 21, 1901.

Cavaillon. "These seeds should be planted under glass early in the spring and subjected to the least possible change of temperature until the weather is settled and the plants have become sufficiently advanced to warrant transplanting. This melon is one of the most valued horticultural products of southern France. It might be successfully cultivated in the latitude of Washington, and certainly in our Southern States. The fruit, when ripe, is very much the color of our green watermelons; the flesh is light green in color, highly perfumed and extremely palatable." (*Skinner.*)

6132. CANAVALIA ENSIFORMIS.**Halberd bean.**

From Morioka, Japan. Received through Rev. E. Rothesay Miller, March 9, 1901.

Nata-Mame. "This, as a string bean eaten when young, is one of the finest I have ever tasted. It grows much like pole limas, 10 feet high, and the pods are of immense size, often over a foot long and an inch and a half broad and half an inch thick. The Japanese use them generally for pickling when young, and they are very fine for this purpose, but as a string bean they are well worth introducing into the United States. They are cultivated about like pole limas, but need a warm climate for ripening. Should do well south of the latitude of Pennsylvania." (*Miller.*)

6133. CUCURBITA sp.**Crepe squash.**

From Morioka, Japan. Received through Rev. E. Rothesay Miller, March 9, 1901.

Chirimen Kabucha. "This squash is rather large, of a dark-green color, changing to yellow, sometimes even to a light greenish-blue color. The appearance is like a rough muskmelon, flattened considerably. I think it comes from Shinshu, one of the central provinces of Japan, but grows well here. It is about the best of the Japanese squashes, and is quite different from the varieties commonly grown in the United States, and may be worth cultivation." (*Miller.*)

6134. BRASSICA RAPA.**Turnip.**

From Morioka, Japan. Received through Rev. E. Rothesay Miller, March 9, 1901.

"A large white turnip, possibly worth cultivating for stock feeding." (*Miller.*)

6135. RAPHANUS SATIVUS.**Radish.**

From near Tokyo, Japan. Received through Rev. E. Rothesay Miller, March 9, 1901.

Daikon. "This is the immense radish used by the Japanese for pickling and eaten by them three times a day. The seeds I send are of an especially large and fine variety which grows near Tokyo." (*Miller.*)

6136. RAPHANUS SATIVUS.**Radish.**

From Sakura Island, Japan. Received through Rev. E. Rothesay Miller, March 9, 1901.

Sakura-gima Daikon. "This is another variety of the 'Daikon' radish, grown on Sakura Island, in the Bay of Kagoshima. It is not long, like No. 6135, but turnip shaped, and grows to such an immense size that the natives say two of them make a horse load." (*Miller.*)

6137. RAPHANUS SATIVUS.**Radish.**

From Sakura Island, Japan. Received through Rev. E. Rothesay Miller, March 9, 1901.

Sakura-gima Daikon. "The same as No. 6136, but can be planted about two weeks later." (*Miller.*)

- 6138. CORYLUS TUBULOSA.** **Hazelnut.**
 From Rovigno, Austria. Received through Mr. D. G. Fairchild (No. 509, January 19, 1901), March 23, 1901.
Pignatele. "Plants of a small hazelnut, inferior in quality to No. 6139. May, however, be worthy of trial in comparison with American varieties." (*Fairchild.*)
- 6139. CORYLUS TUBULOSA.** **Hazelnut.**
 From Rovigno, Austria. Received through Mr. D. G. Fairchild (No. 508, January 19, 1901), March 23, 1901.
Noce lunghe. "Plants of the best variety of Rovigno hazelnut. This variety is grown only in the Province of Istria and because of its scarcity is not much exported. It is a variety not reproduced from seed; requires a calcareous dry soil, and is said to be a heavy bearer. The size of the nuts will recommend them to American growers. In quality of kernel I consider them inferior to those of *Corylus pontica*. The plant forms a small tree, 12 to 15 feet high, with rather handsome trunk and graceful branches; would be an ornament to any garden. This variety will stand a temperature of +14° F. easily and probably much lower. I consider it a promising addition to American nut-bearing trees, and it deserves a thorough distribution through the South. Secured through the kindness of Emil Watzke, of Rovigno." (*Fairchild.*)
- 6140. VITIS VINIFERA.** **Grape.**
 From Sebenico, Austria. Received through Mr. D. G. Fairchild (No. 505, January 17, 1901), March 23, 1901.
Marascina. "Cuttings of the delicate variety of grape from which the famous Marascina wine (not the liqueur) is made. The vines are not very hardy and are subject to Peronospora. From the region where the sort originated and the only place where the wine is still manufactured." (*Fairchild.*)
- 6141. PINUS BRUTIA.** **Pyrenean pine.**
 From Triest, Austria. Received through Mr. D. G. Fairchild (No. 506, January 18, 1901), March 23, 1901.
 "Pyrenean pine, a variety especially valuable for its rapid growth and ability to endure drought. Indigenous to Syria, Asia Minor, Cyprus, Crete, and parts of Italy. This has been used with great success on the dry limestone soil of the *Karst* formation. It makes a handsome showing in from two to three years; especially recommended for planting in the warmer regions of the South on limestone soil." (*Fairchild.*)
- 6142. CHRYSANTHEMUM CINERARIAEFOLIUM.** **Pyrethrum.**
 From Milna, Brač Island, Austria. Received through Mr. D. G. Fairchild (No. 507, January 4, 1901), March 23, 1901.
 "Seed from a locality noted for its continued profitable production of the Dalmatian insect powder, notwithstanding American and Australian competition." (*Fairchild.*)
- 6143. CERATONIA SILIQUA.** **Carob.**
 From Triest, Austria. Received through Mr. D. G. Fairchild (No. 510, January 20, 1901), March 10, 1901.
Carob. (See No. 3112, Inventory No. 7.)
- 6144. LIATRIS ODORATISSIMA.** **Vanilla plant.**
 From Biloxi, Miss. Received through Mr. S. M. Tracy, February, 1901.
- 6145. CRAMBE MARITIMA.** **Sea kale.**
 From Centralia, Kans. Received through Mr. A. Oberndorf, jr., March 27, 1901.

6146. CUCUMIS MELO.

Muskmelon.

From Hungary. Presented by Dr. L. Waltherr, Inanda, N. C. Received March 28, 1901.

Turkestan. "The Turkestan muskmelons were imported into Hungary by the famous linguist, Wambéry, nearly fifty years ago from Turkestan, Central Asia, and the importation was a great success. The fruit is sometimes round, sometimes oblong, and weighs sometimes even 7 kilograms. The rind has a special yellow color, is sometimes netted; the flesh has a greenish yellow color, is very sweet and juicy, and so soft that it must be eaten with a spoon. It is far superior to any muskmelons of this country." (*Waltherr.*)

6147. CUCUMIS MELO.

Muskmelon.

From Hungary. Presented by Dr. L. Waltherr, Inanda, N. C. Received March 28, 1901.

Pineapple. "A variety having fruit of the shape of a pineapple, with the same half-yellow, half-green color as that of a half-ripe pineapple, and the rind is sprinkled with small tuberous prominences from the size of a pea to the size of a hazelnut, so that it resembles a pineapple at a distance. The flesh is hard, sweet, and has a deep yellow color like an orange rind." (*Waltherr.*)

6148. CUCUMIS MELO.

Muskmelon.

From Hungary. Presented by Dr. L. Waltherr, Inanda, N. C. Received March 28, 1901.

"A hybrid of Turkestan No. 6146, and pineapple No. 6147; delicious to eat." (*Waltherr.*)

6149 to 6159. CITRULLUS VULGARIS.

Watermelon.

From Hungary. Presented by Dr. L. Waltherr, Inanda, N. C. Received March 28, 1901.

A collection of Hungarian varieties as follows:

- | | |
|---|---|
| 6149. | 6154. |
| 6150. | 6155. |
| "With white rind and red flesh;
very fine." (<i>Waltherr.</i>) | 6156. |
| 6151. | "Very fine." (<i>Waltherr.</i>) |
| 6152. | 6157. |
| "Very fine." (<i>Waltherr.</i>) | <i>Marsowsky.</i> "Finest kind in
Hungary." (<i>Waltherr.</i>) |
| 6153. | 6158. |
| "Very fine." (<i>Waltherr.</i>) | 6159. |

6160.

From Guadalupe, Mexico. Presented by Dr. L. Waltherr, Inanda, N. C. Received March 28, 1901.

Cinco palomas. "An ornamental plant, the flowers of which resemble five pigeons; hence the Mexican name 'Cinco palomas.'" (*Waltherr.*)

6161. TAXUS BACCATA.

Yew.

From Hungary. Presented by Dr. L. Waltherr, Inanda, N. C. Received March 28, 1901.

6162. PYRUS BACCATA.

Siberian crab apple.

From the Khabarovsk forest. Presented by the Department of Agriculture, St. Petersburg, Russia. Received April 20, 1901.

6163. SPIROSTACHIS OCCIDENTALIS.

From Byron, Cal. Received through Prof. J. Burt Davy, April 1, 1901.

6164. CANNABIS INDICA.**Hemp.**

From Calcutta, India. Received through Prof. D. Prain, superintendent of the Sibpur Botanical Garden, April, 1901.

Hasheesh, the well-known opiate, is extracted from the resin of this plant.

6165 to 6168. BETA VULGARIS.**Chard.**

From San Giovannia a Teduccio, Italy. Received through Dammann & Co., April 1, 1901.

6165.*Chilean scarlet-ribbed.***6167.***Chilean yellow-ribbed.***6166.***Silver-ribbed (yellowish white).***6168.***Silver-ribbed, curled.***6169. RAPHANUS SATIVUS.****Radish.**

From Acneta, Cal. Received March 25, 1901. Seed grown from No. 1237, Inventory No. 2.

6170. CITRULLUS VULGARIS.**Watermelon.**

From Forestburg, S. Dak. Received through Mr. H. C. Warner, March 19, 1901. Seed grown from No. 61, Inventory No. 1.

"This was the best in quality of 80 varieties in two different seasons. Medium size, oblong, light and dark-green striped, sometimes all light. Flesh dark red, sweet, very rich, early." (*Warner.*)

6171. CITRULLUS VULGARIS.**Watermelon.**

From Forestburg, S. Dak. Received through Mr. H. C. Warner, March 19, 1901. Seed grown from No. 105, Inventory No. 1.

"Medium size, round, light and dark-green striped, flesh red, sweet; productive, early." (*Warner.*)

6172. ZEA MAYS.**Corn.**

From Summerville, S. C. Received through Mr. H. A. Jamison, March, 1901. Egyptian. Seed grown from No. 3998, Inventory No. 8.

6173. IPOMOEA BATATAS.**Sweet potato.**

From Manatee, Fla. Received through Mr. A. J. Pettigrew, March, 1901.

6174. AVENA SATIVA.**Oat.**

From Mustiala, Finland. Received through Messrs. Lathrop and Fairchild (No. 425), April 3, 1901.

North Finnish Black. "Dr. Gösta Grotenfelt, director of the Agricultural Institute of Mustiala, has grown this *Black* oat from seed imported from Torneå, Paavola, and Umeå (this latter in Sweden). He finds the seed from Torneå and Umeå very similar, but the Paavola variety is somewhat browner, not black and gray in color like the other two sorts. He has also compared the *North Finnish Black* with Canadian oats, which he got through the seed-breeding institute of Svalöf, Sweden. The comparison is as follows: *Canada* took one hundred and thirteen days to ripen, while the *North Finnish Black* took only ninety-eight days. The latter is the average for four years (1892-1895). In comparison with all sorts of foreign-grown varieties the figures for the four years stand as 98.9: 111.8 days for ripening period. Dr. Grotenfelt says that the yield is small. For 1895, 42.4 kilos of dried straw and grain (air dried) per *are*. The foreign sorts yielded in the same year 49.1 kilos per *are*. The

grain yield of the *North Finnish Black* variety was 12.6 kilos per *are*, while the foreign varieties yielded 16.4 kilos per *are*. These foreign sorts, it must be remarked, were all varieties which had been especially bred—some from Svalöf and others from the experiment station in Tystofte, in Denmark. During six years of cultivation at *Mustiala* this *North Finnish Black* oat has lost none of its early-ripening qualities. In good years the foreign-grown sorts here yield best, but in bad season they yield nothing at all, while the *North Finnish Black* always yields about the same amount. This variety deserves thorough trial in Alaska and the North Atlantic States, and should be used for breeding purposes wherever an early ripening variety of oat is desired. To get the best results it should be sown as early as possible. These various varieties have been analyzed in *Mustiala*, and it has been found that the *North Finnish Black* variety has 13.58 per cent of dry weight of protein, while the *South Finnish Brown* oat, for example, only 10.7 per cent, and the *South Finnish White* 11.77 per cent, and foreign oats only 11.79 per cent protein. Although, because of the small yield of the *North Finnish Black* variety, the actual protein quantity per *are* is smaller than that of the foreign sorts, the fact that the former is really richer in protein is an important point for plant breeders. The figures are: *North Finnish Black*, 1.54 kilos per *are*; foreign, including *Canada* variety, 1.73 per *are*. There have so far been very few experiments here in Finland *en gros*. Those few have been, however, very satisfactory." (*Fairchild*.) (See No. 5513.)

6175. HORDEUM TETRASTICHUM.

Barley.

From *Mustiala*, Finland. Received through Messrs. Lathrop and Fairchild (No. 426, August 1, 1900), April 3, 1901.

Four-rowed Lapland. "This comes from Pillo, a town lying 30 kilometers north of the Arctic Circle. It is a stunted variety, which ripens at least 10 to 14 days earlier than *South Finnish* or *European* varieties, and although it does not produce large quantities of grain, but small kernels and in small quantity, it deserves the especial attention of plant growers in Alaska. Dr. G. Grotenfelt is at the present time busy with its culture and hopes to maintain its earliness and, by crossing, increase its productiveness. At the present time it is almost ripe here in the Doctor's experimental plats, while all other sorts (except No. 427, L. & F.) are quite green. For a very short-season locality and also for breeding purposes this may prove of considerable value where barley is grown. Secured through Dr. Grotenfelt's kindness." (*Fairchild*.)

6176. BRASSICA RAPA.

Turnip.

From *Mustiala*, Finland. Received through Messrs. Lathrop and Fairchild (No. 428, August 1, 1900), April 3, 1901.

White Tankard Purple Top. "A Scottish variety of fodder turnip which has grown here for fifty years. This variety, grown on Finnish soil, has proved superior to that grown from seed imported from Scotland, and it is worthy a trial in Alaska. Its growth in spring is particularly rapid, and it therefore escapes the attacks of insect enemies better than other sorts. Will be sent by Director G. Grotenfelt in November." (*Fairchild*.)

6177. FAGOPYRUM ESCULENTUM.

Buckwheat.

From *Mustiala*, Finland. Received through Messrs. Lathrop and Fairchild (No. 430, August 1, 1900), April 3, 1901.

Finnish. "This buckwheat is for planting in Alaska. It is believed to be an early ripening variety. It is cultivated in east Finland on a large scale, but little in west Finland. It is now in bloom in Doctor Grotenfelt's experimental plats. Will be sent by Doctor Grotenfelt in November." (*Fairchild*.)

6178. BRASSICA CAMPESTRIS.

Turnip.

From *Mustiala*, Finland. Received through Messrs. Lathrop and Fairchild (No. 429, August 1, 1900), April 3, 1901.

Mustiala. "A variety of Swedish turnip which has been originated here in *Mustiala* and grown for over fifteen years. It is the best sort that has been tested here and is very regular in growth and altogether to be recommended for fodder purposes in Alaska." (*Fairchild*.)

6179. BRASSICA RAPA.**Turnip.**

From Mustiala, Finland. Received through Messrs. Lathrop and Fairchild (No. 432, August 1, 1900), April 3, 1901.

Finnish Svedje. "This is one of the few originations of the old Finnish people. It is called *Svedje* because it is grown on soil that has been burned over, i. e., in new clearings. The seed was sown by the peasants by taking into the mouth and spitting out as a Chinaman sprinkles clothes. It is a small variety, said to be of superior flavor, and is baked in the oven in butter after being pulled, a little boiling water being added as the turnips become brown. It can be grown in the Arctic Circle, and is a highly prized vegetable, worthy of especial attention." (*Fairchild.*)

6180. JUGLANS REGIA.**Walnut.**

From Patras, Greece. Received through Mr. D. G. Fairchild (No. 553), April 4, 1901.

"Cuttings from a single tree on the estate of Mr. S. D. Stamo which bears nuts that are unusually large and thin shelled." (*Fairchild.*)

6181. JUGLANS REGIA.**Walnut.**

From Zante, Greece. Received through Mr. D. G. Fairchild (No. 554, February 21, 1901), April 4, 1901.

"Cuttings from a single tree on the estate of Mr. Angalotti, at Bocali, which bore nuts that are somewhat irregular in form, but of very large size, some specimens measuring 6 inches in circumference, and so thin shelled that they can be crushed in the hand; not as large nor as regular in shape, however, as No. 6182. The quality is excellent and the tree reported to be a good bearer." (*Fairchild.*)

6182. JUGLANS REGIA.**Walnut.**

From Zante, Greece. Received through Mr. D. G. Fairchild (No. 555, February 21, 1901), April 4, 1901.

"Cuttings from a single tree growing through the roof of a small shop near the house of one Sig. Machalitzza, in the town of Zante. The nuts are regular in form and of very unusual size, measuring $5\frac{1}{8}$ by $5\frac{1}{8}$ inches in both circumferences. Heavy, and said to be well filled with an excellent flavored meat." (*Fairchild.*)

6183. CYDONIA SINENSIS.**Chinese quince.**

From Zante, Greece. Received through Mr. D. G. Fairchild (No. 556, February 21, 1901), April 4, 1901.

"Cuttings of the *scented quinces* called "musk," "citron," or "Japanese" quinces; grown in this vicinity. The fruits are very large and woody and seldom used for preserving. Their principal value is as ornamentals and as perfume fruits to store away with linen to give it an agreeable odor." (*Fairchild.*)

6184. CITRUS AURANTIUM.**Orange.**

From Zante, Greece. Received through Mr. D. G. Fairchild (No. 557, February 21, 1901) April 4, 1901.

Queen. "The trees from which these cuttings were taken are the only bearing trees of the kind on the island. The fruit is of a dark orange color, almost seedless, and of very fine flavor. It is worth trying in California and Florida orchards." (*Fairchild.*)

6185. CITRUS LIMONUM.**Lemon.**

From Zante, Greece. Received through Mr. D. G. Fairchild (No. 558, February 22, 1901) April 4, 1901.

"Cuttings of a thick-skinned, nearly seedless, variety of lemon growing in the monastery garden of Kalitero. Very juicy and extremely acid." (*Fairchild.*)

6186. CYDONIA SINENSIS.**Chinese quince.**

From Zante, Greece. Received through Mr. D. G. Fairchild (No. 559) April 4, 1901.

Cuttings from a seedling quince, possibly the same as No. 6183. *See also* No. 6362.

6187. CYDONIA VULGARIS.**Quince.**

From Zante, Greece. Received through Mr. D. G. Fairchild (No. 560, February 22, 1901) April 4, 1901.

Apple. "Cuttings of the favorite quince of Zante, used for preserves, marmalades, and as a table fruit. When fully ripe they are eaten like apples, which they resemble in shape." (*Fairchild.*)

6188. CYDONIA SINENSIS.**Chinese quince.**

From Zante, Greece. Received through Mr. D. G. Fairchild (No. 561, February 21, 1901) April 4, 1901.

"Cuttings of a small, scented quince grown for its sweet-scented fruit, which is not edible." (*Fairchild.*)

6189. PINUS PINEA.**Stone pine.**

From Zante, Greece. Presented by Count S. Lunzi through Mr. D. G. Fairchild (No. 562, February 21, 1901). Received April 4, 1901.

"The edible seeds of this pine are so thin shelled that they can be easily broken with the fingers, while the ordinary type has such hard-shelled seeds that they must be broken open with a hammer. Should be tried in the dry parts of Florida and the Southwest." (*Fairchild.*)

6190. CITRUS LIMONUM.**Lemon.**

From Zante, Greece. Presented by Mr. Geo. Sargent through Mr. D. G. Fairchild (No. 563, February 22, 1901). Received April 4, 1901.

"A young plant grown from a bud of an old lemon tree that has always borne seedless fruit." (*Fairchild.*)

6191. ERIBOTRYA JAPONICA.**Loquat.**

From Zante, Greece. Presented by Mr. Geo. Sargent through Mr. D. G. Fairchild (No. 564, February 22, 1901). Received April 4, 1901.

"Two young plants grown by Castagnias Aristides from cuttings of an old loquat tree reported to bear only seedless fruits." (*Fairchild.*)

6192. VIOLA ODORATA.**Violet.**

From Zante, Greece. Received through Mr. D. G. Fairchild (No. 565, February 22, 1901) April 4, 1901.

Parmensis. Plants of a very large double violet exported from Zante to all parts of Greece. Lacking in perfume. Grown in the open air in Zante, not under glass.

6193. CYDONIA VULGARIS.**Quince.**

From Zante, Greece. Received through Mr. D. G. Fairchild, April 4, 1901. No data.

6194. CANNABIS SATIVA.**Hemp.**

From Yokohama, Japan. Received through L. Boehmer & Co., April 5, 1900.

6195. RHUS CORIARIA.**European sumac.**

From Paris, France. Received through Vilmorin-Andrieux & Co., April 5, 1901.

- 6196. SEQUOIA SEMPERVIRENS.** **Redwood.**
From Berkeley, Cal. Received through Mr. Charles H. Shinn, April 6, 1901.
- 6197. CUCURBITA MOSCHATA.** **Cushaw.**
From Oakgrove, Ind. Received through Mr. H. A. Allen, April 4, 1901.
- 6198. BRASSICA NAPUS.** **Rape.**
From La Crosse, Wis. Received through John A. Salzer Seed Company, April, 1901.
Dwarf Victoria.
- 6199. LINUM USITATISSIMUM.** **Flax.**
From Paris, France. Received through Vilmorin-Andrieux & Co., April 8, 1901.
Irish-grown seed.
- 6200 to 6220. ORYZA SATIVA.** **Rice.**
From the Philippine Islands. Presented by Hon. J. Aranato, secretary of agriculture of the island of Negros. Received March 9, 1901.
A collection of native varieties of rice as follows:
- 6200.**
Capao. An early variety, to be sown on irrigated land in May and harvested in September.
- 6201.**
Gui-os. An early variety, sown on irrigated land in May and harvested in September.
- 6202.**
Cabatinjan. An early variety, sown on irrigated or dry land in May and June and harvested in September and October. The grains of this variety, after being boiled, cling together and are therefore adapted for use in the preparation of jellies.
- 6203.**
Bunja-tagum. An early variety, sown on irrigated land early in June and harvested early in October. The grain is very white and highly esteemed for food.
- 6204.**
Morado.
- 6205.**
Cachuri. An early, "fragrant" variety, sown in April and harvested in August. Cultivated on the mountain slopes. Its principal use is for the manufacture of "Pilipig."
- 6206.**
Mayuro. An early variety, sown on irrigated land early in June and harvested in October. The grain is very white and highly esteemed for food.
- 6207.**
Baráo. An early variety, sown on irrigated land early in June and harvested at the end of October.
- 6208.**
Cotsium. An early rice, sown on irrigated land in April and May and harvested in August and September.

6200 to 6220—Continued.**6209.**

Caayaá. An early variety, sown on irrigated land early in June and gathered in October. The grain is red and is valued as an article of food.

6210.

Cabunlog. A late variety sown on irrigated land at the end of June or early in July and gathered in December or early in January.

6211.

Piracát. An early variety, sown on dry land in May and gathered in September. The grains of this rice cling together after being boiled, and this substance is used in the preparation of dainties.

6212.

Lubang. An early variety, sown on either irrigated land or dry land in May or June and harvested in September or October.

6213.

Lumantao. An early variety, sown on irrigated or dry land in May or June and harvested in September or October.

6214.

Dagul-pilit. A late variety, sown on dry or irrigated lands in May and harvested in November. The grains of this rice cling together after being boiled and are used for making delicacies.

6215.

Caba. An early variety, sown on irrigated land early in June and harvested the last of October.

6216.

Tapul-pilit. A late variety, sown on irrigated land late in June or early in July and harvested in December and January.

6217.

Calanay-pilit. A late variety, sown on irrigated land late in June or the first of July and harvested in December and January.

6218.

Tapul-pilit. An early variety, sown on dry land in May and harvested in September. The grains of this are dark, and when boiled cling together and serve for the making of delicacies.

6219.

Macau. A late variety, sown on irrigated lands late in June or early in July and harvested in December and January.

6220.

Soladong. A late variety, sown on irrigated land the last of June and first of July; harvested in December and January.

6221 to 6238.

From the Philippine Islands. Presented by Hon. J. Aranato, secretary of agriculture of the island of Negros. Received March 9, 1901.

A collection of seeds of economic plants grown by the natives, as follows:

6221. CHAETOCHLOA ITALICA.

Millet.

Dana. An early-maturing grass, the seeds of which are used for making jellies.

6221 to 6238—Continued.

6222. SESAMUM INDICUM. **Sesame.**
Lunga. Sown in May and harvested in October. The oil of "ojonjoli" is extracted from the seeds.
6223. DOLICHOS SINENSIS (?). **Bean.**
Balatong.
6224. PHASEOLUS MUNGO. **Gram.**
Mongo.
6225. **Bean.**
Marayo. A black climbing bean, sown in May and harvested in October; used for pottage.
6226. PHASEOLUS CALCARATUS. **Bean.**
Tajori. A yellow climbing bean, sown in May and harvested in October; used for pottage.
6227. **Pea.**
 Native name, *Cadios.* An undetermined variety of pea.
6228. DOLICHOS SINENSIS. **Bean.**
Lestones. A climbing bean, sown in May and harvested in September; used for pottage.
6229. NICOTIANA TABACUM. **Tobacco.**
6230. ZEA MAYS. **Corn.**
 An early variety; sown in May and harvested in August and September.
6231. ZEA MAYS. **Corn.**
 The first crop from American seed.
6232. ZEA MAYS. **Corn.**
 The second crop from American seed.
6233. ZEA MAYS. **Corn.**
 An early purple variety; sown in May and harvested in August and September.
6234. MUSA TEXTILIS. **Manila hemp.**
Abaca-Bisaya. In the island of Negros it is the custom to sow the seed of this plant in the months of May, June, and July.
6235. MUSA TEXTILIS. **Manila hemp.**
Abaca-Kinisol. In the island of Negros it is the custom to sow the seed of this plant in the months of May, June, and July.
6236. MUSA TEXTILIS. **Manila hemp.**
Abaca-Moro. In the island of Negros it is the custom to sow the seed of this plant in the months of May, June, and July.
6237. MUSA TEXTILIS. **Manila hemp.**
Abaca-Lono. In the island of Negros it is the custom to sow the seed of this plant in the months of May, June, and July.
6238. (Museum specimen.)

- 6239. MUSA TEXTILIS.** **Manila hemp.**
Museum specimen only.
- 6240. OLEA EUROPAEA.** **Olive.**
From Fresno, Cal. Presented by Mr. George C. Roeding, through Mr. W. T. Swingle. Received April 6, 1901.
Obliza.
- 6241 to 6243. FICUS CARICA.** **Caprifig.**
From Fresno, Cal. Presented by Mr. George C. Roeding, through Mr. W. T. Swingle. Received April 6, 1901.
- 6241.** **6243.**
Roeding's No. 1 variety. Roeding's No. 3 variety.
- 6242.**
Roeding's No. 2 variety.
- 6244. FICUS CARICA.** **Fig.**
From Fresno, Cal. Presented by Mr. George C. Roeding, through Mr. W. T. Swingle. Received April 6, 1901.
Smyrna.
- 6245. CITRUS AURANTIUM.** **Orange.**
From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Mr. W. T. Swingle. Received April 8, 1901.
- 6246. CITRUS DECUMANA.** **Pomelo.**
From Eustis, Fla. Presented by Mr. Frank W. Savage, through Mr. W. T. Swingle. Received April 8, 1901.
- 6247. CITRUS NOBILIS (?).** **Orange.**
From Eustis, Fla. Presented by Mr. Frank W. Savage, through Mr. W. T. Swingle. Received April 8, 1901.
King, or King of Siam.
- 6248. CITRUS AURANTIUM.** **Orange.**
From Eustis, Fla. Presented by Mr. Frank W. Savage, through Mr. W. T. Swingle. Received April 8, 1901.
Sanford Mediterranean.
- 6249. CITRUS AURANTIUM.** **Orange.**
From Eustis, Fla. Presented by Mr. Frank W. Savage, through Mr. W. T. Swingle. Received April 8, 1901.
Ruby blood.
- 6250. CITRUS DECUMANA.** **Pomelo.**
From Eustis, Fla. Presented by Mr. Frank W. Savage, through Mr. W. T. Swingle. Received April 8, 1901.
Aurantium.

6251. OLEA EUROPAEA.**Olive.**

From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Mr. W. T. Swingle. Received April 30, 1901.

Mascara, a variety from M. Jaubert's place at Inkermann. Thought by Mr. Swingle to be possibly the very large sort, the fruit of which sometimes weighs 17 grams. Doctor Trabut considers it the same as the variety *Bréa* of Tlemsen.

6252. PISTACIA VERA.**Pistache.**

From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Mr. C. S. Scofield. Received May 22, 1901.

Sfax (female). "The sort grown about Sfax, Tunis, where large quantities of pistaches were formerly produced. It is said to be a good variety and was formerly largely exported, but of late prices have declined and exports from Sfax ceased. This variety was obtained last year from the same tree and was sent through the University of California to Mr. G. P. Rixford, who succeeded in grafting it on the terebinth tree on his place in Sonoma County." (*Swingle.*)

6253. PISTACIA VERA.**Pistache.**

From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Mr. C. S. Scofield. Received May 22, 1901.

Sfax (male). "Scions from male tree growing in the botanical garden of the *Écoles Supérieures* at Algiers." (*Scofield.*) See No. 6252.

6254. FICUS CARICA.**Caprifig.**

From Maison Carrée, near Algiers, Algeria. Presented by M. Lepiney through Mr. C. S. Scofield. Received May 28, 1901.

6255 to 6258.

(Numbers not utilized.)

6259. XIMENIA AMERICANA.**Hog plum.**

From Miami, Fla. Presented by Mr. H. C. Henricksen. Received May 21, 1901.

6260 to 6271.

A collection of Danish vegetable seed.

6260. BETA VULGARIS.**Beet.**

Yellowstone. "Yellow, bottle-shaped; is a half-breed beet of unusual yielding ability in connection with great nutritive substance; requires an early sowing, but does not make great claims as to soil. It is a comparatively new variety, which is in great demand." (*Kolle Bros.*)

6261. BETA VULGARIS.**Beet.**

McKinley. "Pink, bottle-shaped. It combines yielding power with nutritive substance, but wants a rich, warm soil. Under these conditions it is a variety of high value." (*Kolle Bros.*)

6262. BETA VULGARIS.**Beet.**

Adam. "White, cylinder-shaped variety, which ranges between the common fodder beets and fodder sugar beets. Combines good yielding power with a respectable nutritive substance. It requires a somewhat low-situated, deep-molded soil, and, thus placed, it will scarcely be exceeded by any other beet variety in regard to yielding power." (*Kolle Bros.*)

6263. BETA VULGARIS.**Beet.**

Red Oberndorfer. "This is an improved old variety which, by strict selection in field and laboratory, has attained its standing among 'bell-shaped beets.' It is particularly fit for a warm, light soil." (*Kolle Bros.*)

6260 to 6271—Continued.

6264. BETA VULGARIS. Beet.

Red Eckendorfer. "Like *Red Oberndorfer*, it is an old variety which by treatment has reached perfection. Its value lies in its great yielding power, while its nutritive contents are rather low. In order to attain its full development it should be sown in moldy, well-fertilized, moist soil." (*Kolle Bros.*)

6265. BRASSICA RAPA. Turnip.

Fiona.

6266. BRASSICA OLERACEA var. BOTRYTIS. Cauliflower.

Danish Mammoth. Grown on the island of Fyen, Denmark.

6267. BRASSICA OLERACEA var. BOTRYTIS. Cauliflower.

Extra Early Dwarf Erfurt. Grown on the farm of the royal palace, Fredricksburg.

6268. BRASSICA OLERACEA var. BOTRYTIS. Cauliflower.

Danish Snowball.

6269. BRASSICA OLERACEA var. BOTRYTIS. Cauliflower.

Extra Early Dwarf Erfurt. Grown on the island of Fyen, Denmark.

6270. BRASSICA OLERACEA var. BOTRYTIS. Cauliflower.

Extra Early Improved Erfurt. Grown on the island of Zealand, Denmark.

6271. BRASSICA OLERACEA var. BOTRYTIS. Cauliflower.

Copenhagen Snowball. Grown at Copenhagen, Denmark.

6272. TRITICUM VULGARE. Wheat.

From Volo, Greece. Presented by Mr. Ar. Tsakonas, of Athens, through Mr. D. G. Fairchild (No. 581, March 23, 1901). Received April 15, 1901.

Diminum. "A spring variety. The name means 'two months.' This is a semi-hard sort, used in Greece to plant after the failure of the winter wheat is known. It is not a two months' wheat, as the name implies, but matures in about three months, being planted the last of February and harvested the first of June. It is a light bearer and not very highly esteemed in Greece, except for the purpose described." (*Fairchild.*)

6273 to 6278.

From the Philippine Islands. Presented by Hon. J. Aranato, secretary of agriculture of the island of Negros. Received March 9, 1901. A collection of seeds as follows:

6273. ZEA MAYS. Corn.

"Early; sown in May, harvested in August and September." (*Aranato.*)

6274. THEOBROMA CACAO. Cacao.

6275.

Nanca. "A tree which matures at five or six years of age. The fruits, called 'Nanca,' as well as the leaves, are used as greens when young, and when mature the fruit is used as dessert." (*Aranato.*)

6276.

Dagmay. "A bulbous plant which is sown in May and harvested the January following. It grows well in light, loose, rich soil and requires to be kept well covered to produce any shoots. It is used in cooking to take the place of the sweet potato or ordinary potato." (*Aranato.*)

6273 to 6278—Continued.**6277.** DIOSCOREA sp.?

Tamis. "A twining tuberous plant, which is sown in May and harvested the following January. It requires stakes about 7 feet high, grows best in a loose, well-fertilized soil, and its roots should be frequently covered with earth. It is used in cooking as a substitute for the potato and sweet potato." (*Aranato.*)

6278. COFFEA ARABICA.**Coffee.****6279.** PHASEOLUS sp.**Bean.**

From China. Received from Mr. J. Lawton Taylor, Honolulu, Hawaii, April 16, 1901.

Meru (?). "Very mealy or granular when boiled." (*Taylor.*)

6280 to 6299. VITIS sp.**Grape.**

From Departmental Nursery of Maine and Loire, France. Received from Mr. Louis Leroy, Angers, France, April 19, 1901.

A collection of phylloxera-resistant varieties for use as stocks.

6280.*Riparia* × *Rupestris* 101.**6290.***Pure Berlandieri.***6281.***Mourvedre* × *Rupestris* 1202.**6291.***Monticola* × *Riparia* 554.**6282.***Bourrisquou* × *Rupestris* 603.**6292.***Riparia* × *Rupestris* 3309.**6283.***Berlandieri* × *Riparia* 157-11.**6293.***Aramon* × *Rupestris* 2.**6284.***Chasselas* × *Berlandieri* 41.**6294.***Aramon* × *Rupestris* Ganzin 1.**6285.***Colorado* E.**6296.***Rupestris du Lot.***6286.***Colomband* × *Rupestris* 3103.**6297.***Rupestris* Martin.**6287.***Bourrisquou* × *Rupestris* 601.**6298.***Aramon* × *Rupestris* Ganzin 1.**6288.***Solonis* × *Riparia* 1616.**6299.***Riparia Gloire de Montpellier.***6289.***Riparia grand glabre.***6300 to 6306.** VITIS sp.**Grape.**

From Caplat. A collection of grapes, No. 6300 being Japanese and the others Chinese. Received through Mr. Louis Leroy, Angers, France, April 19, 1901.

6300.*Precoce Caplat.***6304.***Morandi.***6301.***Alenconnaise* (new).**6305.***Pagnacci.***6302.***Romaneti trilobées.***6306.***Romaneti.***6303.***Tisserandi, inédite de Mandchurie.*

6307 to 6339.

From the Tokyo Seed and Plant Company, Tokyo, Japan. Received April 20, 1901.

A collection of miscellaneous seeds, as follows:

6307.	ORYZA SATIVA. <i>Sugaichi.</i>	Rice.
6308.	ORYZA SATIVA. <i>Adzuma Nishiki.</i>	Rice.
6309.	CANNABIS SATIVA. <i>Shimonita.</i>	Hemp.
6310.	CANNABIS SATIVA. <i>Hiroshima.</i>	Hemp.
6311.	VIGNA CATJANG. <i>Black Jurokusasage.</i>	Cowpea.
6312.	GLYCINE HISPIDA. <i>Black Flat.</i>	Soy bean.
6313.	VICIA FABA. <i>Large Soramame.</i>	Broad bean.
6314.	GLYCINE HISPIDA. <i>Yoshioka.</i>	Soy bean.
6315.	VICIA FABA. <i>Early Soramame.</i>	Broad bean.
6316.	PISUM SATIVUM.	Pea.
6317.	CANNABIS SATIVA. <i>Tochigi.</i>	Hemp.
6318.	PHASEOLUS MUNGO-RADIATUS. <i>Muroran.</i>	Gram.
6319.	DOLICHOS LABLAB. <i>White.</i>	Hyacinth bean.
6320.	DOLICHOS LABLAB. <i>Purple.</i>	Hyacinth bean.
6321.	PHASEOLUS MUNGO-RADIATUS. <i>Yainari.</i>	Gram.
6322.	CANNABIS SATIVA. <i>Aidzu.</i>	Hemp.
6323.	CANAVALIA ENSIFORMIS. <i>White Natamame.</i>	Knife bean.

6307 to 6339—Continued.

6324.	CANAVALIA GLADIATA. <i>Pink Nataname.</i>	Knife bean.
6325.	CANNABIS SATIVA. <i>Iwate.</i>	Hemp.
6326.	GLYCINE HISPIDA. <i>Rokugatsu.</i>	Soy bean.
6327.	VIGNA CATJANG. <i>Kurakake.</i>	Cowpea.
6328.	VIGNA CATJANG. <i>Kintohi.</i>	Cowpea.
6329.	ASTRAGALUS SINICUS. An early variety of this clover. (See No. 3725, Inventory No. 8.)	Genge clover.
6330.	ASTRAGALUS SINICUS. A late variety of this clover. (See No. 3725, Inventory No. 8.)	Genge clover.
6331.	LESPEDEZA BICOLOR. <i>Hagi.</i>	Bush clover.
6332.	PISUM SATIVUM (?).	Red fodder pea.
6333.	GLYCINE HISPIDA. <i>Gosha.</i>	Soy bean.
6334.	GLYCINE HISPIDA. <i>Black Round.</i>	Soy bean.
6335.	GLYCINE HISPIDA. <i>Green Medium.</i>	Soy bean.
6336.	GLYCINE HISPIDA. <i>Bakaziro.</i>	Soy bean.
6337.	BOEHMERIA NIVEA. <i>No. 1.</i>	Ramie.
6338.	BOEHMERIA NIVEA. <i>No. 2.</i>	Ramie.
6339.	BOEHMERIA NIVEA. <i>No. 3.</i>	Ramie.
6340.	QUERCUS ILEX. From Vilmorin-Andrieux & Co., Paris, France. Received April 22, 1901.	Holly oak.
6341.	CAPPARIS INERMIS. From Vilmorin-Andrieux & Co., Paris, France. Received April 22, 1901. A spineless form of caper.	Caper.

- 6342. CERATONIA SILIQUA.** **Carob.**
 From Vilmorin-Andrieux & Co., Paris, France. Received April 22, 1901.
- 6343. QUERCUS ILEX.** **Green truffle oak.**
 Obtained through Vilmorin-Andrieux & Co. from Mr. A. Rousseau, Carpentras, Vaucluse, France. Received April 22, 1901.
- 6344. QUERCUS PUBESCENS.** **White truffle oak.**
 Obtained through Vilmorin-Andrieux & Co. from Mr. A. Rousseau, Carpentras, Vaucluse, France. Received April 22, 1901.
- 6345. QUEBRACHIA LORENTZII.** **Quebracho colorado.**
 From Ronaldo Tidblom, director of agriculture and animal industry, Buenos Ayres, Argentina. Received April 22, 1901.
 From the semidesert territories of Chaco and Formosa.
- 6346. ASPIDOSPERMA QUEBRACHO-BLANCO.** **Quebracho blanco.**
 Presented by Ronaldo Tidblom, director of agriculture and animal industry, Buenos Ayres, Argentina. Received April 22, 1901.
 From the semidesert territories of Chaco and Formosa. The name given by Sig. Tidblom was *A. quebracho* Schlect., which does not appear in the Kew Index.
- 6347. VACCINIUM VITIS-IDAEA.** **Mountain cranberry.**
 Presented by Prof. Theodor Erben, of the agricultural-botanical experiment station of Tabor, Bohemia. Received April 25, 1901.
- 6348. RUBUS IDAEUS.** **Raspberry.**
 Obtained from France by Mr. G. B. Brackett, Pomologist, U. S. Department of Agriculture.
 "This belongs to the *R. idaeus* group. The plant is a strong, upright grower, everbearing in its habit. The fruit is large, red, and of excellent quality. It ripens from July to December." (*Brackett.*)
- 6349. PISTACIA VERA.** **Pistache.**
 From Athens, Greece. Received through Mr. D. G. Fairchild (No. 569, March 3, 1901), April 27, 1901.
 Female trees. Three-year-old trees budded the winter of 1900-1901 and the preceding winter.
 "The pistache is a valuable nut tree, well suited for culture in regions having a hot, dry climate. The nuts sell in this country from 40 cents to \$1.25 a pound, wholesale. They are already extensively used in America for flavoring confectionery and ice creams, and it is confidently expected that they will be widely used as a table nut, to be served like the almond, as soon as they become better known. In the eastern Mediterranean countries, where the pistache is the best known and choicest nut, it is much more used for eating from the hand than for flavoring. These nuts are among the most delicious known, rather smaller than the almond, but more delicate in flavor and a little oilier, somewhat resembling in texture and taste the piñon of the Rocky Mountains. Unlike the piñon and almond, the pistache nut has a shell easily opened with the fingers, since it contains two thin valves, which split open and become nearly separated as the fruit dries.
 "The sorts having yellow kernels are most used in oriental countries as a nut to eat from the hand, but the green sorts only are in demand for flavoring, since the public has become accustomed to associating this color with pistaches used for this purpose.
 The pistache is a small tree, 15 to 30 feet high, belonging to the same family as the sumac (*Anacardiaceae*). The male and female flowers are borne on different trees, and this necessitates securing both kinds of trees for an orchard, or, what is preferable, that scions of the male sort be grafted on the female trees that bear the fruit. One male tree is said to suffice to pollinate from five to ten female trees. The best method

of propagation is to graft the pistache on the terebinth tree (*Pistacia terebinthus*), a near relative of the pistache, native of the Mediterranean countries where the pistache is cultivated. It is preferable to grow the terebinth trees from seed in place in the orchard, but they can be transplanted, if necessary. The present importation comprises three-year-old trees which were grafted in nursery rows and dug up early in March.

"The pistache will endure a temperature of from 10° to 20° F. It is about as hardy as the fig and olive, possibly rather hardier. Its crop is not so liable as that of the almond to injury by late frosts, because it flowers much later in spring, a matter of great importance in the Southwest, where the almond is often injured because of its habit of blooming early. The pistache thrives best on a deep soil containing lime, but it succeeds also on other soils. A warm southern hillside is the best location. The tree is adapted especially for culture in regions having a dry summer season. It requires about the same climate as the olive, and will doubtless succeed in parts of California, Arizona, and possibly in some regions in Florida. Around the shores of the Mediterranean, where it is commonly cultivated, the tree is not irrigated. It needs about as much water as the olive, and, like it, can succeed on hillsides too dry to support most other fruit trees.

"The trees comprised under this number are female trees, and should be planted 20 to 25 feet apart, with a male tree (No. 6350) in the center of the group of females. The grafts should be cut back to two buds. The trees should be watered judiciously this season until properly started, after which no special care is necessary. Although these trees are already older than is desirable for transplanting, it is hoped that by care they can all be made to live, and that a small quantity of nuts will be produced year after next. The trees will bear full crops when they are 7 years old. The average yield is about 20 pounds." (*W. T. Swingle and D. G. Fairchild.*)

6350. PISTACIA VERA.

Pistache.

From Athens, Greece. Received through Mr. D. G. Fairchild (No. 569, March 8, 1901), April 27, 1901.

Male trees. "Three-year-old stocks budded 1899-1900 to male scions." (*Fairchild.*)

6351. NEOWASHINGTONIA FILAMENTOSA.

Fan palm.

Received March, 1901, through Prof. Charles H. Shinn, from Johnson & Musser Seed Company, Los Angeles, Cal.

6352. ERYTHEA EDULIS.

Guadalupe palm.

Received March, 1901, through Prof. Charles H. Shinn, from Johnson & Musser Seed Company, Los Angeles, Cal.

6353. HUMULUS LUPULUS.

Hop.

From Horst Brothers, Horstville, Cal. Received April 25, 1901.

A collection of American varieties.

6354. JUGLANS REGIA.

Walnut.

From Karpenisi, Greece. Presented by Mr. Xanthopoulo, of the Agricultural Experiment Station of Patras, Greece, through Mr. D. G. Fairchild (No. 568, March, 1901). Received April 27, 1901.

"Plants of a very large, thin-shelled walnut which grows in the mountains of Karpenisi, Southern Thessaly. I did not see specimens of this nut, but heard that an unusually large one from one of these trees was sent to the Paris Exposition of 1898. It was so thin shelled that it was necessary to pack it in cotton. Mr. Xanthopoulo, who secured the plants, says he took them from the original trees in Karpenisi which bore the giant nuts sent to Paris." (*Fairchild.*)

6355. PISTACIA sp.

Pistache.

From Athens, Greece. Received through Mr. D. G. Fairchild, April 27, 1901.

Stocks originally budded with the pistache (No. 6349), of which the scions died in transit. To be used as stocks upon which to graft the true pistache.

6356. VITIS sp. Grape.

Received, through Mr. G. B. Brackett, Pomologist, U. S. Department of Agriculture, from Matthew Crawford, Cuyahoga Falls, Ohio, April 29, 1901.

6357. FICUS CARICA. Fig.

From T. S. Williams, Monetta, S. C. Received April 29, 1901.

6358. PYRUS BACCATA. Siberian crab apple.

From Troitzkosavsk, Altai Province, Siberia. Received, through A. Fischer von Waldheim, director of Imperial Botanic Gardens, St. Petersburg, Russia, April 30, 1901.

This was marked "*Pyrus baccata genuina.*"

6359. BETA VULGARIS. Sugar beet.

Grown in Friedrichswerth, Germany, by Ed. Meyer. Presented by Beet Sugar Gazette Co., Chicago, Ill., April 29, 1901.

Friedrichswerther Elite.

6360. CITRUS LIMONUM. Lemon.

From Poros Island, Greece. Received through Mr. D. G. Fairchild (No. 576), April 27, 1901.

"One of the best varieties of Poros lemons, which are noted in Greece as the finest coming to the Athens market. The scions are from trees that often bear nearly or quite seedless fruits." (*Fairchild.*)

6361. CITRUS sp.

From Canné, Crete. Received through Mr. D. G. Fairchild (No. 580, March 14, 1901), April 27, 1901.

"Grafting wood of a remarkable citrous fruit, which resembles in shape a large, somewhat pear-shaped lemon. It is Australian gold in color, with a soft, rather thin skin and a flesh as dark colored as some oranges and of a remarkably agreeable, very mild acid, slightly bitter taste. In resembles in flavor a pomelo, only it is somewhat milder. Altogether a most refreshing fruit and deserving the serious attention of all pomelo and other citrus growers. It is possibly a cross or result of several crosses, including the orange, bergamot, and lemon. There are a few weak spines, the leaf has a winged petiole, and the fruit is borne on long, swinging fruit stalks. The name *lemon pomelo* is suggested because it is shaped like a lemon and tastes something like a pomelo. There is no popular name here in Crete. It is probable, in fact, that there are not more than a half dozen trees in existence on the island." (*Fairchild.*)

6362. CYDONIA SINENSIS. Chinese quince.

From Zante, Greece. Received through Mr. D. G. Fairchild, April 27, 1901.

Seeds of No. 6183.

6363. CUCUMIS MELO. Melon.

From Zante, Greece. Received through Mr. D. G. Fairchild (No. 567, February 22, 1901), April 27, 1901.

Zante winter. "This is said to be the best of the winter melons of Zante, having a delicious sweet flavor and keeping until the opening of spring. It is cultivated like any ordinary melon, plucked before frost in autumn, and allowed to ripen in a cool place free from frost. In Zante the fruits are hung up to ripen in small fiber slings on the wall. A specimen was tasted by the writer on the 22d of February, and although it was somewhat lacking in sweetness proved a most palatable fruit. Good melon connoisseurs say that these winter melons from Zante are often deliciously sweet, even when kept until spring." (*Fairchild.*)

6364. CUCUMIS MELO.**Winter melon.**

From Zante, Greece. Received through Mr. D. G. Fairchild (No. 566, February 22, 1901), April 27, 1901.

Cephalonia. "A winter canteloupe, which is grown to perfection on the island of Cephalonia, one of the Ionian group. The melons are cultivated in the usual way and in autumn plucked and strung up in a primitive basket of rough twisted grass. Here they are left to ripen and from midwinter until April the inhabitants of both Cephalonia and Zante serve them on their tables. These winter melons have a thin rind, which is loosely attached to the flesh and can be peeled off like the skin of an orange, leaving the most beautiful ice-cream-like, greenish flesh behind. I know of no more beautiful table fruit than a half melon peeled and served in this way. It looks like a mound of pistache ice cream and would captivate any fruit lover." (*Fairchild.*)

6365. CITRUS LIMONUM.**Lemon.**

From Andros Island, Greece. Received through Mr. D. G. Fairchild, April 27, 1901.

Seed from fruits which are nearly seedless.

6366. VITIS VINIFERA.**Corinth.**

From region of Nemeo, Greece. Received through Mr. D. G. Fairchild, April 27, 1901.

Corinth. "Among the clusters of ordinary dried *Corinths*, which are usually seedless, there are generally small branches bearing larger berries. These berries have often one or more seeds in them. These seeds were taken from such berries. It may be possible, by the use of such seeds, to produce new seedless varieties." (*Fairchild.*)

6367. HORDEUM DISTICHUM ERECTUM.**Barley.**

From Patras, Greece. Received through Mr. D. G. Fairchild, April 27, 1901.

6368. MEDICAGO sp.

From mountains of Corfu, Greece. Received through Mr. D. G. Fairchild (No. 537), April 27, 1901.

"One of the numerous leguminous fodder plants which grow rankly on the island and form a large part of the excellent Corfu hay. Procured through the assistance of Mr. Antonio Collas." (*Fairchild.*)

6369. TRITICUM VULGARE.**Wheat.**

From Trieste, Austria. Received through Mr. D. G. Fairchild, April 27, 1901.

Riete Originario. "A noted winter variety, said to be resistant and a good yielder. Grown in the vicinity of Görz and Trieste, Austria." (*Fairchild.*)

6370. TRITICUM VULGARE.**Wheat.**

From Greece. Received through Mr. D. G. Fairchild, April 27, 1901.

Cologna. "A winter variety." (*Fairchild.*)

6371. TRITICUM DURUM.**Wheat.**

From Corfu, Greece. Received through Mr. D. G. Fairchild, April 27, 1901.

Sample only.

6372. TRITICUM POLONICUM?**Wheat.**

From Corfu, Greece. Received through Mr. D. G. Fairchild, April 27, 1901.

"Sample only; probably of Russian origin." (*Fairchild.*)

6373. TRITICUM VULGARE.**Wheat.**

From Greece. Received through Mr. D. G. Fairchild, April 27, 1901.

Sample only, labeled *Jucente* (?).

- 6374. VITIS VINIFERA.** **Corinth.**
 From Patras, Greece. Received through Mr. D. G. Fairchild from Cremidi Brothers, of Patras, Greece. Received April 27, 1901.
Corinth. "Large berries containing seeds. These large berries are produced, I am told, occasionally by certain branches of the plant which otherwise bear only seedless fruit. They have often many seeds in them. New varieties of the *Corinth* grape are likely to originate as seedlings from this generally seedless variety." (*Fairchild.*)
- 6375. NIGELLA AROMATICA.** **Fennel flower.**
 Grown on the Potomac Flats, District of Columbia, under the direction of W. R. Beattie, from No. 2129.
- 6376. HIBISCUS ESCULENTUS.** **Okra.**
 Grown on the Potomac Flats, District of Columbia, under the direction of W. R. Beattie, from No. 3636.
- 6377. DOLICHOS LABLAB.** **Lablab bean.**
 Grown on the Potomac Flats, District of Columbia, under the direction of W. R. Beattie, from No. 2083.
- 6378. PHASEOLUS MUNGO.** **Gram.**
 Grown on the Potomac Flats, District of Columbia, under the direction of W. R. Beattie, from No. 3868.
- 6379. GLYCINE HISPIDA.** **Soy bean.**
 Grown on the Potomac Flats, District of Columbia, under the direction of W. R. Beattie, from No. 3870.
- 6380. MEDICAGO TURBINATA.** **Bur clover.**
 Grown on the Potomac Flats, District of Columbia, under the direction of W. R. Beattie, from No. 4187.
- 6381. OCIMUM BASILICUM.** **Sweet basil.**
 Grown on the Potomac Flats, District of Columbia, under the direction of W. R. Beattie, from No. 2008.
- 6382. CAPSICUM ANNUM.** **Red pepper.**
 Grown on the Potomac Flats, District of Columbia, under the direction of W. R. Beattie, from No. 3905.
 A sweet pepper.
- 6383. CAPSICUM ANNUM.** **Red pepper.**
 From Athens, Greece. Received through Mr. D. G. Fairchild, April 27, 1901.
 "A market variety in Athens." (*Fairchild.*)
- 6384 to 6424.**
 From Pyeng Yang, Korea. A collection of seeds of economic plants which are cultivated in Korea. Presented by Rev. W. M. Baird. Received May 3, 1901.
- 6384. ORYZA SATIVA.** **Black rice.**
 "Plant in May." (*Baird.*)
- 6385. FAGOPYRUM ESCULENTUM.** **Buckwheat.**
- 6386. GLYCINE HISPIDA.** **Soy bean.**
Black.

6384 to 6424—Continued.

6387. CALLISTEPHUS HORTENSIS. China aster.
Red.
6388. CALLISTEPHUS HORTENSIS. China aster.
White.
6389. CHAETOCHLOA ITALICA. Millet.
6390. ALLIUM CEPA. Onion.
6391. PHASEOLUS sp. Bean.
6392. CALLISTEPHUS HORTENSIS. China aster.
Red.
6393. PERILLA sp.
"A fine oil for the table is extracted from the seeds. Sow in April or May."
(*Baird.*)
6394. BRASSICA JUNCEA. Chinese mustard.
"Plant in April." (*Baird.*)
6395. CUCUMIS SATIVA. Cucumber.
"Plant in April or May." (*Baird.*)
6396. GLYCINE HISPIDA. Soy bean.
White.
6397. GLYCINE HISPIDA. Soy bean.
6398. RAPHANUS SATIVUS. Radish.
Large. "Plant in August." (*Baird.*)
6399. HORDEUM VULGARE. Barley.
Late.
6400. GOSSYPIUM BARBADENSE. Cotton.
"Plant in May." (*Baird.*)
6401. ZEA MAYS. Corn.
Late. "Plant in April or May." (*Baird.*)
6402. CUCURBITA PEPO. Pumpkin.
April.
6403. HORDEUM VULGARE. Barley.
"A hull-less variety." (*Baird.*)
6404. ZOYSIA PUNGENS. Korean lawn grass.
Used in Korea for lawns.
6405. ZOYSIA PUNGENS. Korean lawn grass.
Used in Korea for lawns.
6406. ANDROPOGON SORGHUM. Sorghum.
"A kind of grain similar in appearance to broom corn or sugar cane. The seeds are eaten. The canes are very straight and quite useful. Planted in May." (*Baird.*)

6384 to 6424—Continued.

6407.	COIX sp.	Job's tears.
6408.	PANICUM MILIACEUM.	Broom-corn millet.
6409.	PANICUM CRUS-GALLI.	Barnyard grass.
6410.	CHAETOCHELOA ITALICA.	Foxtail millet.
6411.	ANDROPOGON SORGHUM.	Sorghum.
	"Kind of grain similar in appearance to broom corn and sugar cane. The grain is eaten by Koreans. The canes are straight and valuable." (<i>Baird.</i>)	
6412.	LAGENARIA VULGARIS.	Gourd.
6413.	VIGNA CATJANG.	Cowpea.
6414.	GLYCINE HISPIDA.	Soy bean.
	"Plant in May." (<i>Baird.</i>)	
6415.	PHASEOLUS sp.	Bean.
	<i>Black.</i>	
6416.	GLYCINE HISPIDA.	Soy bean.
	<i>Black.</i>	
6417.	PHASEOLUS MUNGO-RADIATUS (?).	Gram.
6418.	PHASEOLUS MUNGO-RADIATUS (?).	Gram.
6419.	CHRYSANTHEMUM CARINATUM.	
	"Very good greens for dressing with salad oil are prepared from this." (<i>Baird.</i>)	
6420.	SESAMUM INDICUM.	Sesame.
	"An oil is extracted from the seeds which is useful for oiling furniture, etc." (<i>Baird.</i>)	
6421.	IMPATIENS BALSAMINA.	Balsam.
6422.	CELOSIA CRISTATA.	Cockscomb.
6423.	ZINNIA ELEGANS.	Zinnia.
6424.	TAGETES sp.	Marigold.

6425 to 6428.

From Stockholm, Sweden. Received through Messrs. Lathrop and Fairchild (Nos. 419, 420, 422, 423) from Lindahls Fröhandel, May 6, 1901.

A collection of vegetable seeds as follows:

6425. CUCUMIS SATIVUS. Cucumber.

Stockholm's Torg. "The most popular cucumber in Sweden, suitable for planting in Alaska. It is a white, very hardy variety, though said to be inferior to green sorts." (*Fairchild.*)

6426. CUCUMIS MELO. Muskmelon.

Stockholm's Torg. "The best Swedish market variety of cantaloupe. It is here cultivated under glass, and the melons are sold for 2 to 4 kroner, or 50 cents to \$1 apiece." (*Fairchild.*)

6425 to 6428—Continued.

6427. BRASSICA OLERACEA.

Cabbage.

Stockholm's Torg. "A native variety of Swedish cabbage, said to be a very early maturing sort. For planting in Alaska." (*Fairchild.*)

6428. PISUM SATIVUM.

Pea.

Stensärter äkta. "An early ripening Swedish pea, suitable for Alaska and other northern localities." (*Fairchild.*)

6429. VITIS VINIFERA.

Corinth.

From Panariti, Greece. Received through Mr. D. G. Fairchild (No. 575, March 6, 1901), May 9, 1901.

"The variety of grape producing the *currants* or *corinths* of commerce. These cuttings were purchased in the village of Panariti, which lies among the mountains back of Xyloncastron. This village is noted for producing some of the finest corinths in Greece. It is the custom in Greece to plant very long cuttings in the rocky soil, digging down even into the bed rock, upon which the base of the cutting is allowed to rest. In Greece the vines are planted about 5 feet apart each way, and are trained wholly without a wire or other trellis. The claim is made that the fruit is so delicate, being, as is well known, an essentially seedless grape, that it requires the dense shade made by the foliage of the low sprawling canes which spring from the low-cut, upright, main trunk of the plant. As the clusters mature, these sprawling canes are lifted from the ground and supported on short stakes to prevent the grapes from actually lying on the ground. After the petals have dropped from the flowers, i. e., when the fruit is well 'set,' the vines are ringed or girdled. This girdling is done on the main trunk of the vine, a thin quarter-inch-wide ring of bark being removed. This ringing is said to be essential to the production of a large berry. It is the belief that the berries from vines not ringed are richer in sugar, not so filled with juices, and keep better than those from ringed vines. The climate and soil in which the corinth will thrive are various. Necessary requisites are a long summer with good insolation and a not too high temperature, 95° F. being looked on as a very high temperature in the regions where these plants are cultivated. It is a popular belief that the corinth degenerates rapidly on being introduced into foreign countries, and that it even becomes a seed-bearing grape. I can not find that this belief is supported by sufficient evidence. Samples of corinths grown in Australia show that at least the plant does not produce seed there and does produce a utilizable product, which, however, is inferior in size and flavor to good Greece-grown specimens. The small size may be caused by a neglect to ring or a failure to perform this important process at the proper time, i. e., just after the fruit sets. This variety is exceedingly subject to the downy mildew (*Plasmopara viticola*), and the fields of Greece were ravaged by a frightful epidemic of this disease last year. The immediate locality from which these cuttings came was spared." (*Fairchild.*)

6430. PHASEOLUS VIRIDISSIMUS.

Gram.

From Athens, Greece. Received through Mr. D. G. Fairchild (No. 571), May 9, 1901.

"One of the smallest and most delicate beans in the world. The beans are not much larger than grains of rice and of a deep green color. They are said to be most delicious when cooked alone or with rice in the national Greek dish called *Pilaff*. Their culture in Greece is a restricted one and the beans are considered a great delicacy. This is a variety which should receive a thorough distribution, as it is one worthy of trial throughout the south. I am indebted to Prof. Th. de Heldreich, of Athens University, for calling my attention to this species of which he has made a special study. Probably a variety of the *gram* of India (*Phaseolus mungo*)." (*Fairchild.*)

6431. VIGNA CATJANG.

Cowpea.

From Athens, Greece. Received through Mr. D. G. Fairchild (No. 572, March 7, 1901), May 19, 1901.

"This legume is highly prized by the Greeks, who use it as we do the ordinary bean. (*Fairchild.*)

6432. BRASSICA OLERACEA VAR. BOTRYTIS. Cauliflower.

From Athens, Greece. Received through Mr. D. G. Fairchild (No. 573, March 7, 1901), May 5, 1901.

"An early variety of cauliflower which ripens in December in Greece. Its heads attain most unusual proportions and are of quite unusual flavor. It is sown here in August or September." (Fairchild.) (See No. 6434.)

6433. LENS ESCULENTA VAR. MICROSPERMA. Lentil.

From Athens, Greece. Received from Dr. Th. de Heldreich through Mr. D. G. Fairchild (No. 570, March 8, 1901), May 9, 1901.

"A small-seeded, very delicate lentil which was first described by Dr. Th. de Heldreich, the noted explorer of the Grecian flora. (See *Revue des Sciences Naturelles Appliquées 37^e Anné No. 15.5 Août 1890. Note sur une variété nouvelle ou peu Connue de Lentille.*) The variety is cultivated on the islands of Cephalonia and Leucade, two of the Ionian group, and differs essentially from the ordinary *Lens esculenta* Meh., having smaller ellipsoid, even almost spherical, seeds which possess a marginal border very inconspicuous and obtuse. The color is pale yellow and they vary in diameter from three to five millimeters. Their ordinary lentil is lens shaped, circular, and has a sharply defined margin. This *microsperma* is said to be more tender than the ordinary sorts and much more easily cooked, and the flavor is reported to be superior, lacking that pronounced characteristic taste which makes lentils objectionable to some people. Deserves a thorough trial as a vegetable for soups and purées. A calcareous soil is essential to its cultivation. Stalks make a good fodder." (Fairchild.)

6434. BRASSICA OLERACEA VAR. BOTRYTIS. Cauliflower.

From Athens, Greece. Presented by Dr. Th. de Heldreich, of Athens University, through Mr. D. G. Fairchild (No. 574, March 7, 1901). Received May 9, 1901.

"A late variety of Grecian cauliflower which is planted in December and matures in March. Is a monster headed white variety of excellent flavor." (See No. 6432.) (Fairchild.)

6435. VICIA ERVILIA.

From Canné, Crete. Received through Mr. D. G. Fairchild (No. 594, March 16, 1901), May 17, 1901.

Orobus. "A forage plant very largely cultivated in the island of Crete. It is sown like any ordinary vetch, and the seeds are fed to the oxen and cattle. Cav. G. M. Fumis, inspector of agriculture at Canné, can secure this in quantity should it prove of sufficient interest." (Fairchild.)

6436. LATHYRUS OCHRUS.

From Canné, Crete. Received through Mr. D. G. Fairchild, May 17, 1901.

Vicos. "A forage plant cultivated on the island of Crete." (Fairchild.)

6437. VICIA sp.

From Canné, Crete. Received through Mr. D. G. Fairchild, May 17, 1901.

Yares or Gesu. "A forage plant cultivated on the island of Crete." (Fairchild.)

6438. PHOENIX DACTYLIFERA. Date.

From Alexandria, Egypt. Received through Mr. D. G. Fairchild (No. 582, March 30, 1901), May 11, 1901.

Hayani. "This is the earliest sort grown in the Delta region of the Nile and one of the best-known kinds there. It is a red table date, becoming black when ripe; 2 to 2½ inches long; cylindrical. It ripens in September or October. Not used as a drying date. It sells in the season for 2 piasters Turkish (10 cents) per oke (3 pounds). Matures its fruit all at once." (Fairchild.)

6439. PHOENIX DACTYLIFERA.**Date.**

From Alexandria, Egypt. Received through Mr. D. G. Fairchild (No. 583, March 30, 1901), May 11, 1901.

Zaghlul. "A variety from the Nile Delta region. Fruits of this sort are very large, often 3 inches long. They are eaten by the Arabs when red in color and still unripe. They are table dates, but are not prized as highly by Europeans as by the Arabs, who pay a high price for them. It is a variety which hangs on late in the season." (*Fairchild.*)

6440. PHOENIX DACTYLIFERA.**Date.**

From Alexandria, Egypt. Received through Mr. D. G. Fairchild (No. 584, March 30, 1901), May 11, 1901.

Bint Aisha. "The best variety of table date in lower Egypt, at least it is so considered by many Europeans. It is not a keeping date, being so sweet and sticky that when ripe it must be eaten with a fork. A short, black, small (1½ inches long) date, ripening in December. Skin separates very easily from the flesh. Sells for 10 to 15 cents for three pounds. Stem of mature palm very slender." (*Fairchild.*)

6441. PHOENIX DACTYLIFERA.**Date.**

From Alexandria, Egypt. Received through Mr. D. G. Fairchild (No. 585, March 30, 1901), May 11, 1901.

Samani. "A variety of Delta date; large, yellow, 2 to 2½ inches long, with a thick skin; ripening in November. It is used in making preserves, which are manufactured especially well by a Mr. Tambaco, of Alexandria, who puts them in tin cans for export after they have been stewed in sugar. They must be peeled before canning, as the skin is tough. Thought of very highly by many Europeans as a sweet characteristic preserve. Is also canned with little sugar, as Americans can plums." (*Fairchild.*)

6442. PHOENIX DACTYLIFERA.**Date.**

From Alexandria, Egypt. Received through Mr. D. G. Fairchild (No. 586, March 30, 1901), May 11, 1901.

Dakar Majahel. "A male variety which is used in the Delta for fertilizing purposes. All the varieties, of which there are at least eight in the region of Ramley alone, are fertilized with the pollen of this *Dakar Majahel*. It is claimed to be the only sort that can be used on all these eight varieties." (*Fairchild.*)

6443. ALBIZZIA LEBBEK**Lebbek.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 611, April 18, 1901), May 17, 1901.

"A much used shade tree about Cairo. Owing to the inroads of a borer, however, this species is being gradually replaced in Egypt by other forms such as *Ficus nitida*." (*Fairchild.*)

6444. KIGELIA PINNATA (?)**Sausage tree.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 612, April 18, 1901), May 17, 1901.

"This sausage tree is not only a very curious species, bearing its flowers and fruit on long pendant pedicels, but it is a foliage and landscape tree of great merit, worthy of introduction into the parks of southern Florida. Its foliage is exceedingly hard and harsh and very brittle and its heavy sausage-shaped fruits are so heavy as to be dangerous when they fall from the tree. In the Ezbekieh Gardens in Cairo a beautiful specimen of this tree is to be seen." (*Fairchild.*)

6445. PHOENIX DACTYLIFERA.**Date.**

From Charkia, Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 606), May 17, 1901.

Amri (fruit bought on the market). "This sort is known as the best drying date in Egypt. It is in its prime in November but keeps until May or June. A large,

red date with a dry, though not unpleasant taste. Some of the specimens are two inches long. Skin rather tough and in most respects inferior to Algerian varieties. These seeds are from trees probably pollinated by some other variety, so they may not yield true *Amri* seedlings." (*Fairchild.*)

6446. Elettaria cardamomum.**Cardamom.**

From Heneratgoda, Ceylon. Received from J. P. William & Bros., May 17, 1901.

Malabar. "In planting cardamoms, nursery beds should be prepared about 3 feet wide and 6 feet long; if the soil is poor, cow-dung manure or vegetable mold should be mixed with it (half soil and half manure). Sow the seed, covering it lightly with soil, give the young plants shade, and water them regularly once every evening. Seeds will germinate in from six to eight weeks or possibly not for twelve weeks. When the seedlings are 4 to 6 inches high they should be removed to another bed and planted about 6 to 8 inches apart. When they attain 1 to 2 feet high they are ready to plant in the field about 6 to 12 feet apart, according to the nature of the soil, and should be planted in rainy weather. In planting, the bulb of the plant only should be covered and not the stem; in poor soils, holes are necessary about 1 foot deep and 1½ feet wide which are filled with surface soil, mixed with cow-dung manure or vegetable mold. Care should be taken to keep the nursery thoroughly free from weeds." (*William.*)

6447. Erythroxylon coca.**Coca.**

From Heneratgoda, Ceylon. Received through J. P. William & Bros., May 17, 1901.

Huanuco. "This plant is a native of tropical South America; it thrives from the sea level up to 5,000 feet and over. The large leaved *Huanuco* variety is especially suited to elevations from 2,000 feet and upward." (*William.*)

6448. Croton tiglium.**Croton oil tree.**

From Heneratgoda, Ceylon. Received through J. P. William & Bros., May 17, 1901.

"This tree grows even in the poorest soil or abandoned coffee plantations from the sea level up to 3,000 feet and over. Once a week a coolie shakes the tree and picks up from the ground what pods have fallen off, then drops the pods in the sun, shells them, and gives another drying, which is all that is required. A net profit of about 1 shilling a tree per annum has been realized from full-grown trees." (*William.*)

6449. Santalum album.**Sandalwood.**

From Heneratgoda, Ceylon. Received through J. P. William & Bros., May 17, 1901.

"This tree yields the sandalwood of commerce. The same tree produces both the white and yellow sandalwood, the last being the inner part of the tree and very hard and fragrant, especially near the roots. The tree grows from sea level up to 5,000 feet on red and stony soils, and among rocks where the soil is good. The principal item of forest revenue in Mysore is sandalwood. The export to Europe and other countries is yearly increasing." (*William.*)

6450. Aleurites triloba.**Candle nut.**

From Heneratgoda, Ceylon. Received through J. P. William & Bros., May 17, 1901.

"Oil from the large seeds of this tree is much used for lamps under the name of 'Kekuna' oil; also in painting as a drying oil. In the manufacture of soap it replaces cocoanut oil at Othahiti. The cultivation is easy, the culture being possible from the sea level up to 2,000 feet altitude." (*William.*)

6451. Artocarpus integrifolia.**Honey Jack.**

From Heneratgoda, Ceylon. Received through J. P. William & Bros., May 17, 1901.

"The fruits of this tree, including the seeds, are used as food in various ways, and are highly esteemed by the natives. The fruits weigh as much as 100 pounds. The

timber is largely used for all kinds of furniture and building purposes. It is also largely exported to Europe. A full-grown old tree is worth £5 and upward. This is one of the best shade trees for coffee, cocoa, and cardamons, and from the sea level up to 2,000 feet its fallen leaves enrich the soil. The demand for jackwood timber is yearly increasing, as well as the price. Leaves are excellent fodder for cattle, goats, and sheep." (*William.*)

6452. SAPINDUS TRIFOLIATUS.

From Heneratgoda, Ceylon. Received through J. P. William & Bros., May 17, 1901.

6453 to 6460. ERIOBOTRYA JAPONICA.

Loquat.

From Mustapha Supérieur, near Algiers, Algeria. Presented by Rev. Ewyn Arkwright, from Villa Thémely, through W. T. Swingle. Scions obtained in June, 1900. Grafted trees shipped April 13, 1901; received May 18, 1901.

"This valuable collection of loquats comprises most of the large sorts which have originated in Algeria, where much attention has been paid recently to this valuable fruit. Single fruits of some of these varieties weighed 59 grams, or something over two ounces. There are differences in the time of ripening as well as in the size and flavor of these varieties." (*Swingle.*)

6453.

Don Carlos.

6457.

Olivier.

6454.

Baronne Hall.

6458.

Scala.

6455.

St. Michel, long.

6459.

St. Michel, round.

6456.

Marcadal.

6460.

Narbonne.

6461 to 6468. FICUS CARICA.

Fig.

From Rouïba, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

"This collection embraces the principal varieties of figs which are grown at Damascus, and was secured by the French consul there on February 14, 1895. They were sent to Dr. L. Trabut, Government Botanist, Algeria, who planted them at Rouïba in March, 1895. The original notes which accompanied the varieties and which, presumably, were prepared by the French consul are given under each of the numbers." (*Swingle.*)

6461.

Kaab el Ghazal. Fruit medium size, white, yellow outside, of the color of honey inside, splitting open when ripe.

6462.

Sultani. Fruit large, yellow outside, red inside, splitting open at maturity. An early variety.

6463.

Mamari (labeled *Mennoni*, probably erroneously). Fruit medium size, yellow outside, red inside, splitting open when ripe. A late variety.

6464.

Malaki blanc. Fruit large, yellow, white outside, red inside; does not split open when ripe.

6461 to 6468—Continued.

6465.

Sultanie. Grows on dry lands. Fruit medium size, yellow outside, white inside, splitting open when ripe.

6466.

Malaki (labeled *Masaki*, probably erroneously). Fruit large, yellow outside, honey colored inside, splitting open when ripe.

6467.

Baalie. Fruit small, green outside, red inside; does not split open when ripe.

6468.

Hamari. This variety is not included in the descriptive list of varieties furnished by the French consul to Dr. Trabut.

6469 to 6471. FICUS CARICA.

Fig

From Kabylia, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

6469.

Abakour amellal (early white). "A fig from Kabylia, a good fig-growing region, said to produce two crops a year, brebas and figs." (*Swingle and Scofield.*)

6470.

Aberkan (black). "A fig from Kabylia, a good fig-growing region, said to produce two crops a year, brebas and figs." (*Swingle and Scofield.*)

6471.

Yousef blanche. "A fig from Kabylia found by General Yousef at time of conquest, 1830-45." (*Swingle and Scofield.*)

6472. FICUS CARICA.

Fig.

From Rouïba, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Figuier de Smyrne. "An unnamed Smyrna fig obtained by Doctor Trabut through the French consul some years ago." (*Swingle and Scofield.*)

6473. FICUS CARICA.

Caprifig.

From Rouïba, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

"A wild caprifig having short flat fruits." (*Scofield.*)

6474. FICUS CARICA.

Caprifig.

From Rouïba, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

"A wild caprifig having long fruits." (*Scofield.*)

6475. FICUS CARICA.

Caprifig.

From Algiers, Algeria. Received through Mr. C. S. Scofield, May 17, 1901.

Hamma. "A very valuable variety growing by a stone quarry above the Jardin d'Essai du Hamma, near Algiers. Bears large quantities of winter-generation caprifigs (*mamme*). It is probably from this tree that the *Blastophaga* was introduced into California in 1899. It bears abundant profichi also." (*Swingle.*)

- 6476. FICUS CARICA. Caprifig.**
 From Algiers, Algeria. Received through Mr. C. S. Scofield, May 17, 1901.
 "Growing at the stone quarry above Jardin d'Essai du Hamma, near Algiers. Did not hold winter fruits well." (*Scofield.*)
- 6477. FICUS CARICA. Caprifig.**
 From Biskra, Algeria. Obtained by Mr. W. T. Swingle, May 15, 1900. Grown one year at Algiers. Received May 17, 1901.
Laudi (?). "Cuttings from tree in a garden in old Biskra." (*Swingle.*)
- 6478. FICUS CARICA. Caprifig.**
 From Chetma oasis, near Biskra, Algeria. Obtained by Mr. W. T. Swingle, May 14, 1900. Grown one year at Algiers. Received May 17, 1901.
Bsikri. "Cuttings from a tree in a garden." (*Swingle.*)
- 6479. FICUS CARICA. Caprifig.**
 From Biskra, Algeria. Obtained by Mr. W. T. Swingle, May 15, 1900. Grown one year at Algiers. Received May 17, 1901.
Bsikri. "Cuttings from a tree in garden in Old Biskra." (*Swingle.*)
- 6480. FICUS CARICA. Fig.**
 From Biskra, Algeria. Obtained by Mr. W. T. Swingle, May 15, 1900. Grown one year at Algiers. Received May 17, 1901.
Choe. "Cuttings from a fig tree growing in the road running south along the west side of Biskra oasis. Probably of no great value." (*Swingle.*)
- 6481. FICUS CARICA. Caprifig.**
 From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.
Hamma. The same as No. 6475.
- 6482. FICUS CARICA. Caprifig.**
 From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.
 Wild fig, with entire leaves from stone quarry above the Jardin d'Essai du Hamma, near Algiers.
- 6483. FICUS CARICA. Caprifig.**
 From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.
 "A variety of caprifig from M. Eymes de Cheffi." (*Swingle and Scofield.*)
- 6484. FICUS CARICA. Caprifig.**
 From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.
Sultani. The same as No. 6462.
- 6485. FICUS CARICA. Caprifig.**
 From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.
Yousouf blanche. The same as No. 6471.

6486. FICUS CARICA.

Caprifig.

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Hamari. The same as No. 6468.

6487. FICUS CARICA.

Caprifig.

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Belamie.

6488. FICUS CARICA.

Caprifig.

From Chetma oasis, near Biskra, Algeria. Obtained by Mr. W. T. Swingle, May 14, 1900. Grown one year at Algiers. Received May 17, 1901.

Booung. "A late sort considered of fourth quality. Cuttings from a tree in a garden." (*Swingle.*)

6489. FICUS CARICA.

Caprifig.

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Figue de l'Archipel (Archipelago fig).

6490. FICUS CARICA.

Caprifig.

From Algiers, Algeria. Obtained by Mr. W. T. Swingle. Received May 17, 1901.

Bourlier. "A variety much prized by the Kabyle fig growers who come 15 miles or more to Reghaia to M. Bourlier's farm to get the fruits to use in caprifying figs." (*Swingle.*)

6491. FICUS CARICA.

Caprifig.

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Malaki noir (labeled *Masaki noir*, probably erroneously). Fruit large, violet-colored without, red within, not splitting open at maturity. A late variety.

6492. IRIS UNGUICULARIS.

Iris.

From Algiers, Algeria. Presented by Rev. Ewyn Arkwright, through Mr. C. S. Scofield. Received May 17, 1901.

Iris stylosa (white sport). "A very handsome white sport of this curious iris (also called *Iris stylosa*), which bears its fruit capsules at or just below the surface of the ground. The flowers have a tube 8 to 12 inches long which serves to support them at the level of the ends of the leaves differing widely from the ordinary species where the tubes are short and the flowers attached to two stems." (*Swingle.*)

6493. FICUS CARICA.

Fig.

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Abakour amclab(?) or *Abacour amclale.*

6494. FICUS SAKOUL.

Fig.

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

6495. FICUS CARICA.**Fig.**

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Abakour aberkan (early black).

6496. FICUS CARICA.**Fig.**

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Yousouf. "A fig from Kabylia, found by General Yousef at the time of the French conquest, 1830-1845." (*Swingle and Scofield.*)

6497. FICUS CARICA.**Fig.**

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Mamari or Menmoni. "An early fig from Damascus obtained by Doctor Trabut through the French consul some years ago." (See No. 6463.) (*Swingle and Scofield.*)

6498. FICUS CARICA.**Fig.**

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Kaab el ghazal. See No. 6461.

6499. FICUS CARICA.**Fig.**

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Aberkan or aberkane. "A fig from Kabylia, a good fig-growing region, said to produce two crops a year, brebas and figs." (*Swingle and Scofield.*)

6500. VITIS VINIFERA.**Grape.**

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Sultanie. "A white grape bearing large bunches of fruit suitable for table use or for making a kind of port or Madeira wine." (*Scofield.*)

6501. VITIS VINIFERA.**Grape.**

From Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist, through Messrs. W. T. Swingle and C. S. Scofield. Received May 17, 1901.

Smyrna seedless raisin.

6502 and 6503.

(Numbers not utilized.)

6504. ACTINIDIA sp.

From Kuling, China. Received through Dr. G. D. Brill (No. 7), May 17, 1901.

"Will grow at an elevation of 3,500 feet and over." (*Brill.*)

6505. VITIS ROMANETI.**Wild grape.**

From Kuling, China. Received through Dr. G. D. Brill (No. 8), May 17, 1901.

"Thorny grape, which bears large clusters of good-sized, black berries." (*Brill.*)

6506.

(Number not utilized.)

6507 to 6646.

From China. Received through Dr. G. D. Brill, May 17, 1901.

A collection of seeds and plants made during an extended trip through China in 1900. The notes regarding the various numbers are copied from letters written during this period, no separate descriptive list of the various introductions having been furnished. Doctor Brill's numbers are given.

6507. PYRUS sp. Pear.

From Ichang. "Small and medium, russet colored around the half near the stem. Rest of skin covered with russet dots. Skin coarse, flesh firm." (No. 10.) (*Brill.*)

6508. PYRUS sp. Pear.

From Ichang. "Medium sized, drum-shaped, skin yellow and dotted." (No. 11.) (*Brill.*)

6509. PYRUS sp. Pear.

From Ichang. (No. 12.)

6510. PYRUS sp. Pear.

From Ichang. (No. 13.)

6511. PYRUS sp. Pear.

From the vicinity of Ichang. (No. 14.)

6512. PYRUS sp. Pear.

From the vicinity of Ichang. (No. 15.)

6513. PYRUS sp. Pear.

From the vicinity of Ichang. (No. 16.) "Fruit medium small, skin white to greenish, fruit flattened-round. Flesh dry, quality poor." (*Brill.*)

6514. PYRUS sp. Pear.

From the vicinity of Ichang. (No. 17.) "A flat pear, reddish in color." (*Brill.*)

6515. PYRUS sp. Pear.

From the vicinity of Ichang. (No. 18.) "Fruit medium small, skin white to greenish, fruit flattened-round. Flesh dry, quality poor." (*Brill.*)

6516. PYRUS sp. Pear.

From the vicinity of Ichang. (No. 19.) "Ripens in September; a longer and larger pear than the Kieffer; of similar shape, but smoother; color, rich golden yellow; quality, good; free from woody tissue; very handsome; often weighs $1\frac{1}{2}$ pounds." (*Brill.*)

6517. PYRUS sp. Pear.

From the vicinity of Ichang. (No. 20.) "Large, but of poor quality; skin brown-russet color, with corky dots the size of sesame seeds; good baked." (*Brill.*)

6518. PYRUS sp. Pear.

From the vicinity of Ichang. (No. 21.) "Very large; cavity at stem deep; coarse flesh." (*Brill.*)

6519. PYRUS sp. Pear.

From the vicinity of Ichang. (No. 22.)

6507 to 6646—Continued.

6520. *PYRUS* sp. Pear.
From the vicinity of Ichang. (No. 23.) "Ripens very early; small-medium; flat; color yellow-green; slightly acid." (*Brill.*)
6521. *PYRUS* sp. Pear.
From the vicinity of Ichang. (No. 24.) "Size large; larger around at stem end than blossom end; very sweet and good; texture fine. Chinese say it is 'cooling.'" (*Brill.*)
6522. *DIOSPYROS KAKI*. Japanese persimmon.
From the vicinity of Ichang. (No. 25.) "Small fruited." (*Brill.*)
6523. *DIOSPYROS KAKI*. Japanese persimmon.
From the vicinity of Ichang. (No. 26.) "Large fruited." (*Brill.*)
6524. *DIOSPYROS KAKI*. Japanese persimmon.
From Wuchang. (No. 27.) "Small, rather pointed, red; flesh firm and of good quality, not astringent." (*Brill.*)
6525. *DIOSPYROS KAKI*. Japanese persimmon.
From Wuchang. (No. 28.) "Large, red persimmon, rather pointed. Similar to No. 6524, only three times the size." (*Brill.*)
6526. *DIOSPYROS KAKI*. Japanese persimmon.
From Wuchang. (No. 29.) "Small, yellow; not as good as the red." (*Brill.*)
6527. *DIOSPYROS KAKI*. Japanese persimmon.
From Wuchang. (No. 30.) "Large, flat, ridged, yellow, slightly astringent; has a crease around its greatest diameter as though a string had been tied around it before it was fully ripe." (*Brill.*)
6528. *PYRUS* sp. Apple.
From Wuchang. (No. 31.) "Each tree has buds of three varieties. A soft mealy apple, resembling a Hyslop crab. Of good size and firm flesh. A variety cultivated for flowers." (*Brill.*)
6529. *PRUNUS CERASUS*. Cherry.
From Wuchang. (No. 32.) "Tree small. Fruit rather small, pointed, yellowish-red. Ripens at end of April. Never allowed to attain full size before being picked." (*Brill.*)
6530. *CASTANEA* sp. Chestnut.
From Hankow. (No. 33.) "Propagated by root cuttings. Large nuts. Tree bears very young, at from 5 to 7 feet." (*Brill.*)
6531. *PRUNUS* sp.
From Ichang. (No. 34.) "Came to me as a peach. Chinese name is for cherry." (*Brill.*)
6532. *PYRUS* sp. Pear.
From the vicinity of Ichang. (No. 35.) "Same as No. 6507." (*Brill.*)
6533. *CASTANEA* sp. Chestnut.
From Ichang. (No. 36.) "Root cuttings of a tree bearing large nuts. Bears early and the tree does not grow large." (*Brill.*)
6534. *PRUNUS ARMENIACA*. Apricot.
From Ichang. (No. 37.) "Large and late." (*Brill.*)

6507 to 6646—Continued.

6535.

(Number not utilized.)

6536. PRUNUS sp. Plum.

From Sai Tseo, above Hankow. (No. 39.) "Pointed, reddish-yellow, sweet; flesh clings to the stone." (*Brill.*)

6537. PRUNUS sp. Plum.

From Ichang. (No. 40.)

6538. PRUNUS sp. Plum.

From Ichang. (No. 41.)

6539. PRUNUS sp. Plum.

From Ichang. (No. 42.)

6540. PRUNUS sp. Plum.

From Sai Tseo, above Hankow. (No. 43.)

6541. AMYGDALUS PERSICA. Peach.

From Sai Tseo, above Hankow. (No. 44.) "Flat, freestone, ripens in May." (*Brill.*)

6542. AMYGDALUS PERSICA. Peach.

From near Sai Tseo, above Hankow. (No. 45.) "White, fine fleshed, flat, freestone, ripening the middle of May." (*Brill.*)

6543. AMYGDALUS PERSICA. Peach.

From Sai Tseo. (No. 46.) "Long, rather pointed, red-fleshed, freestone." (*Brill.*)

6544. AMYGDALUS PERSICA. Peach.

From Sai Tseo. (No. 47.) "Medium size, flat, freestone, ripening in May." (*Brill.*)

6545. AMYGDALUS PERSICA. Peach.

From Sai Tseo. (No. 48.) "Flat, freestone, quality very good. Ripens in June." (*Brill.*)

6546. PRUNUS sp. Plum.

From Sai Tseo. (No. 49.) "Large, round, with deep suture down one side. Flesh, red. Ripens in August." (*Brill.*)

6547. AMYGDALUS PERSICA. Peach.

From Ichang. (No. 50.) "White peach." (*Brill.*)

6548. AMYGDALUS PERSICA. Peach.

From the mountains above Ichang. (No. 50a.)

6549. ZIZYPHUS JUJUBA. Chinese date.

From Ichang. (No. 50a.) "Much used for preserves by drying in sugar or sirup. Also eaten fresh." (*Brill.*)

6550. VICIA FABA. Broad bean.

From Hankow. (No. 51.) "Large flat bean, a few in a pod. Used for food green and dry. Planted in October or December." (*Brill.*)

6507 to 6646—Continued.

- 6551.** PISUM SATIVUM. Pea.
From the valley of Hankow. (No. 52.) "Much resembles the Canadian field pea. Tender ends of shoots, pods, and the peas, green and dry, are used for food." (*Brill.*)
- 6552.** PISUM SATIVUM. Pea.
From the mountains near Hankow. (No. 53.)
- 6553.** VICIA sp. (?) Pea.
From Ichang. (No. 54.) "Grown 1,000 to 3,000 feet above river. Taller than the others. Much used as food by boat 'trackers.'" (*Brill.*)
- 6554.** VICIA sp. (?)
From Chiu Niu, near Hankow. (No. 55.) "Used as a green manure for rice fields. Sown in October to November and plowed under in April. Larger than No. 6555." (*Brill.*)
- 6555.** VICIA CRACCA. Vetch.
From Wusuel. (No. 56.) "Used especially as a green manure for rice fields. Sown in September to November. Often among the late rice, beans, or buckwheat." (*Brill.*)
- 6556.** GLYCINE HISPIDA. Soy bean.
(No. 57.) "Much used for bean curd and oil all over central China. Probably as many of these are grown as all the other varieties together." (*Brill.*)
- 6557.** VIGNA CATJANG. Cowpea.
From Hankow. (No. 58.) "Is ground with water into a paste and pressed into long strings, which are dried and boiled in water." (*Brill.*)
- 6558.** GLYCINE HISPIDA. Soy bean.
From Hankow. (No. 59.) "Used for bean curd and oil. Considered better than No. 6556." (*Brill.*)
- 6559.** GLYCINE HISPIDA. Soy bean.
From beyond Chiu Niu. (No. 60.) "Planted between the rows of rice and ripening late in the fall, after the rice is harvested. Used the same as No. 6556, only quality poorer. Will grow on very wet land." (*Brill.*)
- 6560.** GLYCINE HISPIDA. Soy bean.
From beyond Chiu Niu. (No. 61.) "Planted and used the same as No. 6559. Planted in July or August." (*Brill.*)
- 6561.** GLYCINE HISPIDA. Soy bean.
From Hankow. (No. 62.) "A black bean, used for same purposes as Nos. 6559 and 6560, but of better quality. Not planted with other crops." (*Brill.*)
- 6562.** PHASEOLUS MUNGO-RADIATUS. Gram.
(No. 63.) "Planted on the banks of rice fields and in odd corners. Will grow in hard-baked soils. Used in the same way as No. 6557." (*Brill.*)
- 6563.** VIGNA CATJANG. Cowpea.
(No. 64.) "Grows to a height of four feet or more. Used for food." (*Brill.*)
- 6564.** PHASEOLUS MUNGO. Gram.
From Ichang. (No. 65.) "Grows on the mountains between the Indian corn. Largely takes the place of rice; is also cooked with vegetables before fully dry." (*Brill.*)

6507 to 6646—Continued.

- 6565.** PHASEOLUS VULGARIS. **Bean.**
From Ichang. (No. 66.) "A climber. Used as a snap bean." (*Brill.*)
- 6566.** VIGNA CATJANG. **Cowpea.**
From Hankow. (No. 67.) "These peas are often ground to a paste with water and fried in a hot kettle, forming a huge pancake." (*Brill.*)
- 6567.** VIGNA CATJANG. **Cowpea.**
From Hankow. (No. 68.) "Long-podded bush bean. Used almost entirely green as a snap bean. It is planted early in the spring in cold frames after being soaked in water, then transplanted." (*Brill.*)
- 6568.** VIGNA CATJANG. **Cowpea.**
From Hankow. (No. 69.) "Same as No. 6567, except a climber, trained on a trellis." (*Brill.*)
- 6569.** DOLICHOS LABLAB. **Bean.**
(No. 70.) "A great trailer. Usually planted above banks or fences. A profuse bearer of flat pods, which later are used green as snap beans. Late variety." (*Brill.*)
- 6570.** CANAVALIA ENSIFORMIS. **Jack bean.**
(No. 71.) "A great climber; strong grower. Often planted around the houses for shade. Pods over 1 foot long, containing about nine large beans. Pods are cut up and eaten green, and also salted. Beans are very good, but expensive." (*Brill.*)
- 6571.** ASTRAGALUS SINICUS. **Genge clover.**
(No. 72.) "A cloverlike plant, sown from September to December. Plowed under in April as a green manure for rice. Grows to a height of 1½ to 2½ feet. Has many tubercles on the roots and will grow in very wet land. Reseeds itself on the overflowed lands." (*Brill.*)
- 6572.** GYMNOCLADUS CHINENSIS. **Soap tree.**
(No. 73.) "Large tree. The pods are pounded to a paste and used as a soap. They have the smell of rancid butter. Seeds are used as a dye." (*Brill.*)
- 6573.** ZEA MAYS. **Corn.**
From the mountains above Ichang. (No. 74.) "Has been grown there for 200 years or more. Originally from America. Resists drought well. Much used as food." (*Brill.*)
- 6574.** ZEA MAYS. **Corn.**
From the mountains above Ichang. (No. 75.) (Same as No. 6573, except in color.)
- 6575.** ORYZA SATIVA. **Rice.**
From Hankow. (No. 76.) "A glutinous rice, very much like No. 6577. It is planted a little earlier and will ripen in two weeks less time." (*Brill.*)
- 6576.** ORYZA SATIVA. **Rice.**
(No. 77.) "A glutinous rice sown in May and harvested in November. Very productive." (*Brill.*)
- 6577.** ORYZA SATIVA. **Rice.**
(No. 78.) "A glutinous rice with red or brown hulls, which are quite easily separated from the kernels. Rather late in ripening." (*Brill.*)

6507 to 6646—Continued.

- 6578.** ORYZA SATIVA. **Rice.**
 (No. 79.) "A glutinous rice, ripening a little earlier than No. 6584. The hull is very thin and gives a large proportion of hulled rice. Hulls very long. Mostly used for making candy." (*Brill.*)
- 6579.** ORYZA SATIVA. **Rice.**
 (No. 80.) "A hard rice that does not swell a great deal in cooking. Sown in May, transplanted in June, harvested in September. Hulls thin, giving a large per cent of clean rice." (*Brill.*)
- 6580.** ORYZA SATIVA. **Rice.**
 (No. 81.) "A hard rice with long awns and brown, thick chaff." (*Brill.*)
- 6581.** ORYZA SATIVA. **Rice.**
 (No. 82.) "A round, short-grained, glutinous rice, with small, compact heads. Ripens a week earlier than No. 6578, or about the middle of July." (*Brill.*)
- 6582.** ORYZA SATIVA. **Rice.**
 (No. 83.) "Straw large and coarse. Hull quite thick. Best rice of this section." (*Brill.*)
- 6583.** ORYZA SATIVA. **Rice.**
 (No. 84.) "A hard rice; straw short and small, but tough; hulls thin; yields well." (*Brill.*)
- 6584.** ORYZA SATIVA. **Rice.**
 (No. 85.) "Grows 3½ to 4 feet high. The seed is sown in March and it is ripe in July. Field is then flooded after harvest and suckers start out which produce a smaller crop in September. Yields heavy crop of good rice. More of this is sown than of any other variety around Hankow." (*Brill.*)
- 6585.** ORYZA SATIVA. **Rice.**
 From Ichang. (No. 86.) "A brown-hulled rice." (*Brill.*)
- 6586.** ORYZA SATIVA. **Rice.**
 From Ichang. (No. 87.) "It is said to ripen three months from sowing the seed." (*Brill.*)
- 6587.** ORYZA SATIVA. **Rice.**
 From Ichang. (No. 88.)
- 6588.** ORYZA SATIVA. **Rice.**
 From Shasi. (No. 89.) "A glutinous rice sown on the overflowed lands. The plants are said to stand an excess of water and to keep their heads above it better than any other variety." (*Brill.*)
- 6589.** CHAETOCHELOA ITALICA. **Millet.**
 From Sai Tseo. (No. 90.) "Much used by the people as porridge in place of rice in the north of the province." (*Brill.*)
- 6590.** CHAETOCHELOA ITALICA. **Millet.**
 From Sai Tseo. (No. 91.) "Used in same way as No. 6589." (*Brill.*)
- 6591.** CHAETOCHELOA ITALICA. **Millet.**
 From Ichang. (No. 92.) "Grown in the mountains and much used as a substitute for rice." (*Brill.*)

6507 to 6646—Continued.

6592. CHAETOCHELOA ITALICA. **Millet.**
From Ichang. (No. 93.) "Has the same use as No. 6591, but is said to be of a different variety." (*Brill.*)
6593. CHAETOCHELOA ITALICA. **Millet.**
From Ichang. (No. 94.) "Said to be more glutinous than Nos. 6591 and 6592." (*Brill.*)
6594. CHAETOCHELOA ITALICA. **Millet.**
From the plains above Hankow. (No. 95.)
6595. SESAMUM INDICUM. **Sesame.**
From Hankow. (No. 96.) "Black variety, much used for oil; seeds also used in candy and cake; oil is considered the best of all for cooking." (*Brill.*)
6596. SESAMUM INDICUM. **Sesame.**
(No. 97.) "White variety, used the same as No. 6595, but grown in much larger quantities. The oil is considered better than any other vegetable oil for cooking. Exported to France and Germany in large quantities." (*Brill.*)
6597. HORDEUM VULGARE. **Barley.**
From Chiu Niu, near Hankow. (No. 98.) "Boiled with rice or boiled and eaten in place of rice." (*Brill.*)
6598. TRITICUM VULGARE. **Wheat.**
From near Hankow. (No. 99.) "Fish-headed wheat, with small, compact heads." (*Brill.*)
6599. TRITICUM VULGARE. **Wheat.**
From near Hankow. (No. 100.) "Long-headed wheat." (*Brill.*)
6600. TRITICUM VULGARE. **Wheat.**
(No. 101.) "Variety most sown on the plains after the summer overflow of the river." (*Brill.*)
6601. HORDEUM VULGARE. **Barley.**
From below Hankow. (No. 102.) "Largely used here for feeding horses." (*Brill.*)
6602. FAGOPYRUM ESCULENTUM. **Buckwheat.**
(No. 103.) "Sown in August or September. Said to be different from No. 6603. Called sweet buckwheat." (*Brill.*)
6603. FAGOPYRUM ESCULENTUM. **Buckwheat.**
(No. 104.) "Sown early in the spring and called bitter buckwheat." (*Brill.*)
6604. ANDROPOGON SORGHUM. **Sorghum.**
From Hankow. (No. 105.) "Grows to a height of 12 feet or more. Planted on land too dry for rice. Used for distilling, and refuse is used for pigs and cattle. In some places used for human food." (*Brill.*)
6605. RAPHANUS SATIVUS. **Radish.**
From Hankow. (No. 106.) "Sown from September to November. Grows all winter." (*Brill.*)

6507 to 6646—Continued.

6606. ABUTILON AVICENNAE.

Chinese hemp.

From Hankow. (No. 107.) "Much used for the manufacture of rope and coarse bagging. The plant is cut, tied in small bundles, and packed in mud or water for about five days. The bark is then stripped off by hand and washed, and it is then ready for market." (*Brill.*)

6607. BRASSICA JUNCEA.

Chinese mustard.

From Wuchang. (No. 108.) "This seed is planted in August or September. Young plants are then transplanted to rows about 1 to 3 feet apart. The best is grown about Wuchang. Flower stalks are cut all winter continuously. They are eaten much like asparagus. Color, purple, but said to change to green after a season or two if the seed is planted in any other place." (*Brill.*)

6608. HOVENIA DULCIS.

Raisin tree.

From Hupeh Province. (No. 109.) "Large, handsome tree. The thickened, sweet seed stems are sold on the street, and the Chinese eat them after feasts of wine, saying they prevent the wine from making them drunk." (*Brill.*)

6609. PTEROCARYA STENOPTERA.

Wing nut.

From Hankow. (No. 100a.) "Large, quick-growing, soft-wooded tree, growing along streams. Planted on the Hankow Bend." (*Brill.*)

6610. BRASSICA PE-TSAI.

Chinese cabbage.

From Hsiang Yang. (No. 102a.) "Best cabbage of central China. Shipped down the river Han to Hankow in large quantities. Its successful growth appears limited to certain localities. Seeds sown late in April, then transplanted. A month before maturity a rice straw is often tied around the head to make it more compact." (*Brill.*)

6611. BRASSICA PE-TSAI.

Chinese cabbage.

From Hsiang Yang. (No. 103a.) "Same as No. 6610, only a larger variety." (*Brill.*)

6612. RAPHANUS SATIVUS.

Radish.

From Sui Chow. (No. 104a.) "Round, globe shaped, smooth, fine red color. Called a turnip by the Chinese and cooked in the same way." (*Brill.*)

6613. BRASSICA JUNCEA.

Chinese mustard.

From Sui Chow. (No. 105a.) "Top and root are salted much the same as sauerkraut and sold in all large towns." (*Brill.*)

6614. BRASSICA JUNCEA.

Chinese mustard.

(No. 106a.) "Produces very large leaves which are wilted in the sun and then pickled with salt. May be valuable as a food for sheep." (*Brill.*)

6615. DAUCUS CAROTA.

Carrot.

(No. 107a.) "Medium long, yellow. Sown in autumn and generally dug all winter." (*Brill.*)

6616. SPINACIA OLERACEA.

Spinach.

(No. 108a.) "Much used all winter." (*Brill.*)

6617. CHRYSANTHEMUM CORONARIUM.

Edible chrysanthemum.

(No. 109a.) "A plant much used, cooked with other vegetables." (*Brill.*)

6618. LACTUCA SATIVA.

Lettuce.

(No. 110.) "Stalk becomes much thickened and succulent, and is cooked as a vegetable. Leaves used only by very poor people. Foreign varieties are used around the ports." (*Brill.*)

6507 to 6646—Continued.

- 6619.** ARTEMISIA sp. Squash.
(No. 111.) "Used as greens, cooked." (*Brill.*)
- 6620.** CUCURBITA PEPO. Squash.
(No. 112.) "Long, green skinned, smooth. Flesh very white. Often weighs 65 pounds or more. Shipped to Hankow in large quantities." (*Brill.*)
- 6621.** CUCURBITA PEPO. Squash.
(No. 113.) "Thick, fine skinned, dark yellow, very irregular in shape. Flesh thick, firm, and yellow." (*Brill.*)
- 6622.** BRASSICA JUNCEA. Chinese mustard.
(No. 114.) "A large mustard that might have value for sheep food." (*Brill.*)
- 6623.** INDIGOFERA TINCTORIA. Indigo.
(No. 115.)
- 6624.** POLYGONUM sp.
(No. 116.) "Very dark color." (*Brill.*)
- 6625.** SAPIUM SEBIFERUM. Tallow tree.
From Hankow. (No. 117.) "Seeds used for wax. Coating around the seed much harder than that in it. Tree has hard white wood, even grained. Used for carving, incense, etc. Much of the tallow is exported from Hankow." (*Brill.*)
- 6626.** AVENA sp. Wild oat.
(No. 118.) "Grows wild or mixed with barley. Has long awns." (*Brill.*)
- 6627.** RUBUS sp. Raspberry.
From Yang Tse Gorges, above Kuei Fu. (No. 119.) "Strong grower, prolific bearer. Fruit red, of good size and good flavor." (*Brill.*)
- 6628.** RUBUS sp. Raspberry.
From near Kuling, near Kukiang. (No. 120.) "Said to be good as to size and quality." (*Brill.*)
- 6629.** AMYGDALUS PERSICA. Peach.
(No. 121.) "Stones of several varieties." (*Brill.*)
- 6630.** PRUNUS ARMENIACA. Apricot.
(No. 122.) "Stones of several varieties." (*Brill.*)
- 6631.** PRUNUS CERASUS (?). Cherry.
(No. 123.)
- 6632.** CANNA sp. Canna.
From Wau Hsien. (No. 124.) "Growing wild." (*Brill.*)
- 6633.** THEA VIRIDIS. Tea.
From Yang To Seng. (No. 125.) "Seed from one of the best tea districts of China." (*Brill.*)
- 6634.** CASTANEA sp. Chestnut.
(No. 126.) "Seed mixed, large and medium." (*Brill.*)

6507 to 6646—Continued.

- 6635.** AMYGDALUS PERSICA. Peach.
From mountains near Ichang. (No. 127.) "Flowers late, fruit ripens in September. Freestone. Fruit small and quite hairy." (*Brill.*)
- 6636.** CITRUS AURANTIUM. Orange.
(No. 128.) "Three varieties of orange seed." (*Brill.*)
- 6637.** BOEHMERIA NIVEA. Ramie.
From near Wuchang. (No. 129.)
- 6638.** BOEHMERIA NIVEA. Ramie.
From Hunan. (No. 130.) "These roots are from some brought from the best plantations of Hunan for the Viceroy Chang Chi Teng. Hunan is supposed to produce some of the best fiber of China." (*Brill.*)
- 6639.** [Unidentified plant.]
From Loo Ho Ko, on Han River. (No. 131.) "Is cooked much as white potatoes are. Grown from pieces of the root." (*Brill.*)
- 6640.** CITRUS AURANTIUM. Orange.
From Ichang. (No. 132.)
- 6641.** CITRUS LIMONUM. Lemon.
From Ichang. (No. 133.) "Very juicy, fragrant, full of seeds, large, round, thick-skinned. Used by Chinese as a medicine." (*Brill.*)
- 6642.** CITRUS NOBILIS. Mandarin orange.
From Wuchang. (No. 134.) "Medium size, loose-skinned orange, slightly sour." (*Brill.*)
- 6643.** CITRUS MEDICA. Citron.
From Wuchang. (No. 135.) "Tight-skinned, round orange." (*Brill.*)
- 6644.** CITRUS NOBILIS. Mandarin orange.
From Wuchang. (No. 136.) "Large, loose-skinned." (*Brill.*)
- 6645.** CITRUS DECUMANA. Pomelo.
From Ichang. (No. 137.) "Small, white-fleshed."
- 6646.** CITRUS DECUMANA. Pomelo.
From Ichang. (No. 138.) "Small, red-fleshed. Considered the best." (*Brill.*)

6647. CITRUS AURANTIUM. Orange.

From Corfu, Greece. Presented by Mr. Antonio Colla, through Mr. D. G. Fairchild (No. 533, February 12, 1901). Received May 21, 1901.

"A striking variety of orange which is extremely light in color, and according to Mr. Colla is called in Corfu '*Arancio con pello bianco.*' May be of value for breeders." (*Fairchild.*)

6648. FICUS CARICA. Fig.

From Corfu, Greece. Presented by Mr. Antonio Colla through Mr. D. G. Fairchild (No. 536, February 12, 1901). Received May 21, 1901.

"A variety of fig ripening its fruits in February when no leaves are on the tree. The fig is small, but very sweet, and it is very much relished by Europeans in Corfu. It is not a drying fig. Known in Corfu as '*Fico di Febbraio.*'" (*Fairchild.*)

6649. OLEA EUROPAEA.**Olive.**

From Corfu, Greece. Presented by Mr. Antonio Colla through Mr. D. G. Fairchild (No. 535, February 12, 1901). Received May 21, 1901.

"A variety of olive which is said to ripen its fruit in July instead of in October and at the same time to be a heavier yielder than the ordinary sorts grown in Corfu. Called '*Olivo di Estate*,' and I am assured by Mr. Colla, of Corfu, that this variety is known only in a small part of the island of Corfu." (*Fairchild.*)

6650. JUGLANS REGIA.**Walnut.**

From Corfu, Greece. Presented by Mr. Antonio Colla through Mr. D. G. Fairchild (No. 531, February 12, 1901). Received May 21, 1901.

"A very large variety of walnut grown at Paleocastritza, near the town of Corfu. The nut is of quite unusual proportions and the shell is said to be of only medium thickness. The thin skin of the kernel is also said to be less bitter than that of ordinary varieties." (*Fairchild.*)

6651. JUGLANS REGIA.**Walnut.**

From Corfu, Greece. Presented by Mr. Antonio Colla through Mr. D. G. Fairchild (No. 532, February 12, 1901). Received May 21, 1901.

"A variety of walnut having a shell so thin that it splits open of itself as the exocarp or outer covering dries, exposing the kernel within. An interesting house nut, but probably of little commercial value. May, however, be excellent for breeding purposes." (*Fairchild.*)

6652. JUGLANS REGIA.**Walnut.**

From Corfu, Greece. Received May 21, 1901.

(No data.)

6653. LINUM USITATISSIMUM.**Flax.**

From Kafr-el-Zayat, Egypt. Received through Mr. D. G. Fairchild (No. 607, April 18, 1901), May 21, 1901.

"The native Egyptian flax which, according to Mr. Bonaparte's experiments near Cairo, is much inferior to the Belgian imported variety. I can not say positively that this Egyptian variety used by Bonaparte was identical with this seed sent. The stems are long, not blanched near the ground, but of quite miniature and slender size compared with that from Belgian seed. For breeders only." (*Fairchild.*)

6654. CITRUS LIMONUM.**Lemon.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 608, April 18, 1901), May 21, 1901.

Lemon beledi. "A native Egyptian lemon which is not grafted, but grown from seed. It comes true to seed, or reasonably so at any rate. It is a thin-skinned, very juicy variety and is keenly appreciated in Egypt, although a good Syrian variety is common there. This is valued for its great juiciness and wonderfully prolific character." (*Fairchild.*)

6655. GOSSYPIUM sp.**Cotton.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild, May 21, 1901.

"Samples of a variety said to be growing wild in the Sudan, and also a sample from the Province of Tokar, in the Sudan, grown from seed sent up there from Lower Egypt last year to show the quality of Sudan-grown cotton." (*Fairchild.*)

6656. PYRUS MALUS.**Apple.**

Received through Hunter & Sons, Gosford, New South Wales, May 22, 1901.

Irish Peach.

6657. PAULOWNIA sp.

From China. Received through Dr. G. D. Brill (No. 101), May 17, 1901.

6658. HORDEUM VULGARE.**Barley.**

From the Han River, China. Received through Dr. G. D. Brill (No. 102½), May 17, 1901.

“From up the Han River, where it is used for food in place of rice.” (*Brill.*)

6659. ACTINIDIA sp.

From China. Received through Mr. G. D. Brill, May 17, 1901.

6660. CRYPTOMERIA JAPONICA.

From Japan. Received through Tokyo Seed and Plant Company, Yokohama, May 22, 1901.

6661. DALBERGIA SISSOO.

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 601, April 18, 1901), May 24, 1901.

“A rapidly growing, hard-wooded tree which is easily propagated by root cuttings. It is a pretty ornamental for warm regions, with delicate foliage of light green, and it is looked upon by the gardener near Cairo, Mr. Stamm, as one of the most promising avenue trees in Egypt. Personally I find that its shade-giving properties are too scanty to recommend it for this purpose. It will do well as a park or garden tree, however. It requires plenty of water and warmth.” (*Fairchild.*)

6662. RHAMNUS CALIFORNICA.**Cascara sagrada.**

Presented by Prof. Jos. Burt Davy, Berkeley, Cal. Received May 27, 1901.

The plant from which the drug cascara of commerce is secured.

6663. MAURANDIA BARCLAIANA.

Presented by Prof. Jos. Burt Davy, Berkeley, Cal. Received May 27, 1901.

6664. MADIA SATIVA.

Presented by Prof. Jos. Burt Davy, Berkeley, Cal. Received May 27, 1901.

6665. ELAEAGNUS LONGIPES.**Goumi.**

Presented by Prof. Jos. Burt Davy, Berkeley, Cal. Received May 27, 1901.

6666. ACACIA RETINODES (?).

Presented by Prof. Jos. Burt Davy, Berkeley, Cal. Received May 27, 1901.

In Kew Index synonymous with *A. neriifolia*.

6667. EUPHORBIA LATHYRIS.

Presented by Prof. Jos. Burt Davy, Berkeley, Cal. Received May 27, 1901.

6668. STERCVLIA DIVERSIFOLIA.

Presented by Prof. Jos. Burt Davy, Berkeley, Cal. Received May 27, 1901.

6669. VICIA FABA.**Broad bean.**

Presented by Prof. Jos. Burt Davy, Berkeley, Cal. Received May 27, 1901.

6670. VICIA GIGANTEA.**Vetch.**

Presented by Prof. Jos. Burt Davy, Berkeley, Cal. Received May 27, 1901.

6671. CANNABIS INDICA.**Hemp.**

From Royal Botannical Garden, Sibpur, Calcutta, India. Received May 31, 1901.

6672. LARIX LEPTOLEPIS.**Japanese larch.**

From Japan. Received through Vilmorin Andrieux & Co., Paris, France, June 3, 1901.

6673 to 6678. GOSSYPIUM BARBADENSE.**Cotton.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (Nos. 600-605, April 18, 1901), June 10, 1901.

"A collection of cottons which have been selected by Christian Stamm, of Cairo, from fields of the Egyptian cotton and from his own experimental plats.

6673.

Mit Afifi. Selected cream color. First year of selection.

6674.

Very large growing variety, 2 to 2.50 meters high, bearing very large capsules. Grown in Stamm's garden in Cairo.

6675.

Jannovitch. Cream colored, selected from Stamm's own garden.

6676.

The descendant of a cross between a variety sent year before last to Mr. H. J. Webber and a variety called by Stamm "Berla." Shows tendency toward cream color.

6677.

Berla. Second generation. Selected from fields as the yellowest sort among many thousands. The yield of this sort was very high, even double that of many others grown in Stamm's garden.

6678.

"Wild cotton from Omdurman in the Sudan." (*Fairchild.*)

6679. GOSSYPIUM BARBADENSE.**Cotton.**

From Shibin-el-Kanater, Egypt. Received through Mr. D. G. Fairchild, June 10, 1901.

Mit Afifi. Ordinary variety.

6680. TRITICUM DURUM.**Wheat.**

From Minieh, Egypt. Received through Mr. D. G. Fairchild (No. 634, May 5, 1901), June 10, 1901.

Mishriki. "A very fine variety of this wheat which was exhibited last season at the Khedivial Agricultural Society's show in Cairo, and which Mr. George P. Foaden, the secretary of the society, remarked as the finest he has ever seen in Egypt. Secured through Mr. Foaden's kindness from the grower in the province of Minieh, which lies between the twenty-eighth and twenty-ninth degrees of latitude. The wheat is grown on irrigated land, and from all I can ascertain is remarkably pure, considering how mixed almost all Egyptian wheats are. This wheat will probably not withstand the cold winters of the pl-ns at all, but will very likely prove of great value in Texas. It is a hard wheat, whose qualities for macaroni making are quite unknown. Its yielding capacity, I believe, will prove satisfactory, although its resistance to rust, I surmise, may not equal that of other Egyptian sorts, for I notice the heads sent as samples are more or less rusted. Should be planted on soil receiving irrigation and tried as a *winter* wheat in the Southwest on good, rich, stiff soil." (*Fairchild.*) (See No. 7016.)

6681 to 6693.

From Alexandria, Egypt. Presented by the firm of B. Nathan & Co., through Mr. D. G. Fairchild. Received June 10, 1901. A collection of seeds of cultivated plants gathered in the Sudan by one of the firm.

6681. ANDROPOGON SORGHUM. Sorghum.
Kusabee, Arabic name.
6682. PANICUM MILIACEUM (?). Broom-corn millet.
 "Coming from the River Dukhu." (*Fairchild.*)
6683. SESAMUM INDICUM. Sesame.
6684. GOSSYPIUM sp. Cotton.
 A mixed lot of seed of different races and even species.
6685. ANDROPOGON SORGHUM. Sorghum.
 "Very good quality." (*Fairchild.*)
6686. ANDROPOGON SORGHUM. Sorghum.
Aish Abou Girdeh, Arabic name.
6687. CICER ARIETINUM. Chick-pea.
Hummos, Arabic name.
6688. LUPINUS sp. Lupine.
Tirmoos, Arabic name.
6689. ANDROPOGON SORGHUM. Sorghum.
Hajiree, Arabic name.
6690. ANDROPOGON SORGHUM. Sorghum.
Hamaisee, Arabic name.
6691. ANDROPOGON SORGHUM. Sorghum.
Feterite, Arabic name.
6692. PANICUM MILIACEUM (?). Broom-corn millet.
Dukhu, Arabic name.
6693. ANDROPOGON SORGHUM. Sorghum.
Safra, Arabic name.

6694 to 6711.

From Pekin, China. Received through Dr. G. D. Brill, June 12, 1901. A collection of seeds of cultivated plants, as follows:

6694. CUCUMIS SATIVUS. Cucumber.
 "This forcing cucumber is grown with heat during the winter. Many specimens were from 1 foot to 18 inches long, very crisp, and of good quality. Each had a small weight attached to it after it was an inch and a half long to keep it straight." (*Brill.*)
6695. CUCURBITA sp. Squash.
6696. SOLANUM MELONGENA. Eggplant.
 "Large, purple, of very fine quality." (*Brill.*)
6697. CUCUMIS MELO. Muskmelon.
 "Said to be of very good quality." (*Brill.*)

6694 to 6711—Continued.

6698. CUCURBITA sp. Squash.

"Flesh very white, much used by Chinese, cooked with meat or alone." (Brill.)

6699. RAPHANUS SATIVUS. Radish.

"Large, red, flat variety, resembling a turnip. Kept through the winter and much eaten raw, as well as cooked." (Brill.)

6700. RAPHANUS SATIVUS. Radish.

6701. RAPHANUS SATIVUS. Radish.

"A winter variety." (Brill.)

6702. RAPHANUS SATIVUS. Radish.

"A forcing variety, grown under mats or under benches in cucumber houses. It is sold in bunches when small. Globe shaped. It is also grown very thickly and the young radishes are pulled when about to send out the third leaf. For use in salads." (Brill.)

6703. RAPHANUS SATIVUS. Radish.

"Small, long, red variety." (Brill.)

6704. RAPHANUS SATIVUS. Radish.

"Long, white variety." (Brill.)

6705. BRASSICA OLERACEA. Cabbage.

"A very long-headed cabbage, 3 to 5 inches in diameter. The quality is said by foreigners to be excellent. Some say it has a very delicate flavor and can be eaten without causing indigestion by people who can not eat the 'foreign' cabbage." (Brill.)

6706. DAUCUS CAROTA. Carrot.

6707. APIUM GRAVEOLENS. Celery.

"Not very good in comparison with foreign varieties, but better than that of central China." (Brill.)

6708. CUCURBITA sp. Gourd.

"Hard shells used for drinking cups, etc." (Brill.)

6709. PANICUM MILIACEUM. Broom-corn millet.

"Much used in the place of rice by the people around Peking. Cooked as porridge." (Brill.)

6710. ANDROPOGON SORGHUM. Sorghum.

"This is much grown for human food around Peking and is considered much superior to the other varieties." (Brill.)

6711. PANICUM MILIACEUM. Broom-corn millet.

"This variety is said to withstand drought well." (Brill.)

6712. COFFEA ARABICA. Coffee.

From Macassar, Celebes, Dutch East Indies. Presented by Mr. K. Auer, U. S. Consular Agent at Macassar, through Messrs. Lathrop and Fairchild. (No. 385.) Received June 12, 1901.

Patjoe or *Bonthain*. A superior variety of coffee grown in southern Celebes.

6713 to 6730. PYRUS MALUS.**Apple.**

From Gosford, New South Wales. Received through Hunter & Sons, June 19, 1901.

A collection of varieties, as follows:

6713. <i>Fall Beauty.</i>	6722. <i>Yarra Bank.</i>
6714. <i>Winter Majetin.</i>	6723. <i>Chatastee.</i>
6715. <i>Autumn Tart.</i>	6724. <i>Magg's Seedling.</i>
6716. <i>Lord Wolseley.</i>	6725. <i>Early Richmond.</i>
6717. <i>Ruby Pearmain.</i>	6726. <i>Tetofsky.</i>
6718. <i>Golden Queen.</i>	6727. <i>Primate.</i>
6719. <i>Northern Spy.</i>	6728. <i>New England Pigeon.</i>
6720. <i>Menagerie.</i>	6729. <i>Stubbard Codlin.</i>
6721. <i>Striped Beaufin.</i>	6730. <i>Irish Peach.</i>

6731 to 6753. PYRUS MALUS.**Apple.**

From Emerald, Victoria. Received through Mr. C. A. Nobelius, June 19, 1901.

A collection of varieties, as follows:

6731. <i>Sharp's Early.</i>	6738. <i>Granny Smith.</i>
6732. <i>Cole's Rymer.</i>	6739. <i>Sharp's Late Red.</i>
6733. <i>William Anderson.</i>	6740. <i>Ruby Gem.</i>
6734. <i>Kooroochiang.</i>	6741. <i>Northern Spy.</i>
6735. <i>John Sharp.</i>	6742. <i>Statesman.</i>
6736. <i>Cliff's Seedling.</i>	6743. <i>Winter Majetin.</i>
6737. <i>Santa Clara King.</i>	6744. <i>Early Richmond.</i>

6731 to 6753—Continued.**6745.***Sharp's Nonesuch.***6746.***Ruby Pearmain.***6747.***Fall Beauty.***6748.***Irish Peach.***6749.***Magg's Seedling.***6750.***Lord Wolseley.***6751.***The Queen.***6752.***Shroeder's.***6753.***Taupaki.***6754 to 6772.** PYRUS MALUS.**Apple.**

From Camden, New South Wales. Received from Ferguson & Son, June 19, 1901.
A collection of varieties, all grafted on Northern Spy stocks, as follows:

6754.*Striped Beaufin.***6755.***Golden Queen.***6756.***New England Pigeon.***6757.***Chatastee.***6758.***American Golden Pippin.***6759.***Menagerie.***6760.***Stubbart Codlin.***6761.***Ruby Pearmain.***6762.***Primate.***6763.***Lord Wolseley.***6764.***Yarra Bank.***6765.***Northern Spy.***6766.***Autumn Tart.***6767.***Winter Majetin.***6768.***Irish Peach.***6769.***Magg's Seedling.***6770.***Tetofsky.***6771.***Early Richmond.***6772.***Fall Beauty.***6773 to 6823.** FIGUS CARICA.**Caprifig.**

From Kabylia, Algeria. Received through Mr. C. S. Scofield, June 19, 1901.

"This collection, secured by Mr. Scofield in the spring of 1901, consists of cuttings of all the caprifig trees he observed in the vicinity of Tizi Ouzou and Fort National in the mountainous part of Kabylia to the east of the town of Algiers. No data could be secured in regard to most of the numbers and some may prove to be duplicates. All of the 50 numbers are caprifigs, with the exception of 6819, which is an ordinary

edible fig. This collection, as well as those enumerated before in this inventory, was secured in the hope of getting an assortment of caprifigs having as wide a range of climatic and soil requirements as possible, in the hope of finding varieties suited to harbor the blastophaga in all parts of California and the Southwest where fig culture is feasible. These varieties are on trial in the Department gardens, and will be distributed when their qualities have been determined." (*Swingle.*)

6773.

"Cuttings from tree No. 18, growing along road from Fort National to Tizi Ouzou." (*Scofield.*)

6774.

"Cuttings from tree No. 11, growing along road from Fort National to Tizi Ouzou." (*Scofield.*)

6775.

"Cuttings from a large tree (No. 33) in the rich bottom lands about a mile or two beyond Tizi Ouzou on the way from Fort National." (*Scofield.*)

6776.

"Cuttings from tree No. 12 along the road from Fort National to Tizi Ouzou." (*Scofield.*)

6777.

"Cuttings from a large and very fine orchard above Mr. Bankhardt's mill, 4 or 5 miles out of Tizi Ouzou on the road to Fort National." (*Scofield.*)

6778.

"Cuttings from a large and very fine orchard just above Mr. Bankhardt's mill, 4 or 5 miles out from Tizi Ouzou on the road to Fort National." (*Scofield.*)

6779.

"Cuttings from tree No. 22 along the road from Fort National to Tizi Ouzou." (*Scofield.*)

6780.

"Cuttings from tree No. 23 along the road from Fort National to Tizi Ouzou." (*Scofield.*)

6781.

"Cuttings from a tree in large and very fine orchard above the mill belonging to Mr. Bankhardt, 4 or 5 miles out from Tizi Ouzou on the road to Fort National." (*Scofield.*)

6782.

"Cuttings from tree No. 10 along the road from Fort National to Tizi Ouzou." (*Scofield.*)

6783.

"Cuttings from tree No. 14 along road from Fort National to Tizi Ouzou. (Possibly *Ghazarh*, early. Cuttings from tree in immediate vicinity of Tizi Ouzou. Label lost.)" (*Scofield.*)

6784.

"Cuttings from tree No. 21 along the road from Fort National to Tizi Ouzou." (*Scofield.*)

6785.

"Cuttings from tree No. 6 on the road from Fort National to Tizi Ouzou." (*Scofield.*)

6773 to 6823—Continued.**6786.**

“Cuttings from a large and very fine orchard just above Mr. Bankhardt’s mill, 4 or 5 miles out from Tizi Ouzou on the road to Fort National.” (*Scofield.*)

6787.

“Cuttings from tree No. 24 along the road from Fort National to Tizi Ouzou.” (*Scofield.*)

6788.

“Cuttings from tree No. 13 along the road from Fort National to Tizi Ouzou, near Fort National.” (*Scofield.*)

6789.

Dhaalou, No. 1. “Cuttings from tree on north side of valley in the immediate vicinity of Tizi Ouzou.” (*Scofield.*)

6790.

“Cuttings from tree No. 15 along the road from Fort National to Tizi Ouzou.” (*Scofield.*)

6791.

“Cuttings from very fine large tree growing in rich bottom lands a mile or so beyond Tizi Ouzou.” (*Scofield.*)

6792.

“Cuttings from tree No. 7 along the road from Fort National to Tizi Ouzou.” (*Scofield.*)

6793.

Ghazar, No. 1, an early variety. “Cuttings from tree in immediate vicinity of Tizi Ouzou. (Possibly another kind, No. 14, from tree along road from Fort National to Tizi Ouzou. Label missing.)” (*Scofield.*)

6794.

“Cuttings from tree near Fort National, on the other side (from Tizi Ouzou). Tree still carried the winter fruit in considerable numbers.” (*Scofield.*)

6795.

“Cuttings from tree in orchard in rich bottom lands a mile or two beyond Tizi Ouzou (from Fort National), tree of medium size.” (*Scofield.*)

6796.

“Cuttings from a tree, No. 25, along the road from Fort National to Tizi Ouzou.” (*Scofield.*)

6797.

“Cuttings from tree No. 4 along the road from Fort National to Tizi Ouzou.” (*Scofield.*)

6798.

“Cuttings from tree No. 19 along the road from Fort National to Tizi Ouzou.” (*Scofield.*)

6799.

“Cuttings from tree No. 17 along road from Fort National to Tizi Ouzou.” (*Scofield.*)

6773 to 6823—Continued.

6800.

“Cuttings from tree No. 16 along road from Fort National to Tizi Ouzou.”
(*Scofield.*)

6801.

Ghazar, No. 3. “Cuttings obtained from large tree, south side of the valley, in immediate vicinity of Tizi Ouzou, rather late.” (*Scofield.*)

6802.

“Cuttings from tree No. 8 along the road from Fort National to Tizi Ouzou.” (*Scofield.*)

6803.

Taccout, No. 1. “Early variety. Cuttings from tree on north side of valley in the immediate vicinity of Tizi Ouzou.” (*Scofield.*)

6804.

“Cuttings from tree on other side of Fort National from Tizi Ouzou. Worthy of mention, as they still carried the winter fruit in considerable numbers—both old and new fruits.” (*Scofield.*)

6805.

“Cuttings from tree No. 20 along road from Fort National to Tizi Ouzou.”
(*Scofield.*)

6806.

“Cuttings from tree on south side of valley in the immediate vicinity of Tizi Ouzou. Name unknown; season medium, intermediate.” (*Scofield.*)

6807.

Dhaalou, No. 2. “Cuttings from tree in immediate vicinity of Tizi Ouzou, from north side of valley.” (*Scofield.*)

6808.

“Cuttings from a very fine, large tree in orchard in the rich bottom lands a mile or two beyond Tizi Ouzou from Fort National.” (*Scofield.*)

6809.

Marza-Ko. “Cuttings from tree on north side of valley in the immediate vicinity of Tizi Ouzou.” (*Scofield.*)

6810.

Dhaalou, No. 3. “Cuttings from tree on north side of valley in the immediate vicinity of Tizi Ouzou.” (*Scofield.*)

6811.

Ahzaim (2). Late. “Cuttings from tree on north side of valley in immediate vicinity of Tizi Ouzou.” (*Scofield.*)

6812.

“Cuttings from tree No. 9 along the road from Fort National to Tizi Ouzou.” (*Scofield.*)

6813.

Ahzaim, No. 1. Late. “Cuttings from tree on north side of valley in immediate vicinity of Tizi Ouzou.” (*Scofield.*)

6773 to 6823—Continued.

6814.

“Cuttings from tree No. 1, near Fort National, on road to Tizi Ouzou.” (Scofield.)

6815.

Teakourt (short form). Late. “Cuttings from tree on south side of valley in the immediate vicinity of Tizi Ouzou.” (Scofield.)

6816.

“Cuttings from tree in a large and very fine orchard just above a flour and oil mill belonging to Mr. Bankhardt. It is 4 or 5 miles out of Tizi Ouzou, on the road to Fort National.” (Scofield.)

6817.

“Cuttings from a small, scraggy, but heavily fruited tree in orchard in the rich bottom lands a mile or two beyond Tizi Ouzou.” (Scofield.)

6818.

“Cuttings from medium-sized trees in orchard in the rich bottom lands a mile or two beyond Tizi Ouzou.” (Scofield.)

6819.

Bakor (not a caprifig). “Excellent tree. Cuttings from tree south of Tizi Ouzou.” (Scofield.)

6820.

Tetouzel, No. 1. Early. (Spelled Teefouzel or Trefouzel.) “Cuttings from tree on south side of valley in the immediate vicinity of Tizi Ouzou.” (Scofield.)

6821.

“Cuttings from tree No. 5 on the road from Fort National to Tizi Ouzou.” (Scofield.)

6822.

“Cuttings from tree south of Tizi Ouzou.” (Scofield.)

6823.

Ain Hjedjla. “Season medium. Cuttings from tree north of Tizi Ouzou.” (Scofield.)

6824. PISTACIA VERA.

Pistache.

From Smyrna, Asia Minor. Received through Mr. George C. Roeding, June 29, 1901.

“Very fine pistache nut from a Greek nurseryman in Smyrna.” (Roeding.)

6825. TRIFOLIUM SPUMOSUM.

From Mustapha Superieur, near Algiers, Algeria. Received through Mr. C. S. Scofield, May 25, 1901.

“Seed from a plant found in the grounds of the former consulate of Denmark. They are from an especially fine plant and can not be easily replaced.” (Scofield.)

6826. VERONIA ELEPHANTUM (?)

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 609), May 24, 1901.

“A very pretty shade tree, suitable for planting in southern Florida or southern California. It grows and fruits well in the gardens in Cairo and is considered a desirable ornamental tree for parks.” (Fairchild.)

6827. ZEA MAYS.**Corn.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 624), July 1, 1901.

Secured for Mr. Fairchild by George P. Foaden, esq., secretary of the Khedivial Agricultural Society of Cairo.

Morelli. "It is a low-growing sort and does not exhaust the soil as the tall-growing American kinds do. As much as 80 bushels per acre are harvested in Egypt. It has been tested in comparison with the following American sorts and yielded heavier and twenty days earlier: *Morelli*, the Egyptian sort, yielded $12\frac{1}{2}$ ardebs per feddan; *Tender and True*, an American variety, yielded $11\frac{1}{2}$; *Hickory King*, also American, 10; and *Imperial Learning* only 9 ardebs. (These are Egyptian units, given only for comparison.) It is a white variety, preferred to most others in Egypt because of its extreme earliness and great productivity. It grows scarcely half as high as the American sorts. Here in Egypt the maize is broadcasted very thickly, much as we plant fodder maize. The hill system is little known. Perhaps this and the irrigation system used in the comparative test may account for the comparatively high yield of the Egyptian. This variety should be tried in irrigated regions, such as those of southern California, and a quantity should be reserved for experiments in the Colorado Desert." (*Fairchild*.)

6828. QUEBRACHIA LORENTZII.**Quebracho colorado.**

From Tucuman, Argentina. Presented by Mr. Joel Blamey, Huasan, Andalgalá Catamarca, Argentina. Received July 5, 1901.

"Large handsome trees, 40 to 50 feet high, found in the heavy river bottom forests of Argentina and Paraguay, not yet introduced into this country. The wood is of a red color, very hard, contains from 25 to 28 per cent of tannin, and is impervious to weather conditions. Logs exposed for a hundred years are still sound. It is used in Argentina for beams in house and bridge building, railroad ties, all kinds of posts, and for tannin. There were imported into the United States in 1901 60,000 tons of extract, worth nearly \$300,000. Klipstein & Co., New York, state that 240,000 tons of wood are also imported annually." (*Harrison*.)

6829.**Ebony tree.**

From Tucuman, Argentina. Received through Mr. Joel Blamey, Huasan, Andalgalá Catamarca, Argentina, July 5, 1901.

6830.**Viraris.**

From Tucuman, Argentina. Received through Mr. Joel Blamey, Huasan, Andalgalá Catamarca, Argentina, July 5, 1901.

6831. OLEA EUROPAEA.**Olive.**

From Tunis, nurseries of M. G. Castet. Presented by Dr. L. Trabut, Government Botanist of Algeria, through Mr. C. S. Scofield. Received July 2, 1901.

Chetoni or *Octonbri*. This is described by N. Minangoin as an oil olive "very common in northern Tunis at Tunis, Soliman, Tebourba, Bizerte, and Grombalia, where it enters to at least the extent of two-thirds into the composition of the olive orchards." (*Bulletin de la Direction de l'Agriculture et du Commerce, Regence de Tunis 6 No. 8, January, 1901, p. 35, pl. 6, fig. 11.*)

6832. FICUS CARICA.**Caprifig.**

From Aidin, Asia Minor. Received through Mr. George C. Roeding, July 5, 1901.

"Very large caprifig from S. G. Magnisalis, Aidin." (*Roeding*.)

6833. QUERCUS AEGILOPS.**Valonia oak.**

From Nazli, Province of Smyrna, Asia Minor. Received through Mr. George C. Roeding, July 5, 1901.

This species of evergreen oak is the one furnishing the "Valonia" of commerce, one of the best tanning materials known. The acorn cups are the parts containing the tannin.

6834. OLEA EUROPAEA.**Olive.**

From Aidin, Asia Minor. Received through George C. Roeding, July 5, 1901.

Early Aidin olive grown in the Meander Valley for oil. There must be 5,000,000 trees in this valley.

6835. FICUS CARICA.**Caprifig.**

From Aidin, Asia Minor. Received through Mr. George C. Roeding, June 5, 1901.

"Very largest and finest caprifig from S. G. Magnisalis, Aidin." (*Roeding.*)

6836. FICUS CARICA.**Caprifig.**

From Aidin, Asia Minor. Received through Mr. George C. Roeding, July 5, 1901.

"One of the largest caprifigs from S. G. Magnisalis, Aidin." (*Roeding.*)

6837. FICUS CARICA.**Caprifig.**

From Aidin, Asia Minor. Received through Mr. George C. Roeding, July 5, 1901.

"Another variety of black caprifig from S. G. Magnisalis, Aidin." (*Roeding.*)

6838. FICUS CARICA.**Caprifig.**

From Aidin, Asia Minor. Received through Mr. George C. Roeding, July 5, 1901.

"Very fine caprifig from garden of S. G. Magnisalis, Aidin." (*Roeding.*)

6839. FICUS CARICA.**Caprifig.**

From Aidin, Asia Minor. Received through Mr. George C. Roeding, July 5, 1901.

"Black caprifig from garden of S. G. Magnisalis, Aidin." (*Roeding.*)

6840. FICUS CARICA.**Caprifig.**

From Aidin, Asia Minor. Received through Mr. George C. Roeding, July 5, 1901.

"Loose sample to show method of budding, inclosed with Nos. 6838 and 6839." (*Roeding.*)

6841. PRUNUS ARMENIACA.**Apricot.**

From Aidin, Asia Minor. Received through Mr. George C. Roeding, July 5, 1901.

"A small freestone apricot, having a very sweet kernel, with a flavor like an almond." (*Roeding.*)

6842. MEIBOMIA ILLINOENSIS.**Beggar weed.**

From Manhattan, Kans. Presented by Mr. J. M. Westgate. Received July 8, 1901.

A leguminous plant, possibly of some value for forage or green manure, which grows on the prairie lands of central Kansas. Seed ripens in summer and autumn. This sample was collected in the autumn of 1900.

6843. PUNICA GRANATUM.**Pomegranate.**

From Smyrna, Asia Minor. Received through Mr. George C. Roeding, July 8, 1901.

Scheerdekses. "Seedless pomegranate." (*Roeding.*)

- 6844. PRUNUS ARMENIACA. Apricot.**
 From Smyrna, Asia Minor. Received through Mr. George C. Roeding, July 8, 1901.
 "A very large apricot, growing in the garden of Doctor Lane, American consul, Smyrna. Kernel sweet." (*Roeding.*)
- 6845. PRUNUS ARMENIACA. Apricot.**
 From Smyrna, Asia Minor. Received through Mr. George C. Roeding, July 8, 1901.
 "A large freestone apricot, having sweet kernels like an almond" (*Roeding.*)
- 6846. PHOENIX DACTYLIFERA. Date.**
 From Orleansville, Algeria. Presented by M. Yahia ben Kassem. Received May, 1901.
Deglet Noor.
- 6847. POPULUS sp. Poplar.**
 From Kephisia, near Athens, Greece. Received through Mr. George C. Roeding, July 17, 1901.
 "A poplar resembling the silver leaf in foliage, but with smaller leaves. Tree very vigorous and of spreading habit. Superior to any poplar I have ever seen. I saw one tree 6 feet in diameter, whose estimated height was 125 feet, and which had a spread of branches of 80 feet." (*Roeding.*)
- 6848. MORUS sp. Mulberry.**
 From Royal Grounds, Kephisia, near Athens, Greece. Received through Mr. George C. Roeding, July 17, 1901.
 "A variety of mulberry with large, dark-green, rough leaves, no gloss, and having very fine fruit." (*Roeding.*)
- 6849. PISTACIA VERA. Pistache.**
 From Athens, Greece. Received through Mr. George C. Roeding, July 17, 1901.
 "Buds of a very fine pistache nut from the garden of the agricultural experiment station at Athens." (*Roeding.*)
- 6850. FICUS CARICA. Caprifig.**
 From Kephisia, near Athens, Greece. Received through Mr. George C. Roeding, July 17, 1901.
 "A late fruiting variety of caprifig." (*Roeding.*)
- 6851 to 6912.**
 From Oneco, Fla. Received through the firm of Reasoner Brothers, July 5, 1901.
 A collection of ornamental and economic plants (nomenclature is in the main that of the nurserymen):
- 6851. ABERIA CAFFRA. Kei apple.**
- 6852. ANACARDIUM OCCIDENTALE. Cashew.**
- 6853. ANONA MURICATA. Sour sop.**
- 6854. ARTOCARPUS INTEGRIFOLIA. Jack fruit.**
- 6855. COCCOLOBA UVIFERA. Shore grape.**

6851 to 6912—Continued.

6856.	CUPANIA SAPIDA.	Akee.
	"The fruits are said to be delicious when eaten in omelettes." (<i>Fairchild.</i>)	
6857.	FICUS GLOMERATA.	Cluster fig.
6858.	MALPIGHIA GLABRA.	Barbados cherry.
6859.	MELICocca BIJUGA.	Spanish lime.
6860.	PHYLLANTHUS EMBLICA.	Emblie myrobalan.
	"This is not the true myrobalan of commerce, although its fruits are used for tanning purposes, according to Talbot." (<i>Trees, Shrubs, and Woody Climbers of the Bombay Presidency, 2d ed., p. 300.</i>)	
6861.	SPONDIAS DULCIS.	Otaheite apple.
6862.	TERMINALIA CATAPPA.	Tropical almond.
6863.	RHODOMYRTUS TOMENTOSA.	Downy myrtle.
6864.	AMOMUM CARDAMOMUM.	Cardamom.
6865.	CEDRELA ODORATA.	Jamaica cedar.
6866.	CEDRELA TOONA.	Toon tree.
6867.	CINNAMOMUM CASSIA.	Chinese cinnamon.
6868.	CRESCENTIA CUJETE.	Calabash tree.
6869.	GARCINIA MORELLA.	Gamboge.
6870.	GUAIACUM OFFICINALE.	Lignum-vitæ.
6871.	LAWSONIA ALBA.	Henna.
6872.	MARANTA ARUNDINACEA.	Bermuda arrowroot.
6873.	DITTELASMA RARAK.	Indian soap berry.
6874.	SEMECARPUS ANACARDIUM.	Marking nut tree.
6875.	ZINGIBER OFFICINALE.	Ginger.
6876.	CUPRESSUS FUNEBRIS.	Funeral cypress.
6877.	ABRUS PRECATORIUS.	Crab's eye vine.
6878.	ARDISIA POLYCEPHALA.	
6879.	BAPHIA RACEMOSA.	
6880.	BAUHINIA ACUMINATA.	Mountain ebony.
6881.	BAUHINIA GALPINI.	
6882.	BRUNFELSIA MACROPHYLLA.	
6883.	BUTEA FRONDOSA.	Bastard teak.
6884.	POINCIANA REGIA.	Royal poinciana.
6885.	CAESALPINIA PULCHERRIMA.	Dwarf poinciana.

6851 to 6912—Continued.

6886. CAESALPINIA SAPPAN.

Sappan.

"The pods and hard wood of this plant yield the valuable red dye used in coloring silk. A native of the Asiatic tropics." (*Talbot.*)

6887. DILLENIA INDICA.

Gunstock tree.

"Native of India. Ripe fruit eaten in curries. Wood durable, used for gunstocks." (*Talbot.*)

6888. DRACAENA DRACO.

Dragon's blood.

Native of the Canary Islands, where, until recently, a noted tree of great age and size was standing. A valuable and curious ornamental for parks.

6889. FICUS HISPIDA.

6890. HIBISCUS TILIACEUS.

"Fiber used in India for the manufacture of elephant timber-dragging ropes." (*Talbot.*)

6891. JACQUINIA ARMILLARIS.

6903. CHAMAEROPS FARINOSA.

(Not in Kew Index.)

6892. MABA NATALENSIS.

6904. RHAPIDOPHYLLUM HYS-
TRIX.6893. THEVETIA NEREIFOLIA.
Trumpet flower.

6894. ATALANTIA TRIMERA.

6905. COCOS AUSTRALIS.

6895. TURRAEA FLORIBUNDA (?)

6906. COCOS ALPHONSEI.

6896. TUTSIA AMBOSENSIS.

6907. COCOS BONNETI.

(Not in Kew Index.)

6908. ELAEIS GUINEENSIS.
Oil palm.

6897. TODDALIA LANCEOLATA.

6909. BACTRIS GASIPAËS.

6898. ACROCOMIA SCLEROCARPA.

6910. BACTRIS UTILIS.

6899. ATTALEA COHUNE.

6911. LICUALA GRANDIS.

6900. CARYOTA URENS.

6912. LICUALA RUMPHII.

6901. CHAMAEROPS HUMILIS.

6902. CHAMAEROPS HUMILIS var.
SPINOSA.

6913 to 6932.

From Mexico. Received through Dr. J. N. Rose, assistant curator, U. S. National Museum, July 9 and 10, 1901.

A collection of Mexican ornamentals and economic plants, many of which have not been specifically identified; made in 1901 by Dr. J. N. Rose. No further data than Doctor Rose's numbers and the generic names were at hand when this inventory was prepared.

6913. OXALIS sp. (No. 207.)

6918. OXALIS sp. (No. 212.)

6914. OXALIS sp. (No. 208.)

6919. HYMENOCALLIS HARRISON-
IANA. (No. 222.)

6915. OXALIS sp. (No. 209.)

6920. (No. 213.) "Pepo."

6916. OXALIS sp. (No. 210.)

6917. OXALIS sp. (No. 211.)

6913 to 6932—Continued.

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| 6921. CISSUS sp. (No. 201.) | 6927. AMPELOPSIS sp. (No. 215). |
| 6922. ECHEVERIA PLATYPHYLLA,
Rose, n. sp. (No. 202.) | 6928. TRADESCANTIA CRASSIFOLIA.
(No. 216.) |
| 6923. ECHEVERIA MACULATA,
Rose, n. sp. (No. 217.) | 6929. SEDUM sp. (No. 218.) |
| 6924. FOUQUIERIA SPLENDENS.
(No. 205.) | 6930. SOLANUM sp. (No. 219.) |
| 6925. ZEPHYRANTHES sp.
(No. 206.) | 6931. ERYTHRINA sp. (No. 220.) |
| 6926. ZEPHYRANTHES sp.
(No. 214.) | 6932. TILLANDSIA sp. (No. 221.) |

6933 to 6958.

From Malta. Received through Mr. D. G. Fairchild, July 9 and 10, 1901.

A collection of figs, loquats, pomegranates, and citrous fruits secured during a short stay in Malta in May, 1901. In most cases scions only were sent.

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| 6933. FICUS CARICA.
A large white variety. (No. 685e.) | Fig. |
| 6934. FICUS CARICA.
(No. 685.) | Fig. |
| 6935. PUNICA GRANATUM.
(No. 679.) | Pomegranate. |
| 6936. PUNICA GRANATUM.
(No. 677.) | Pomegranate. |
| 6937. PUNICA GRANATUM.
<i>St. Catherine.</i> (No. 673.) | Pomegranate. |
| 6938. ERIOBOTRYA JAPONICA.
(No. 681.) | Loquat. |
| 6939. ERIOBOTRYA JAPONICA.
(No. 684.) | Loquat. |
| 6940. PUNICA GRANATUM.
<i>St. Joseph.</i> (No. 674.) | Pomegranate. |
| 6941. FICUS CARICA.
<i>Xehba.</i> (No. 685c.) | Fig. |
| 6942. FICUS CARICA.
<i>Barnisotte.</i> (No. 685f.) | Fig. |
| 6943. ERIOBOTRYA JAPONICA.
(No. 680.) | Loquat. |
| 6944. PUNICA GRANATUM.
<i>Santa Rosa.</i> (No. 675.) | Pomegranate. |
| 6945. ERIOBOTRYA JAPONICA.
(No. 682.) | Loquat. |

6933 to 6958—Continued.

6946. *FICUS CARICA.*

Fig.

Black Parsot or *Barnisotte.* (No. 685d.)6947. *CITRUS AURANTIUM.*

Orange.

"The *round* blood orange of the island of Malta. This variety has nearly always a blood-colored flesh and is one of the best strains of oranges on the island. Probably originated here or was brought here at a very early date. It is quite distinct from No. 6948 and not esteemed so highly." (*Fairchild.*)

6948. *CITRUS AURANTIUM.*

Orange.

"An *oval* blood orange, said by Dr. Giovanni Borg, a specialist in citrus matters in Malta, to be the finest flavored orange on the island. Personally I find it superior to No. 6947 and unparalleled for its remarkably vinous flavor." (*Fairchild.*)

6949. *ERIOBOTRYA JAPONICA.*

Loquat.

"Seeds of some very large loquats from Bosketto Gardens, Malta, collected May 22, 1901." (*Fairchild.*)

6950. *CITRUS AURANTIUM.*

Orange.

Maltese *oval seedless.* "Cuttings taken from trees in the governor's palace grounds in Malta. This is the best known seedless Malta orange. My experience is that it sometimes has a few seeds or rudiments of seeds in it. By many it is thought to be the best orange in Malta." (*Fairchild.*)

6951. *CITRUS LIMETTA.*

Lime.

"A variety of lime growing in the gardens of San Antonio near Valetta. The origin of this variety is unknown by Doctor Borg, the citrus specialist. The fruits are almost without exception quite seedless and attain a very considerable size for limes, being often 3 inches long by 2½ inches in smaller diameter. Doctor Borg says that owing to the peculiar flavor (a typical lime flavor) this is not appreciated in Malta, people preferring forms *with* seeds. It is a very juicy sort, with thinnish rind, and of a good color. Possibly this is the same as that sent in by Mr. Swingle (No. 3412) from Algiers. The trees are very vigorous here, even strikingly so. They commonly bear only one crop of fruit, but occasionally two crops are produced. A single fruit yielded one-fourth of an ordinary drinking glass full of juice of good flavor. Secured through the kindness of Dr. Giovanni Borg, of San Antonio Gardens, at the governor's palace." (*Fairchild.*)

6952. *FICUS CARICA.*

Fig.

Vin Baitri or *St. Johns.* "Precocious fig, two cropper." (*Fairchild.*) (No. 685h.)

6953. *FICUS CARICA.*

Fig.

Tina baida. (No. 685b.)6954. *CITRUS AURANTIUM.*

Orange.

Lumi-laring. "A remarkable variety of orange otherwise known as the Sweet orange or China orange. It is *always sweet even when quite green and immature.* Doctor Bonavia, well known as a specialist on the oranges of India, speaks of this variety in a recent article in the Journal of the Royal Horticultural Society, April, 1901 (Vol. XXV, pt. 3, p. 308). He remarks: 'I am informed that in Malta there exists a unique orange of the same (Portugal orange) group, but which is never sour from beginning to end, but sweet and juicy. * * * I have never met with an orange of this description in India. It would be worth while getting hold of it for the purpose of multiplying it and bringing it into commerce. Such a unique orange, I believe, has never appeared on the English market.' In Malta this orange is not very highly esteemed, and personally I find it not nearly so agreeable as the sour varieties, but nevertheless it is far superior to an immature sour orange. It is as sweet as sugar and water, and is declared to be just as sweet when half grown as when mature. It may have a decided value commercially, and will find many

6933 to 6958—Continued.

who will appreciate it. If it proves to be early ripening enough it might be sent to market much in advance of the sour sorts, when it would surprise all buyers by its sweet flavor at a time when all other varieties were too sour to be appreciated. It is medium in size, globular in shape, skin good and of fair thickness, flesh fine color and juicy, and color medium dark orange." (*Fairchild.*)

6955. ERIOBOTRYA JAPONICA. **Loquat.**
(No. 683.)

6956. FICUS CARICA. **Fig.**
(No. 685g.)

6957. FICUS CARICA. **Caprifig.**
Duccar. (No. 686.)

6958. ERIOBOTRYA JAPONICA. **Loquat.**
Seeds of large fruits.

6959. TRITICUM sp. **Wheat.**

From Shibin-el-Kanatir, Egypt. Received through Mr. D. G. Fairchild (No. 653, May 11, 1901), July 11, 1901.

"A collection of selected typical races of Egyptian wheat, gathered from the fields about a small village between Zagazig and Cairo. These are the best, and they show how mixed the races of Egyptian wheat are, but at the same time how remarkably free from rust. The wheat was mostly dead ripe when gathered May 7, while American sorts grown at Cairo were several weeks behind. All grown by perennial irrigation." (*Fairchild.*)

6960. CITRUS LIMONUM. **Lemon.**

From Chios, Turkey. Presented by Mr. N. J. Pantelides through Mr. D. G. Fairchild (No. 590, March 23, 1901). Received July 17, 1901.

Paffa. "A variety of almost seedless lemon, grown in the island of Chios." (*Fairchild.*)

6961 to 6977.

From Rouïba, Algeria. Received through Mr. C. S. Scofield.

A collection of the root tubercles of a number of leguminous forage plants collected by Mr. C. S. Scofield in May, 1901, at Dr. L. Trabut's experimental gardens.

6961. VICIA FABA. **Horse bean.**

6962. VICIA LUTEA. **6970.** LOTUS TETRAGONOLOBUS. **Square pea.**

6963. TRIGONELLA FOENUM-GRÆCUM. **6971.** LUPINUS ANGUSTIFOLIUS. **Blue lupine.**

6964. ASTRAGALUS BOETICUS. **6972.** LUPINUS TERMIS.

6965. MELILOTUS INFESTA. **6973.** LATHYRUS TINGITANUS.

6966. ONOBRYCHIS VICIAEFOLIA. **6974.** LATHYRUS CLYMENUM.
Sainfoin.

6967. ANTHYLLIS TETRAPHYLLA. **6975.** LOTUS EDULIS.

6968. ANTHYLLIS TETRAPHYLLA. **6976.** LOTUS ORNITHOPODIODES.

6969. SCORPIURUS SULCATA. **6977.** ONONIS ALOPECUROIDES.

6978 to 6995.

(Numbers not utilized.)

6996. TRITICUM VULGARE.**Wheat.**

From Oklahoma Agricultural Experiment Station Farm, Stillwater, Okla. Received July 26, 1901.

Weissenburg. Box containing a few heads of wheat grown from No. 5499 during season 1900-1901.

6997. TRITICUM VULGARE.**Wheat.**

From Oklahoma Agricultural Experiment Station Farm, Stillwater, Okla. Received July 26, 1901.

Weissenburg. Bag of wheat grown from No. 5499 during season 1900-1901.

6998. MEDICAGO SATIVA.**Alfalfa.**

From Gizeh, near Cairo, Egypt. Received through Mr. D. G. Fairchild, July 1, 1901.

"A small package of dried plants of alfalfa with roots showing very few nodules. These plants were grown from Argentine seed sent to Cairo by the Office of Seed and Plant Introduction and Distribution, U. S. Department of Agriculture, and planted in the spring of 1901." (*Fairchild.*)

6999. CICER ARIETINUM.**Chick-pea.**

From Gizeh, near Cairo, Egypt. Received through Mr. D. G. Fairchild, July 1, 1901.

Package of dried plants and roots for root tubercle germ. (See No. 6961.)

7000. TRIFOLIUM ALEXANDRINUM.**Berseem.**

From Gizeh, near Cairo, Egypt. Received through Mr. D. G. Fairchild, from the agricultural society. Collected about May 1, 1901.

"Roots of berseem dried in the shade. These roots came from a field which had just been grazed over by cattle." (See No. 6961.) (*Fairchild.*)

7001. PHOENIX DACTYLIFERA.**Date.**

From Fayum, Egypt. Received through Mr. D. G. Fairchild (No. 617), July 1, 1901.

Wahi. "Twenty kilos of dried fruit of a variety of date which is said to have been brought from Siwah, a small village in the oasis of Bahriyeh. It is to my taste the sweetest drying date in Egypt—at least it is much sweeter than the Amri or any other I have tasted. It has a very peculiar mealy flesh of golden to greenish yellow. The skin is very thin and smooth and of a golden brown shade. Seed short, rather large, and clinging to the meat rather firmly. The flesh is somewhat granulated with the sugar. I can not be certain that this variety did really come from Siwah, but it certainly is a sort not commonly seen at this season in Cairo, and is superior in flavor to that which is considered the best in Egypt. The word *Wahi* signifies merely oasis, according to Mr. H. A. Rankin, of Fayum." (*Fairchild.*)

7002. PHOENIX DACTYLIFERA.**Date.**

From Fayum, Egypt. Received through Mr. D. G. Fairchild (No. 618), July 1, 1901.

"Dried dates of the common variety of the Province of Fayum. They are of fair quality as a drying date, but are not equal to the 'Wahi' or 'Amri' dates, the former of which was for sale on the same market in Fayoum. It is probable that seedlings from these seeds will be mixed, although in northern Egypt only one variety of male plant is grown." (*Fairchild.*)

7003 to 7010.

From Mexico. A collection of plants received through Dr. J. N. Rose, July 15, 1901.

Doctor Rose's numbers are appended, no further data being on hand regarding the plants.

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| <p>7003. MAMMILLARIA sp.
(No. 204).</p> <p>7004. MAMMILLARIA sp.
(No. 225).</p> <p>7005. ERYNGIUM sp. (No. 227).</p> <p>7006. CISSUS sp. (No. 228).</p> | <p>7007. MANFREDA sp. (No. 229).</p> <p>7008. HYMENOCALLIS sp.
(No. 230).</p> <p>7009. OXALIS PRINGLEI sp.
(No. 233).</p> <p>7010. OXALIS sp. (No. 234).</p> |
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7011. FIGUS SYCOMORUS.

Sycamore fig.

From Biskra, Algeria. Received through Mr. D. G. Fairchild (No. 719, June 14, 1901), July 17, 1901.

"This is the sacred fig of the Egyptians. The fruit is produced in very large numbers on the main branches and trunk of the tree, being borne in clusters. The tree is used in Egypt extensively as an avenue tree, and forms one of the characteristic landscape trees of Egypt. Along the canals it grows luxuriantly and attains large dimensions. The trunk is often 2 feet or more in diameter, and the spread of the branches makes it an excellent shade tree. The objection is made by old residents, and, I feel, quite justly, that it is a 'dirty' tree, i. e., drops continually débris of green fruit and fruit stalks which have to be cleaned up. As a fruit, it is not highly esteemed by any but Arabs, who will eat almost anything. It is dry and mealy, and personally I do not care for it. The Arabs in Biskra, and also in Egypt, have a practice of cutting off the tips of the immature figs in order to make them ripen. Mr. Columbo, of Biskra, asserts that three days after this cutting is done the cut figs become twice as large as the uncut ones and develop a not unpleasant taste. It is quite possible that in Texas and Louisiana this fig might be keenly appreciated by children and even by adults." (*Fairchild.*)

7012. QUEBRACHIA LORENTZII.

Quebracho colorado.

From Terr. Nac. de Misiones, Argentina. Presented by Mr. W. G. Davis, of Cordoba. Received July 17, 1901.

"These trees are found in the central northern sections of the Republic. In the provinces of Catamarca and Rioj and San Luis the rainfall rarely exceeds 300 mm. a year. Over a large extent of the quebracho forests in Santiago del Estero the average rainfall does not exceed 200 mm." (*Davis.*) (See No. 6828.)

7013. ASPIDOSPERMA QUEBRACHO-BLANCO.

Quebracho blanco.

From Terr. Nac. de Misiones, Argentina. Presented by Mr. W. G. Davis, of Cordoba. Received July 17, 1901.

See No. 6828.

7014. COLA ACUMINATA.

Kola nut.

From Hope Gardens, Kingston, Jamaica. Received through the director, Dr. William Fawcett, July 18, 1901.

7015. CUCUMIS MELO.

Muskmelon.

From Bassoua, Egypt. Received through Mr. D. G. Fairchild (No. 633, May 1, 1901), July 1, 1901.

Shaman. "A variety of cantaloupe said to be small, oblong, often egg-shaped, and of a peculiarly delicate flavor. Very highly spoken of by Englishmen in Egypt. Bassoua is the most noted melon-growing center of Egypt." (*Fairchild.*)

7016. TRITICUM DURUM.**Wheat.**

From Alexandria, Egypt. Received from George P. Foaden, esq., secretary of the Khedivial Agricultural Society at Gizeh, through Mr. D. G. Fairchild, October 10, 1901.

Mishriki. A red durum wheat, of which samples have already been sent in for inspection. (See No. 6680.)

7017. CICER ARIETINUM.**Chick-pea.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 622, April 26, 1901), July 1, 1901.

"The Syrian variety of chick-pea grown in Egypt and considered equal to the native sort. It has better seeds, however, being plumper and better formed." (*Fairchild.*)

7018. GOSSYPIUM BARBADENSE.**Cotton.**

From Fayum, Egypt. Received through Mr. D. G. Fairchild (No. 613), July 1, 1901.

Ashmuni. "Unginned cotton of this variety collected where it is exclusively grown, i. e., in the oasis of Fayum. I am informed that this variety is the only one which will succeed well in this province. The *Afiñi*, *Jannovitch*, and *Abbasi* have all been tried, although, I suspect, not thoroughly. This variety may be better suited to upland cultivation than the *Jannovitch* or *Afiñi*, and may be more resistant to the wilt disease." (*Fairchild.*) (See No. 7025 for ginned seed.)

7019. GOSSYPIUM BARBADENSE.**Cotton.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 648, May 11, 1901), July 1, 1901.

Mit Afiñi. Secured by George P. Foaden, esq., of the Khedivial Agricultural Society, Cairo.

7020. VICIA FABA.**Horse bean.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 632, April 26, 1901), July 1, 1901.

"These are the varieties which took the prizes at the Agricultural Fair in Cairo last year. They are introduced for comparative trial with the other sorts." (*Fairchild.*)

7021. CICER ARIETINUM.**Chick-pea.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 626, April 26, 1901), July 1, 1901.

Hommos Beledi. "The native variety of chick-pea. This variety is grown usually for food. The green peas are eaten raw, while the ripe peas are cooked. In Egypt this chick-pea is planted in October or November at the rate of from 30 to 40 pounds of seed per acre, depending upon whether it is sown in drills or broadcasted. On irrigable land it is watered when sown, again when in flower, and the third time when the seeds are being formed. This plant will probably prove of value as a winter soiling crop in the Southwestern States. In parts of the country subject to frost it should be sown in May or June. In parts of Egypt the plants are dried and fed to cattle. Care must be taken, however, in using it for this purpose, as it is known sometimes to be injurious to horses and even to cattle. The seeds, however, make an excellent food for domestic animals." (*Fairchild.*)

7022. LUPINUS TERMIS.**Egyptian lupine.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 628, April 26, 1901), July 1, 1901.

"A variety of lupine planted by the Egyptians on the dry sandy edges of the irrigation basins of Upper Egypt. The seeds are sown broadcast after the irrigation

water has subsided, and no more attention is given to their culture until the lupines are harvested. It is considered a valuable crop for increasing the nitrogen in the soil and the beans are eaten by the natives after being boiled in salt water. Should be tried as a soiling crop in arid regions where a single irrigation is possible." (*Fairchild.*)

7023. GOSSYPIUM BARBADENSE.**Cotton.**

From Alexandria, Egypt. Received through Mr. D. G. Fairchild (No. 593), July 1, 1901.

Jannovitch. "This variety is said to be losing in popularity in Egypt. Its yield is lighter, at least 10 per cent, and its staple, although longer than that of *Mit Afifi*, is said to be falling off in length. It is open to the serious objection that the bolls open and allow the cotton to fall to the ground early, thus making its cleaning expensive, since the natives pick it up from the ground where it has lain and become filled with dirt." (*Fairchild.*)

7024. VICIA FABA.**Horse bean.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 621), July 1, 1901.

Saida. "This important fodder crop of Egypt, which forms an article of export amounting in 1898 to over one and one-half million dollars' worth, and which seems entirely unknown in America, is worthy of the most serious attention. For the Colorado Desert region and southern Texas, Louisiana, and California, the broad bean may be of great importance. This variety comes from Upper Egypt, where the bean is grown most extensively. It is a *winter* crop in Egypt and must be fitted in to American conditions. It is killed by too cold or too hot weather." (*Fairchild.*)

7025. GOSSYPIUM BARBADENSE.**Cotton.**

From Fayoum, Egypt. Received through Mr. D. G. Fairchild (No. 614, April 21, 1901), July 1, 1901.

Ashmuni. "From the ginning mill of Theodore Bakoum, Fayoum. This is probably of a mixed character. See No. 7018 for sample of staple. For trial against the root disease and on uplands. It is all grown here by irrigation and is claimed to be the only sort which pays in the Fayoum oasis." (*Fairchild.*)

7026. GOSSYPIUM BARBADENSE.**Cotton.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 649, May 11, 1901), July 1, 1901.

Jannovitch. "Seed from plants which have been grown on land containing from 1 to 1½ per cent of salt. It is presumed that this seed will be adapted to experiments with similar soils in America and possibly will prove more resistant to the wilt disease than the *Jannovitch* seed taken from plants growing in soil with less salt in it or without any. Secured by Mr. Foaden from the lower Delta region. In quality the fiber is said to equal that coming from plants grown on the less saline soils." (*Fairchild.*)

7027. GOSSYPIUM BARBADENSE.**Cotton.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 631, April 26, 1901), July 1, 1901.

7028. ERVUM LENS.**Lentil.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 627, April 26, 1901), July 1, 1901.

Saidi. "The upper Nile lentil, which is cultivated in Egypt, is an important food crop. Lentils amounting in value to over \$90,000 were exported in 1898 to England, France, and Turkey. It is remarkable that America should so long neglect the culture of this most excellent food plant. For some years a very well-known invalid food, called 'Revelenta Arabica,' has been manufactured in England which consists

exclusively of a flour of the Egyptian lentil. Purées of lentil and lentil soup are delicacies of the European menus quite absent, generally, from American tables. As a forage crop as well, these lentils should receive serious study. This is a typical Egyptian variety. It brings nearly \$2 per hectoliter, according to custom-house returns of exports. The yield varies from 20 to 25 bushels per acre and upward. Sown at rate of 1 bushel per acre broadcasted. Grown in irrigation basins. Requires little water." (*Fairchild.*)

7029. TRIGONELLA FOENUM-GRAECUM.

Fenugreek.

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 623, April 26, 1901), July 1, 1901.

"*Egyptian fenugreek* or *Helba*, as it is called by the Arabs. This plant yields an important condiment and its root system is so remarkably provided with tubercles that it is worthy serious attention as a green manure crop. The seeds are also of value for feeding purposes, and a large amount of fodder is produced, which, if cut before seeds ripen, is of excellent quality. The condition powders and condiment foods which are sold in England extensively and fed to ailing horses and cattle are mixtures of the fenugreek with other meals or grains. It is sometimes planted with berseem here to give a slight purgative effect to the green fodder given so commonly in Egypt to horses and cattle." (*Fairchild.*)

7030. GOSSYPIUM BARBADENSE.

Cotton.

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 647, May 11, 1901), July 1, 1901.

Ashmouni. "Secured through the kindness of Mr. George P. Foaden. This should prove valuable for experiments in the hot dry uplands. It is the variety grown especially in the upper Nile region." (*Fairchild.*)

7031. TRIFOLIUM ALEXANDRINUM.

Berseem.

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 620, April 26, 1901), July 1, 1901.

Muscovi. "This variety, as noted in No. 4254, is the common variety of the Delta region. It is the variety from which the largest number of cuttings can be made and the one likely to prove of greatest use in America." (*Fairchild.*)

7032. HIBISCUS CANNABINUS.

Ambari hemp or Teale.

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 625, April 26, 1901), July 1, 1901.

"This fiber plant, which is used here as a wind-break for the cotton fields, may be worth investigating, as I am assured by Mr. George P. Foaden, of the Khedivial Agricultural Society, that the prices offered for it in the London markets are very high. This *Teale* may be quite a different variety from the ordinary Ambari hemp and better suited to culture in irrigated regions of America. Mr. Foaden intends trying several acres of it as a culture next year. It is planted at the same time as the cotton in a thickly sown row around the cotton field, forming a sort of hedge. This practice is a very old one in Egypt. Some samples of this Egyptian *Teale* were sent to London and a quotation of £20 per ton was secured by Mr. Foaden." (*Fairchild.*) (See Dodge's "Fiber Plants," pp. 192-193.)

7033. TRITICUM VULGARE.

Wheat.

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 629, April 26, 1901), July 1, 1901.

Mezzafannager White. "A variety of Indian wheat which has recently been introduced into Egypt and has met with unusual success, being a much heavier yielder than the native. Though small in grain and thin husked, it yielded near Cairo about 12 bushels per acre more than any native sorts. Samples sent to England were pronounced 'the finest of their kind' by experts. The yield of straw was unusually large in some preliminary tests made on the grounds of the Khedivial Agricultural Society. On the Domain's lands last year there were about 1,500 acres of this Indian wheat planted and over 5,000 acres of native wheat. The Indian averaged nearly 12 bushels an acre more than the native. Less seed is required than of ordinary varie-

ties, as the plant stools unusually well. Starts into growth more rapidly than native sorts. A winter wheat for warm climates. For information regarding this Indian wheat apply to George P. Foaden, esq., secretary of the Khedivial Agricultural Society of Cairo, through whose kindness this sample has been secured." (*Fairchild.*)

7034. ALLIUM CEPA.

Onion.

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 630, April 26, 1901), July 1, 1901.

"A native variety of onion which is grown in immense quantities on the islands and elsewhere on the upper Nile. These are for export mostly and in 1898 over \$909,000 worth were exported. Train loads are piled on the wharves in Alexandria in March and April, from which point they are shipped all over Europe and even to New York, \$5,365 worth going to this latter port during the quarter ending March 31, 1901. This onion forms one of the army rations now, I am told, and these Egyptian onions are of good, even superior quality. A Texas onion specialist who tested these Egyptian onions two years ago declared them to be the finest pickle onion he had ever seen. Deserves a wide distribution wherever irrigation prevails, as it is an onion for irrigated lands." (*Fairchild.*)

7035. VICIA FABA.

Horse bean.

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 650), July 1, 1901.

Beheri. "A variety of horse bean which is grown in the province of Beheri in lower Egypt. It is a distinct variety from the *Saida* and should be tested in comparison with it. Especially valuable for experiments in irrigated regions of California, Arizona, and Texas. Secured through Mr. George P. Foaden, of the Khedivial Agricultural Society." (*Fairchild.*)

7036. GOSSYPIUM BARBADENSE.

Cotton.

From Alexandria, Egypt. Received through Mr. D. G. Fairchild (No. 592), July 1, 1901.

Mit Affi. "This variety is now more commonly grown than any other, and the *Jumovitch* variety, so popular two years ago, is said to be a lighter yielder and, by some, to be rapidly deteriorating. The *Mit Affi* is not a white but a cream-colored cotton, and is prized especially for the manufacture of cream-colored underwear, hosiery, etc. It is also mixed with silk and is especially suited for this purpose." (*Fairchild.*)

7037. HEDYSARUM CORONARIUM.

Sulla.

From Malta. Received through Mr. D. G. Fairchild (No. 689), July 23, 1901.

Malta. "Sulla from the island of Malta. This is a late maturing sort, useful when rains are abundant. It is a heavier yielder than that from Gozzo, and hence preferred by Maltese in places where there is plenty of moisture." (*Fairchild.*)

7038 to 7045. MANGIFERA INDICA.

Mango.

From Bombay, India.

A collection of grafted mango plants, arranged for by Mr. John B. Beach, of West Palmbeach, Fla., through Latham & Co., Bombay. Received July 24, 1901.

7038.

Bath.

7042.

Mazagon.

7039.

Fernandez.

7043.

Roos.

7040.

Goa Alfonso.

7044.

Alfonso, or Alfoos.

7041.

Kala Alfoos.

7045.

Cowasjee Patel.

7046. GYMNOCLADUS CANADENSIS. Kentucky coffee tree.

From Botanic Gardens, Washington, D. C. Received through Mr. G. W. Oliver, July 23, 1901.

7047 to 7057.

From City of Mexico, Mexico. Received through Dr. J. N. Rose, July 26, 1901.

A collection of economic and ornamental plants and seeds made in Mexico in the summer of 1901. Doctor Rose's numbers are retained for identification.

7047. ERYTHRINA sp.

(No. 5301.)

7048. VITIS sp.**Grape.**

"A grape the stems of which die down to the ground every year. Fruit very large." (Rose.) (No. 5349.)

7049. ROSA sp.**Rose.**

(No. 5368.)

7050. OXALIS sp.

"Has beautiful red foliage." (Rose.) (No. 5389.)

7051. HYPTIS sp.

"Flowers red." (Rose.) (No. 5412.)

7052. TRIFOLIUM sp.

"A showy clover with large heads." (Rose.) (No. 5486.)

7053. CARDIOSPERMUM sp.

"A vine." (Rose.) (No. 5490.)

7054. ALBIZZIA sp.

"A beautiful leguminous tree cultivated in Mexico at an altitude of 7,000 feet. Flowers in spikes 2 or 3 inches long." (Rose.) (No. 5281.)

7055.**Zapote borracho.**

"A cultivated fruit." (Rose.) (No. 252.)

7056. PASSIFLORA sp.

"Edible fruit sold in markets." (Rose.) (No. 254.)

7057. CULPHEA sp.

(No. 5353.)

7058. COCHLEARIA ARMORACIA. Horse-radish.

From Stockholm, Sweden. Received through Lindahl's seed firm, July 27, 1901. (L. & F. No. 421.)

Enköping. A variety of horse-radish grown at Enköping, near Stockholm. It is as noted a sort in Sweden as the *Maliner Kren* is in Austria, and is cultivated in a similar way.

7059. CERATONIA SILIQUA. Carob.

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 742), July 29, 1901.

"A male variety of carob. In this region all trees of carobs are grafted or budded with this male sort. A large branch or, oftener, a secondary trunk is trained up into the center of the tree to furnish the pollen for the female flowers. This practice,

which I have not observed in Greece or Algiers in the same degree of perfection, accounts no doubt for the heavy yields obtained here. This may be what is called *La Borrera*." (*Fairchild*.)

7060. CERATONIA SILIQUA.

Carob.

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 744), July 29, 1901.

Vera. "This is the sweetest carob I have ever tasted." (*Fairchild*.)

7061. AMYGDALUS COMMUNIS.

Almond.

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 740), July 29, 1901.

Mollar. "A soft-shelled variety of almond grown in Alicante for table use. Especially relished when still green. The consumption of these green almonds in Mediterranean countries is very great. They are eaten with salt. This variety is not an exporting one, but may prove an addition to the orchards of California." (*Fairchild*.)

7062. AMYGDALUS COMMUNIS.

Almond.

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 741), July 29, 1901.

Planeta. "The great exporting almond of this part of Spain. It is the variety best known and most extensively cultivated, not because it is altogether the best, according to local taste, but because of its shipping and good marketing qualities. It is wedge-shaped in form, with *hard* shell and a flat, heart-shaped kernel with medium thin skin. The *Jordan* almond, which fetches higher prices, I am told, is not grown here in Alicante. It has a thinner skin and finer flavor. The *Planeta* is, however, one of the first-class hard-shelled almonds." (*Fairchild*.)

7063. CERATONIA SILIQUA.

Carob.

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 743), July 29, 1901.

Negra. "The commonest variety of carob grown around Alicante. It is a variety used for horse food almost entirely, and its yields are very large and regular. Every year a tree 20 years old will yield from 50 cents' worth to a dollar's worth of fruit. The culture is suited to waste places in dry soil. Trees here 200 years old yield yearly up to \$3 worth apiece. This variety has little sugar in it and the seeds are surrounded by parchment. Not for table purposes." (*Fairchild*.)

7064 to 7070.

From City of Mexico, Mexico. Received through Dr. J. N. Rose, July 29, 1901.

A collection of economic and ornamental plants made in Mexico in 1901. The numbers given by Doctor Rose are retained for identification.

7064. COTYLEDON sp.

(No. 260.)

7066. SEDUM sp.

(No. 263.)

7065. MAMILLARIA sp.

(No. 261.)

7067. SEDUM sp.

(No. 264.)

7068. RUBUS sp.

Raspberry.

"A fine raspberry and worthy of cultivation. Obtained a root and one ripe fruit. It grows at an elevation of 10,400 feet." (*Rose*.) (No. 265.)

7069. COMMELINA sp.

"A very beautiful greenhouse plant. It grows in Alpine meadows at 10,000 feet elevation." (*Rose*.) (No. 266.)

7070. SOLANUM sp.

(No. 267.)

7071. TRIGONELLA FOENUM-GRÆCUM.**Fenugreek.**

From Batna (Constantin), Algeria. Received through Mr. D. G. Fairchild (No. 720), July 31, 1901.

"Sample of fenugreek seed arranged for by Mr. C. S. Scofield, coming from the mountains of the Aurès east of the town of Batna, on the high Algerian plateau. Used, as in Tunis, by the Jewesses to induce an excessive fleshiness, which is the fashion among them. This may prove a different variety and should be reserved for breeding purposes. Sent through the kindness of Mr. John Wild, of Batna." (Fairchild.)

7072 to 7100.

From Mexico. Received through Dr. J. N. Rose, July 31, 1901.

A collection of economic and ornamental plants made in Mexico in 1901. Doctor Rose's numbers are retained for identification.

7072.	Palm.	7083. SEDUM sp.
(No. 253.)		(No. 247.)
7073. SOLANUM sp.	Potato.	7084. COTYLEDON sp.
(No. 257.)		(No. 255.)
7074. SEDUM sp.		7085. CEREUS sp.
(No. 248.)		(No. 223.)
7075. BEGONIA sp.		7086. CEREUS sp.
(No. 238.)		(No. 224.)
7076. SEDUM sp.		7087. AGAVE sp.
(No. 239.)		(No. 246.)
7077. BEGONIA GRACILIS.		7088. TILLANDSIA BENTHAMIANA.
(No. 243.)		(No. 241.)
7078. SEDUM sp.		7089.
(No. 237.)		(No. 226.)
7079. DAHLIA sp.		7090.
(No. 242.)		(No. 203.)
7080. SEDUM sp.		7091. SENECEO sp.
(No. 235.)		(No. 256.)
7081. COTYLEDON sp.		7092. SENECEO sp.
(No. 245.)		(No. 258.)
7082. COTYLEDON sp.		7093. TILLANDSIA sp.
(No. 236.)		(No. 232.)

7072 to 7100—Continued.

7094. (No. 231.)	Orchid.
7095. (No. 251.)	Cactus.
7096. (No. 250.)	Cactus.
7097. NOLINA sp. (No. 240.)	7099. TIGRIDIA sp. (No. 269.)
7098. COTYLEDON sp. (No. 244.)	7100. DASYLIRION sp. (No. 262.)

7101 to 7108. MANGIFERA INDICA.

Mango.

From Bangalore, India. Received through A. Lehmann, Ph. D., July 31, 1901.
A collection of grafted mangoes.

7101. <i>Peterpasand.</i>	7105. <i>Rajabury</i> or <i>Rajpurj.</i>
7102. <i>Mullgoa (Mulgoba).</i>	7106. <i>Raspbury.</i>
7103. <i>Badami.</i>	7107. <i>Gada Mar.</i>
7104. <i>Amini.</i>	7108. <i>Sandersha</i> or <i>Sandershaw (Soon-</i> <i>dershaw).</i>

7109 to 7116.

From Avalon, Santa Catalina Islands, California. Received through Mrs. Blanche Trask, July, 1900.

A collection of seeds of native plants, as follows:

7109. HOSACKIA VENUSTA.	7114. PHACELIA LYONI.
7110. HOSACKIA TRASKIAE.	7115. LYONOTHAMNUS FLORIBUN-
7111. RHUS OVATA.	DUS.
7112. GALIUM CATALINENSE.	7116. ERIOGONUM GIGANTEUM.
7113. SENECIO HYONI.	

7117. DANTHONIA CALIFORNICA.

From Berkeley, Cal. Received through Miss Alice F. Crane, January, 1901.

7118 to 7129.

From Berkeley, Cal. Received through Miss Alice F. Crane, January, 1901.

A collection of seeds of native Trifoliums, as follows:

7118. TRIFOLIUM GRACILENTUM.	7119. TRIFOLIUM BIFIDUM.
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7118 to 7129—Continued.

7120. TRIFOLIUM CILIATUM.	7125. TRIFOLIUM TRIDENTATUM.
7121. TRIFOLIUM MACRAEI.	7126. TRIFOLIUM MICROCEPH- ALUM.
7122. TRIFOLIUM INVOLUCRATUM.	7127. TRIFOLIUM MICRODON.
7123. TRIFOLIUM PAUCIFLORUM.	7128. TRIFOLIUM FUCATUM.
7124. TRIFOLIUM PAUCIFLORUM.	7129. TRIFOLIUM FUCATUM, var. FLAVULUM.

7130. SOLANUM MELONGENA.**Eggplant.**

From Raleigh, N. C. Received through Prof. W. F. Massey, March 18, 1901.

7131. PASSIFLORA sp.

From Melbourne, Australia. Received from Carolin & Co. through Mr. G. W. Hill, Chief of the Division of Publications, U. S. Department of Agriculture.

7132. CERATONIA SILIQUA.**Carob.**

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 744), August 3, 1901.

Vera. "This is a poor yielder, but its fruits are so full of sugar that drops of sirup run out when the pods are broken. It is too dear for horse food and is eaten by the people as a delicacy. Its flesh is very crisp and lacks the harshness of other varieties. Its seeds are of a lighter color and the pods thicker. As a shade tree it is a finer looking variety, with larger leaves, than No. 7063." (*Fairchild.*) (See also Nos. 7060 and 7461.)

7133. AMYGDALUS COMMUNIS.**Almond.**

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 745), August 3, 1901.

Castillet. "A superlative sort of hard-shelled almond which was found in a garden at Mucha Miel, near Alicante. I have not been able to learn that this sort is known on the markets, although the owner assured me it brought a higher price than the *Planeta*. It is a larger, fuller shaped almond." (*Fairchild.*)

7134. AMYGDALUS COMMUNIS.**Almond.**

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 746), August 3, 1901.

Planeta. "Taken from an orchard at Mucha Miel, near Alicante. The names of these varieties are often mixed, and this may be slightly different from No. 7062." (*Fairchild.*)

7135. AMYGDALUS COMMUNIS.**Almond.**

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 748), August 3, 1901.

Fabrica. "A smaller and inferior sort to the *Planeta*, but said to be a good bearer. It is ten to fifteen days later than the *Planeta*, ripening about the middle or last of August." (*Fairchild.*)

7136. PRUNUS ARMENIACA.**Apricot.**

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 749), August 3, 1901.

Patriarca. "One of the largest fruited varieties of apricot in eastern Spain. Said to be of excellent quality. The apricots of Spain probably were introduced from

France originally, but have undergone changes in size and character, suiting them to the drought and heat of this more southern region. This *Patriarca* is the best large variety about Alicante, and is said to be a local sort." (*Fairchild.*)

7137. AMYGDALUS COMMUNIS.

Almond.

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 755a), August 3, 1901.

Pastaneta. "A variety differing in form very materially from the other Spanish varieties. It has a truncated apex and is more or less rectangular. This variety is not planted largely about Alicante, but is the prevailing sort grown at Murcia, I am told. It fetches as high or even a higher price than the *Planeta*." (*Fairchild.*)

7138. TRIFOLIUM PRATENSE.

Red clover.

From New York. Received through J. M. Thorburn & Co., August 5, 1901.

7139. CICHORIUM ENDIVIA.

Endive.

From Cassel, Germany. Received through Mr. George C. Roeding, August 5, 1901.

Self-closing, yellow Cassel summer endive.

7140. PRUNUS ARMENIACA.

Apricot.

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 750), August 9, 1901.

Ull blanc. "A medium sized apricot famed as the finest small fruited variety in the neighborhood of Alicante. I did not have a chance to taste it, and can not vouch for its superiority." (*Fairchild.*)

7141 to 7145. MORUS sp.

Mulberry.

From Murcia, Spain. Received through Mr. D. G. Fairchild (No. 757), August 10, 1901.

A collection of cuttings from the gardens of the Sericultural Institute of Murcia, Spain. The nomenclature is that furnished by the head gardener.

7141.

Esteril.

7144.

Glemosa.

7142.

Arantiana.

7145.

Colson or Lotson, of Italy.

7143.

Common, of Italy.

7146 to 7340.

From Erfurt, Germany. Received through Haage & Schmidt, seedsmen, August 10, 1901.

A collection of seeds as follows (the nomenclature is in the main that of the seedsmen):

7146. STRELITZIA AUGUSTA.

7150. CUPRESSUS FUNEBRIS.

7147. AGERATUM CONYZOIDES (?)

Prinzessin Victoria Luise.

7151. ADENANTHERA PAVONINA.

7152. ANONA MACROCARPA (?)

**7148. AQUILEGIA CHRYSANTHA
FLORE PLENO.**

7153. BETA CHILENSIS.
Golden yellow.

7149. AGERATUM CONYZOIDES (?)

7154. MUSA MANNII (?)

7146 to 7340—Continued.

7155. IMPATIENS SULTANI SPLENDENS.
7156. PHLOX DRUMMONDII.
Brilliant.
7157. PRIMULA OBCONICA GRANDIFLORA VIOLACEA.
7158. CROTON SEBIFERUM.
7159. ANONA SUAVISSIMA (?)
7160. CAMPANULA PERSICIFOLIA FLORE ALBA.
7161. ILLICIAM FLORIDANUM.
7162. BEGONIA SEMPERFLORENS HYBRIDA FLORE PLENO.
7163. ANTIRRHINIUM MAJUS GRANDIFLORUM LUTEUM.
7164. PAPAVER ORIENTALE HYBRIDUM.
7165. AQUILEGIA CAERULEA FLORE LUTEO.
7166. CINCHONA OFFICINALIS.
7167. ACANTHUS MOLLIS.
7168. IMPATIENS SULTANI NACRÉ ROSÉ.
7169. STRELITZIA REGINAE.
7170. ANONA RENIFORMIS (?)
7171. CORDYLINE AUSTRALIS.
7172. PHORMIUM TENAX VARIEGATA.
7173. ANONA CHERIMOLIA.
7174. ANONA SQUAMOSA.
7175. TORENIA FOURNIERI (EDENTULA) COMPACTA ALBA.
7176. EUCALYPTUS ROBUSTA.
7177. PHLOX DRUMMONDI CINNABARINA.
7178. TORENIA FOURNIERIGRANDIFLORA.
7179. BETA BRASILIENSIS CARMOISIN-CARMOISI (?)
7180. TORENIA FOURNIERI (EDENTULA) COMPACTA COELESTINA.
7181. BETA CHILENSIS CARMOISIN-CHAMOISI.
7182. ADANSONIA DIGITATA.
7183. AMARANTHUS CAUDATUS.
7184. LYNCHNIS COELI-ROSA.
7185. PRIMULA OBCONICA GRANDIFLORA ROSEA.
7186. PAPAVER BRACTEATUM.
7187. TORENIA FOURNIERI (EDENTULA) GRANDIFLORA COELESTINA.
7188. RHEUM PALMATUM TANGUTICUM.
7189. PHORMIUM TENAX VEITCHII.
7190. JATROPHA GLAUCA (?)
7191. FICUS MACROPHYLLA.
7192. QUASSIA AMARA.
7193. CINCHONA SUCCIRUBRA.
7194. LINDELOPIA SPECTABILIS.
7195. CHRYSANTHEMUM MAXIMUM.
7196. CAMPANULA PERSICIFOLIA COERULEA.
7197. TORENIA FOURNIERI SPECIOSA.
The Bride.
7198. CARICA PAPAYA PYRIFORMIS.
7199. BETA BRASILIENSIS (?).
White.
7200. ANTIRRHINIUM MAJUS NANUM ALBUM.
7201. ANTIRRHINIUM MAJUS SULPHUREUM RUBRO-VENOSUM.
7202. (Blank. Omitted unintentionally.)
7203. ANTIRRHINIUM MAJUS NIGRO PURPUREUM.
7204. ANTIRRHINIUM MAJUS INSIGNE.
7205. CLITORIA TERNATEA.

7146 to 7340—Continued.

7206. CAESALPINIA SAPPAN.

Sappan.

7207. GAILLARDIA AMBLYODON.

7233. PRIMULA OBCONICA GRANDIFLORA ALBA.

7208. ANTIRRHINUM MAJUS
GRANDIFLORUM ALBUM.

7234. PHORMIUM TENAX COLENSOI ARG. VAR.

7209. CARICA PAPAYA ATROVIO-
LACEA ELEGANTISSIMA.

7235. TORENIA FOURNIERI (EDENTULA) SPECIOSA.

7210. STRYCHNOS NUX-VOMICA.

Violetta.

7211. PRIMULA OBCONICA KER-
MESINA.

7236. TORENIA FOURNIERI (EDENTULA) SPECIOSA.

7212. PITHECOLOBIUM PRUIN-
OSUM.

7237. STERCVLIA ACERIFOLIA.

7213. ANTIRRHINUM MAJUS.

7238. CEDRELA TOONA.

Romeo.

7239. EUCALYPTUS CITRIODORA.

7214. RHEUM PALMATUM TYPI-
CUM.

7240. MUSA SUMATRANA.

7215. ACANTHUS NIGER.

7241. TORENIA FOURNIERI (EDENTULA) COMPACTA.

7216. GAILLARDIA PULCHELLA
LORENZIANA.

7242. AQUILEGIA CAERULEA.

7217. TORENIA FOURNIERI.

7243. JATROPHA MANIHOT.

7218. PHLOX DRUMMONDII ALBA
OCULATA SUPERBA.

7244. CHRYSANTHEMUM sp.

7219. GAILLARDIA PULCHELLA.

7245. CINCHONA HYBRIDA.

7220. PAPAVER ORIENTALE.

7246. JATROPHA CURCAS.

7221. PRIMULA OBCONICA GRANDIFLORA.

7247. CARICA CANDAMARCENSIS.

7222. FICUS ELASTICA.

7248. CENTAUREA AMERICANA.

7223. CEDRELA ODORATA.

7249. GAILLARDIA PICTA MARGINATA ALBA.

7224. CINCHONA LEDGERIANA.

7250. PAPAVER ORIENTALE SEMI-
PLENUM.

7225. AQUILEGIA CAERULEA
FLORE ALBA.

7251. PAPAVER ORIENTALE PAR-
KINANSII.

7226. EUCALYPTUS GLOBULUS.

7252. PAPAVER ORIENTALE.

7227. BERBERIS DARWINII.

Prince of Orange.

7228. IMPATIENS sp.

7253. PAPAVER BRACCTAETUM
NANUM SPLENDENS.

7229. CINCHONA CALISAYA.

7254. STERCVLIA ACERIFOLIA.

7230. AQUILEGIA CALIFORNICA
HYBRIDA.

7255. PITHECOLOBIUM UNGUIS-
CATI.

7231. BEGONIA SEMPERFLORENS
VULCAN-VULCAIN.

7256. CEDRELA SINENSIS.

7232. PHORMIUM TENAX IMPOR-
TIRT GR. IMPORTEES.

7257. JATROPHA MULTIFIDA.

7258. AQUILEGIA CHRYSANTHA.

7146 to 7340—Continued.

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| 7259. MUSA MARTINI (?) | 7289. ELAESIS GUINEENSIS. |
| 7260. MUSA ROSACEA. | 7290. RAPHIA PEDUNCULATA. |
| 7261. MUSA SUPERBA. | 7291. PISTACIA TEREBINTHUS. |
| 7262. MUSA ROSACEA. | 7292. ACROCOMIA SCLEROCARPA. |
| 7263. PHORMIUM TENAX. | 7293. LIVISTONA JENKINSIANA. |
| 7264. IMPATIENS SULTANI HYBRIDA NANA. | 7294. ANACARDIUM OCCIDENTALE. |
| 7265. PRIMULA OBCONICA GRANDIFLORA HYBRIDA. | 7295. MUSA ENSETE. |
| 7266. CAESALPINIA PULCHERRIMA. | 7296. PHOENIX RECLINATA. |
| 7267. CAESALPINIA CORIARIA. | 7297. ERYTHEA EDULIS. |
| 7268. STERCULIA DIVERSIFOLIA. | 7298. THRINAX BARBADENSIS. |
| 7269. ACANTHUS CANDELABRUM (?) | 7299. LIVISTONA AUSTRALIS. |
| 7270. LAURUS CANARIENSIS. | 7300. CHAMAEDOREA CORALLINA (?) |
| 7271. PTEROCARYA CAUCASICA. | 7301. CHAMAEDOREA ERNESTI AUGUSTI. |
| 7272. BOMBAX OCHROMA (?) | 7302. CHAMAEDOREA GEONOMAIFORMIS. |
| 7273. CHAMAEROPS ARBOREA (?) | 7303. CHAMAEDOREA GRACILIS. |
| 7274. CHAMAEROPS CANARIENSIS (?) | 7304. LIVISTONA ALTISSIMA. |
| 7275. RAPHIS COCHINCHINENSIS. | 7305. LIVISTONA ROTUNDIFOLIA. |
| 7276. CHAMAEROPS ELEGANS (?) | 7306. STERCULIA PLATANIFOLIA. |
| 7277. TRACHYCARPUS EXCELSUS. | 7307. CAMPANULA PERSICIFOLIA FLORE ALBO PLENO. |
| 7278. CHAMAEROPS FARINOSA. | 7308. CAMPANULA PERSICIFOLIA GRANDIFLORA ALBA. |
| 7279. CHAMAEROPS HUMILIS. | 7309. CAMPANULA PERSICIFOLIA GRANDIFLORA ALBA GIGANTEA. |
| 7280. CHAMAEROPS HUMILIS ARGENTEA. | 7310. CAMPANULA PERSICIFOLIA CAERULEO PLENO. |
| 7281. CHAMAEROPS MACROCARPA. | 7311. BEGONIA SEMPERFLORENS ATROPURPUREA COMPACTA. |
| 7282. CHAMAEROPS OLIVAEFORMIS (?) | 7312. BEGONIA SEMPERFLORENS FLORE PLENO. |
| 7283. CHAMAEROPS ROBUSTA (?) | |
| 7284. CHAMAEROPS TOXYTOSA. | |
| 7285. PHOENIX DACTYLIFERA. | |
| 7286. JUBAEA SPECTABILIS. | <i>Bijo des Jardin.</i> |
| 7287. KENTIA ALEXANDRIA (?) | 7313. BEGONIA SEMPERFLORENS GRANDIFLORA ATROPURPUREA. |
| 7288. HYPHAENE BENGUELENSIS. | |

7146 to 7340—Continued.

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| <p>7314. PRIMULA OBCONICA GRANDIFLORA FIMBRIATA.</p> <p>7315. PRIMULA OBCONICA GRANDIFLORA VIOLACEA.</p> <p>7316. AQUILEGIA FLABELLATA NANA ALBA.</p> <p>7317. AQUILEGIA GRANDULOSA.</p> <p>7318. AQUILEGIA HAYLODGENSIS.</p> <p>7319. AQUILEGIA SKINNERI.</p> <p>7320. AQUILEGIA STUARTI (?)</p> <p>7321. AQUILEGIA VERVAENEANA FOL. VAR.</p> <p>7322. HYDRIASTELE WENDLANDIANA.</p> <p>7323. THRINAX ALTISSIMA.</p> <p>7324. ACANTHUS MOLLIS.</p> <p>7325. CAESALPINIA SEPIARIA.</p> <p>7326. PYRETHRUM ROSEUM HYBRIDUM (?)</p> | <p>7327. BOCCONIA FRUTESCENS.</p> <p>7328. CARICA PAPAYA.</p> <p>7329. ACANTHUS MOLLIS.</p> <p>7330. BERBERIS WALLICHIANA.</p> <p>7331. CORYPHA ELATA.</p> <p>7332. LIVISTONA AUSTRALIS MACROPHYLLA.</p> <p>7333. ULEX EUROPAEUS.</p> <p>7334. CERATONIA SILIQUA.</p> <p>7335. PISTACIA VERA.
Pistache.</p> <p>7336. PISTACIA LENTISCUS.
Mastic.</p> <p>7337. PINANGA DECORA (?)</p> <p>7338. THRINAX ARGENTEA.</p> <p>7339. COCOS ROMANZOFFIANA.</p> <p>7340. PANDANUS AQUATICUS.</p> |
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7341. LUPINUS HIRSUTUS. Blue lupine.

From Vomero, near Naples, Italy. Received through Mr. C. Sprenger, August 13, 1901.

Used as an ornamental plant, also valued for fodder and as a green manure.

7342 to 7365.

From London, England. Received through Mr. William Bull, August 14, 1901.

A collection of plants, as follows (the nomenclature is in the main that given by Mr. Bull):

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| <p>7342. JASMINUM NITIDUM.</p> <p>7343. LICUALA MUELLERI.</p> <p>7344. CAMOENSIA MAXIMA.</p> <p>7345. CEROPEGIA WOODI.</p> <p>7346. CODIAEUM VARIEGATUM.
Croton broomfieldii.</p> <p>7347. CODIAEUM VARIEGATUM.
Croton excurrens.</p> <p>7348. CODIAEUM VARIEGATUM.
Croton insignis.</p> <p>7349. CODIAEUM VARIEGATUM.
Croton memphis.</p> | <p>7350. CODIAEUM VARIEGATUM.
Croton sceptre.</p> <p>7351. CODIAEUM VARIEGATUM.
Croton elysian.</p> <p>7352. CODIAEUM VARIEGATUM.
Croton elvira.</p> <p>7353. CODIAEUM VARIEGATUM.
Croton euterpe.</p> <p>7354. CODIAEUM VARIEGATUM.
Croton hermon.</p> <p>7355. FICUS RADICANS VARIEGATA.</p> <p>7356. FICUS INDICA.</p> |
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7342 to 7365—Continued.

7357.	CINCHONA OFFICINALIS.	Peruvian bark.
7358.	CALODENDRUM CAPENSIS.	Cape chestnut.
7359.	HIBISCUS ELATUS.	
7360.	PSYCHOTRIA (?) IPECACUANHA.	Ipecacuanha.
7361.	KICKSIA AFRICANA.	Lagos rubber.
7362.	SALVADORA PERSICA.	Mustard tree of Scripture.
7363.	EPIPREMNUM MIRABILE.	Tonga.
7364.	ANTIARIS TOXICARIA.	Upas tree.
7365.	STANGERIA PARADOXA.	

7366. ANANAS SATIVUS. Pineapple.

From West Palmbeach, Fla. Received from Mr. George C. Matthams, August 13, 1901.

Ripley Queen.

7367 to 7396.

From Mexico. Received through Dr. J. N. Rose (Nos. 270-299), August 15, 1901.

A collection of Mexican plants and bulbs, as follows (Doctor Rose's numbers are retained for identification):

7367.	TILLANDSIA sp. (No. 270.)	7375. (No. 278.) Flat-spined.	Cactus.
7368.	COTYLEDON sp. (No. 271.)	7376. (No. 279.) Long-spined.	Cactus.
7369.	COTYLEDON sp. (No. 272.)	7377. (No. 280.) Round.	Cactus.
7370.	COTYLEDON sp. (No. 273.)	7378. (No. 281.) Four-spined.	Cactus.
7371.	AGAVE sp. (No. 274.)	7379. OPUNTIA sp. (No. 282.)	
7372.	AGAVE sp. (No. 275.)	7380. MAMILLARIA sp. (No. 283.) Oblong.	
7373.	COTYLEDON sp. (No. 276.)	7381. MAMILLARIA sp. (No. 284.) Round.	
7374.	COTYLEDON sp. (No. 277.)	7382. (No. 285.) Tall.	Cactus.

7367 to 7396—Continued.

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| 7383. CISSUS sp. (No. 286.) | 7390. COTYLEDON sp. (No. 293.) |
| 7384. TILLANDSIA sp. (No. 287.) | 7391. NOLINA sp. (No. 294.) |
| 7385. TILLANDSIA sp. (No. 288.) | 7392. YUCCA sp. (No. 295.) |
| 7386. TILLANDSIA sp. (No. 289.) | 7393. ZEPHYRANTHES sp. (No. 296.) |
| 7387. HECHTIA sp. (No. 290.) | 7394. COTYLEDON sp. (No. 297.) |
| 7388. FOUQUIERIA sp. (No. 291.) | |
| 7389. (No. 292.) | |

7395. SOLANUM sp. (No. 298.) Potato.

Half-wild potatoes from Mount Orizaba.

7396. SOLANUM sp. (No. 299.) Potato.

A small wild potato from near City of Mexico.

7397. CUCUMIS MELO. Muskmelon.

From Savannah, Ga. Received through Mr. D. G. Purse, president of the Savannah Board of Trade, August 17, 1901.

Seeds from a 32-pound muskmelon.

7398. AMYGDALUS COMMUNIS. Almond.

From Malaga, Spain. Received through Mr. D. G. Fairchild (No. 765), August 19, 1901.

Jordan. "Bud sticks of the famous *Jordan* almond of commerce, which is imported into America in large quantities every year. These bud sticks were taken before the almonds were harvested in almost all cases, and from trees still bearing the *Jordan* almonds. They were difficult to obtain, and it is hoped can be grafted this autumn. This variety is without question the finest almond of its class in the world. It is exported from Spain, largely as shelled kernels, to England and the United States, and is used extensively in these places for the manufacture of confectionery. Its typical long, plump shape distinguishes it from any other sort grown in Spain. It has a very thin, delicate skin and fine, white, highly flavored flesh. There are orchards of considerable size in Spain of this variety, but as a rule the trees are scattered irregularly over the hillsides among the Sierras back of Malaga. A famous locality for them is at Alora, a half hour's railroad ride from Malaga. No special care is given the trees and many of the orchards are quite old. The soil on which they are grown is a light gravel, not fitted for any other culture. In summer it gets exceedingly dry, but the trees seem to withstand the drought very well." (*Fairchild.*)

7399 and 7400. CERATONIA SILIQUA. Carob.

From Malaga, Spain. Received through Mr. D. G. Fairchild (No. 766), August 19, 1901.

Castillana. "One of the best varieties of carob, or St. John's bread, in Spain, and probably one of the best in the world. It is eaten by the natives in the same way that the variety *Vera* is in the region of Alicante. It has a very thick, medium-sized pod, which is very sweet. Produces abundantly and is not grafted with the male variety, as in Alicante." (*Fairchild.*) See No. 7132.

7401. AMYGDALUS COMMUNIS. Almond.

From Malaga, Spain. Received through Mr. D. G. Fairchild (No. 771), August 20, 1901.

Jordan. "Bud sticks from the garden of Cristobal Paloma, of Malaga. These are probably like the former buds of this same variety, but are forwarded to make sure of getting the best strains." (*Fairchild.*)

7402 to 7413.

From Mexico. Received through Dr. J. N. Rose, August 20, 1901.

A collection of native plants, bulbs, and seeds, as follows (the numbers given by Doctor Rose are retained for identification):

- 7402.** ZEPHYRANTHES sp. (No. 268.)
- 7403.** COTYLEDON sp. (No. 300.)
"Large red flowers." (Rose.)
- 7404.** ARGEMONE sp. (No. 301.)
"Large white flowers." (Rose.)
- 7405.** ZEPHYRANTHES sp. (No. 302.)
- 7406.** CUCURBITA sp. (No. 5287.)
- 7407.** RUBUS sp. (No. 5380.)
"A beautiful flowering shrub." (Rose.)
- 7408.** PITHECOLOBIUM sp. (No. 5840.)
"A shrub." (Rose.)
- 7409.** CUCURBITA sp. (No. 5899 ?.)
- 7410.** SOLANUM sp. (No. 5944.)
"Large purple flowers." (Rose.)
- 7411.** SPHAERALCEA sp. (No. 5945.)
"A large, beautiful flowering shrub much used in Mexican parks." (Rose.)
- 7412.** OXALIS sp. (No. 5956.)
- 7413.** [Undetermined.] (No. 303.)
"Forty-nine bulbs of a beautiful white flowering water lily. The flowers stand up above the water." (Rose.)

7414 to 7421.

From Naples, Italy. Received from Dammann & Co., August 20, 1901.

A collection of seeds as follows (the nomenclature is in large part Dammann's):

- | | |
|--------------------------------------|---|
| 7414. ANACARDIUM OCCIDENTALE, | 7419. GAZANIA HYBRIDA.
<i>Nora.</i> |
| 7415. INGA DULCIS. | 7420. GAZANIA HYBRIDA.
<i>Diana.</i> |
| 7416. TRACHYCARPUS EXCELSUS. | 7421. GAZANIA HYBRIDA.
<i>Blondine.</i> |
| 7417. FICUS ELASTICA. | |
| 7418. FICUS MACROPHYLLA. | |

7422. TRITICUM sp.**Wheat.**

From Girgeh Province, Egypt. Received through Mr. D. G. Fairchild (No. 655), August 20, 1901.

"Selected Egyptian wheat secured through the kindness of Sir William Willcocks, from typical 'basin' irrigated lands of the upper Nile. This is especially for trial in the Colorado Desert experiments. It is a winter wheat in Egypt, but matures by the first (or middle at latest) of May. Probably will be more or less mixed and contain both hard and soft varieties." (Fairchild.)

7423. CORYLUS AVELLANA.

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 752), August 30, 1901.

"Sample seeds of what are called here on the market 'Avellinas.' They are grown near Valencia, I am told, and are one of the common sorts of hazelnuts. It is a fairly thin-shelled nut but its skin is flakey and too heavy to make it of first quality." (*Fairchild.*)

7424. CYPERUS ESCULENTUS.**Chufas.**

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 753), August 30, 1901.

"Sample of the 'Chufa' of Spain, for planting in Louisiana and other places in the South. The culture is said to be simple and lucrative in Spain. When soaked in water the rootstocks swell up and are then very sweet and palatable. They are sold as we sell peanuts on the streets. Children are very fond of them, and they are used very extensively in the manufacture, in Madrid, of a delicious ice called '*Horchata di Chufas.*'" (*Fairchild.*)

7425. TRITICUM DURUM.**Wheat.**

From Cordova, Spain. Received through Mr. D. G. Fairchild (No. 764), August 30, 1901.

Negro. "A black-bearded durum wheat grown largely about Cordova. It is called *Negro* simply, but I believe is the *Barba Negro*, from which the *Pelissier* wheat is said to have originated. None of these wheats are much exported, and it is impossible to determine here their macaroni-making properties." (*Fairchild.*)

7426. VICIA FABA.**Broad bean.**

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 755), August 30, 1901.

Mahonesas. "A variety of broad bean, preferred for boiling purposes by Alicanians. Comes from Mahon in the Balearic Islands." (*Fairchild.*)

7427. HORDEUM TETRASTICHUM.**Barley.**

From Albacete, Spain. Received through Mr. D. G. Fairchild (No. 761). Sample received August 21, 1901; 88 kilos received January 14, 1902.

Albacete. "The barley of this dry plateau region of southeastern Spain is used for brewing purposes. Although its quality for this purpose can not compare with the best *Hanna* barley, it is a good variety and worthy of trial by breeders in the southwest." (*Fairchild.*)

7428. TRITICUM DURUM.**Wheat.**

From Albacete, Spain. Received through Mr. D. G. Fairchild (No. 758), January 14, 1902.

"This is the ordinary durum wheat of this dry plateau. It is not, I am told by a dealer in Murcia, as 'strong' a variety as the Russian so-called *Tuganrog*, and hence is not exported, but from what I saw of it I judge it will prove resistant to rust in a fairly high degree. No distinctive name was discoverable. It is the only hard variety." (*Fairchild.*)

7429. TRITICUM VULGARE.**Wheat.**

From Albacete, Spain. Received through Mr. D. G. Fairchild (No. 759), January 14, 1902.

Candial. "A soft variety of wheat grown on this dry plateau in southeastern Spain. This variety is very highly esteemed as a bread-making sort for home use. It may prove valuable for our dry southern plains, for it is grown without irrigation. It is quite distinct from the variety known by the name of Candial in South America, being a soft wheat, while the South American kind is a hard wheat." (*Fairchild.*)

7430. TRITICUM DURUM (?)**Wheat.**

From Albacete, Spain. Received through Mr. D. G. Fairchild (No. 760), January 14, 1902.

Gejar. "A semihard wheat, which is said to be the best for the manufacture of macaroni of any in Spain. It is not so 'strong' as the *Taganrog*, I am told, but has a very fine gluten, which makes it sought after by Spanish macaroni makers. It is grown on the high plateau of southeastern Spain without irrigation, and is suited for trial in the southwest." (*Fairchild.*)

7431 to 7438. MORUS sp.**Mulberry.**

From Murcia, Spain. Received through Mr. D. G. Fairchild (No. 757, f, g, h, i, j, k, l, m, n), August 21, 1901.

Various species of mulberry for silkworm feeding. All dead except:

7431. *Alba nervosa.* (757 f.)

7436. *Fertil de Italia.* (757 l.)

(See Nos. 7141 to 7145.)

7439. AGAVE UNIVITATA.**Lechuguilla.**

From Tamaulipas, Mexico. Received through Mr. L. H. Dewey, August 31, 1901. Presented by Mr. H. Riehl.

A Tampico fiber plant.

7440. PUNICA GRANATUM.**Pomegranate.**

From the island of Chios, Turkey. Presented by Mr. N. J. Pantelides, through Mr. D. G. Fairchild. Received August 23, 1901.

"Scions of a variety of pomegranate which has seeds that are very tender coated. Probably a similar variety to that commonly cultivated on the coast of Spain and considered the best market variety there." (*Fairchild.*)

7441 to 7445.

From Nice, France. Presented by Mr. A. Robertson-Proschowsky. Received August 23, 1901.

A collection of seeds as follows:

7441. *TRACHYCARPUS EXCELSUS.*

7442. *PHOENIX RECLINATA.*

7443. *PHOENIX.*

Hybrid pollinated with *P. reclinata.*

7444. *PHOENIX PUMILA.*

Pollinated with *P. reclinata.*

7445. *PSIDIUM CATTLEYANUM.*

7446.

From Mexico. Received through Dr. J. N. Rose (No. 304), August 24, 1901.

7447.

From Mexico. Received through Dr. J. N. Rose (No. 305), August 24, 1901.

7448. CAPSICUM ANNUM. **Red pepper.**

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 754), August 21, 1901.

"A very fine variety of red pepper grown at Aspra, not far from Elche, near Alicante. It forms a showy object in the market place and is grown extensively." (Fairchild.)

7449. PIMPINELLA ANISUM. **Anise.**

From Alicante, Spain. Received through Mr. D. G. Fairchild, August 24, 1901.

"The anise seed of southeastern Spain is noted. One firm here has exported 40,000 'vielás' in a single year. Used in Amsterdam for the manufacture of anisette." (Fairchild.)

7450. AVENA SATIVA. **Oat.**

From Alicante, Spain. Received through Mr. D. G. Fairchild, August 24, 1901.

"Sample of oats from market." (Fairchild.)

7451. HORDEUM VULGARE. **Barley.**

From Alicante, Spain. Received through Mr. D. G. Fairchild, August 24, 1901.

"Sample of barley from market." (Fairchild.)

7452 to 7458. AMYGDALUS COMMUNIS. **Almond.**

From Alicante, Spain. Received through Mr. D. G. Fairchild, August 24, 1901.

Almond fruits as follows:

7452.

Mollar. From same tree as No. 7061.

7455.

Fabrica. From same tree as No. 7135.

7453.

Planeta. From same tree as No. 7134.

7456.

Planeta. From a grower.

7457.

Planeta. From a grower.

7454.

Castillet. From same tree as No. 7133.

7458.

Pastaneta. From a grower.

7459. TRITICUM DURUM. **Wheat.**

From near Alicante, Spain. Received through Mr. D. G. Fairchild, August 24, 1901.

"Sample of wheat from threshing floor." (Fairchild.)

7460. CERATONIA SILIQUA. **Carob.**

From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 743), August 24, 1901.

Negra. Seed pods from same tree as cuttings. (No. 7063.)

7461. CERATONIA SILIQUA. **Carob.**

From Alicante, Spain. Received through Mr. D. G. Fairchild, (No. 744) August 24, 1901.

Verá. "Seed pods. This is said to be one of the sweetest varieties known. It is planted for table use especially and is too valuable for horse food. The yield is irregular and small compared with other sorts." (Fairchild.)

- 7462. CICER ARIETINUM. Chick-pea.**
From Cordova, Spain. Received through Mr. D. G. Fairchild, August 24, 1901.
- 7463. TRITICUM DURUM. Wheat.**
From Alicante, Spain. Received through Mr. D. G. Fairchild (No. 763), August 24, 1901.
Berberisco. "A variety of wheat which was introduced into Spain many years ago from Barbary, and which has won for itself the reputation of being a larger yielder and having better grain than the durum wheat *Blanco*, No. 7464. It would be interesting to try this in comparison with Algerian wheats, which are said to have originated (part of them at least) from imported Spanish sorts." (*Fairchild.*)
- 7464. TRITICUM DURUM. Wheat.**
From Cordova, Spain. Received through Mr. D. G. Fairchild (No. 762), August 24, 1901.
Blanco. "A native variety of hard wheat grown about Cordova which has the reputation of being of a fair quality and, although not so productive as the so-called *Berberisco*, it is more resistant to drought. I believe it will also prove resistant to rust in a fair degree." (*Fairchild.*)
- 7465. TRITICUM DURUM. Wheat.**
From Uralsk, Russia. Received through Mr. A. A. Vannohin, August 29, 1901.
Kubanka. (See No. 5639, Inventory No. 10.)
- 7466. TRITICUM VULGARE. Wheat.**
From Padui, Russia. Received through Mr. M. Narishkin, August 29, 1901.
Padui. (See No. 5640, Inventory No. 10.)
- 7467. TRITICUM VULGARE. Wheat.**
From Kharkof, Russia. Received through Dr. A. Boenicke, August 29, 1901.
Kharkof. (See No. 5641, Inventory No. 10.)
- 7468. GARCINIA MANGOSTANA. Mangosteen.**
From Heneratgoda, Ceylon. Received through J. P. William & Bros., August 29, 1901.
- 7469 to 7490.**
From Mexico. Received through Dr. J. N. Rose (Nos. 306 to 327), August 30, 1901.
A collection of Mexican plants and bulbs as follows (Doctor Rose's numbers are given for purposes of identification):
- | | |
|--------------|----------------|
| 7469. | Orchid. |
| (No. 306.) | |
| 7470. | Orchid. |
| (No. 307.) | |
| 7471. | Orchid. |
| (No. 308.) | |
| 7472. | Orchid. |
| (No. 309.) | |

7469 to 7490—Continued.

7473. (No. 310.)		Orchid.
7474. (No. 311.)		Orchid.
7475. (No. 312.)		Orchid.
7476. (No. 313.)		Orchid.
7477. (No. 314.)		Orchid.
7478. (No. 315.)		Orchid.
7479. COTYLEDON sp. (No. 316.)	7484. TILLANDSIA sp. (No. 321.)	
7480. ARUM sp. (?). (No. 317.)	7485. ZEPHYRANTHES sp. (No. 322.)	
7481. TILLANDSIA sp. (No. 318.)	7486. TILLANDSIA sp. (No. 323.)	
7482. TILLANDSIA sp. (No. 319.)	7487. COTYLEDON sp. (No. 324.)	
7483. TILLANDSIA sp. (No. 320.)	7488. AGAVE sp. (No. 325.)	
7489. SOLANUM sp. (No. 326.)		Potato.
7490. (No. 327.)		

7491 to 7495.

From Mexico. Received through Dr. J. N. Rose (Nos. 6259 and 328 to 331), August 31, 1901.

A collection of Mexican plants and bulbs, as follows:

7491. (No. 6259.)	7494. (No. 330.)
7492. (No. 328.)	7495. (No. 331.)
7493. (No. 329.)	

7496. CISSUS.

From Eagle Pass, Tex. Received through Dr. J. N. Rose, September 5, 1901.

7497.

From Mexico. Received through Dr. J. N. Rose (No. 259), September 5, 1901.

7498. VICIA FABA.**Broad bean.**

From Vomero-Naples, Italy. Received through Mr. C. Sprenger, September 5, 1901.

St. Pantaleone. "A new variety of bean having very long pods." (*Sprenger.*)

7499. ANACARDIUM OCCIDENTALE.**Cashew.**

From Kingston, Jamaica. Received through Mr. W. Harris, assistant superintendent of the Hope Gardens, September 5, 1901.

7500. MEDICAGO SATIVA.**Alfalfa.**

From Oued Rirh oasis, northern Sahara Desert. Received through Mr. W. T. Swingle from French and Arab foremen of the European date plantations. Received May, 1901.

"An early sort, resisting drought and alkali much better than the ordinary alfalfa." (*Swingle.*)

7501. SPONDIAS sp.**Ciruela.**

From Iguala, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 10, 1901.

Dried fruit.

7502. ZEA MAYS.**Corn.**

From Tampico, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 10, 1901.

Large White Mexican.

7503. PHASEOLUS VULGARIS.**Bean.**

From City of Mexico, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 10, 1901.

Large Purple.

7504. PHASEOLUS VULGARIS.**Bean.**

From City of Mexico, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 10, 1901.

Ballo Gordo. A yellow bean.

7505. CASIMIROA EDULIS.**White sapota.**

From Guadalajara, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 10, 1901.

Zapote Blanco.

7506. (Unidentified seeds.)

From City of Mexico, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 10, 1901.

Pepita para mole verde. "Sold in roasted condition on streets of Mexico." (*Stearns.*)

7507. OPUNTIA sp.

From City of Mexico, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 10, 1901.

Tuna Colorado. "Fruit is the size of a duck's egg, and has very red flesh." (*Stearns.*)

- 7508. CUCURBITA sp. Pumpkin.**
 From City of Mexico, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 10, 1901.
Spargel Kurbis.
- 7509. CEREUS sp. (?) Pitahaya.**
 From Tampico and Guadalajara, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 10, 1901.
 "Fruit pink, large, sweet, and fine eating." (See Cont. U. S. Herb., Vol. V, No. 4, pp. 220-221.)
- 7510. CARICA PAPAYA. Papaw.**
 From Tampico, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 10, 1901.
 "Fruit very large." (*Stearns.*)
- 7511. CUCUMIS SATIVUS (?) Cucumber.**
 From City of Mexico, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 10, 1901.
 "Fruit of fine flavor, round, the size of a large apple. Bears large crop." (*Stearns.*)
- 7512 to 7515. TRITICUM VULGARE. Wheat.**
 From Proskurow, Russia. Received through Dr. S. Mrozinski, September 9, 1901.
 Samples of wheat as follows:
- 7512.**
Sandomirka. "A beardless wheat grown in Podolia. It is very resistant to frost, heat, and drought. This wheat was first grown in the vicinity of Sandomir, in Poland." (*Mrozinski.*)
- 7513.**
Plock. "A variety of wheat introduced into Podolia from Plock, Poland. It is especially noted for its resistance to the effect of rain storms." (*Mrozinski.*)
- 7514.**
Triumph of Podolia. "An improved local species, very productive and resistant to all climatic changes." (*Mrozinski.*)
- 7515.**
Banat. "Selected from the original Hungarian *Banat*. It is noted for not degenerating as easily as the original." (*Mrozinski.*)
- 7516 and 7517. AMYGDALUS COMMUNIS. Almond.**
 From Malaga, Spain. Received through Mr. D. G. Fairchild (No. 769), September 13, 1901.
Jordan. "Bought in the shell from a grower in the Sierra, at a small village called Almogia, one hour's mule ride from the well-known road of Antiquera. This is a collection as it came from the trees, small and large together, and is for purposes of seed selection. It is highly probable that new varieties (seedlings) can be secured from these seeds, and they should be distributed to breeders of *Prunus*. Almost all the trees about Malaga, where this particular variety is grown and from which place almonds are shipped in large quantities to America, are budded trees. The stock is the bitter almond, seeds of which (No. 7517) are included in the same box with the Jordans. I am told, however, that seedling plants are employed and that they bear fruit reasonably true to type. The soil on which these trees are grown is very rocky

and light and at this season is quite dry and dusty. Hillsides and high-lying valleys are the favorite spots for their cultivation, and the secret of their culture seems to lie in the freedom from spring frosts. They flower in January and February, and even about Malaga a crop is often lost by a frost at flowering time. These frosts being quite local, one often hears in one valley of a total loss of the crop in a neighboring one. These seeds may prove very valuable in originating later-blooming sorts of good quality and in discovering valleys suited to their culture. The seed should be carefully inspected and all specimens with gum adhering discarded. I recommend, further, that the remaining be washed with copper sulphate or some other disinfectant and well rinsed with fresh water. The disease called *Gummosis* is a troublesome one and exists in all the orchards I have visited. It is important that this disease, if it really is one, be not introduced into California. I am unaware if it is already there and has been studied. I have seen trees that appeared to be dying of the disease. Nuts attacked by it are worthless. These seeds should be stratified and planted without cracking in rich garden earth. Budding is done here only in April." (*Fairchild.*)

7518. ROMNEYA COULTERI.**Matilija poppy.**

From Los Angeles, Cal. Received through Mr. Elmer Stearns, September 20, 1901.

7519. CEREUS sp. (?)**Pitahaya.**

From Guadalajara, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 20, 1901.

"Fruit three to four inches long and two inches in diameter. Skin reddish pink. Pulp white and jellylike, with the seeds distributed through it. Sweet and fine eating." (*Stearns.*)

7520 to 7534.

From Paris, France. Received through Vilmorin-Andrieux & Co., September 21, 1901.

A collection of agricultural seeds, as follows:

7520. TRIGONELLA FOENUM-GRÆCUM.	Fenugreek.
7521. LATHYRUS CICER. <i>Gesse jarosse.</i>	Vetch.
7522. ERVUM MONANTHOS. One-flowered lentil.	Lentil.
7523. ERVUM LENS HIEMALE. Red winter lentil.	Lentil.
7524. LUPINUS ALBUS. White lupine.	Lupine.
7525. LUPINUS LUTEUS. Yellow lupine.	Lupine.
7526. ONOBRYCHIS ONOBRYCHIS.	Sainfoin.
7527. ONOBRYCHIS ONOBRYCHIS. <i>Sainfoin à deux coupes.</i>	Sainfoin.
7528. HEDYSARUM CORONARIUM. Spanish Sulla.	Sulla.
7529. TRIFOLIUM INCARNATUM. Early variety.	Crimson clover.

7520 to 7534—Continued.

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|--------------|--|------------------------|
| 7530. | TRIFOLIUM INCARNATUM. | Crimson clover. |
| | Very late variety, with white flowers. | |
| 7531. | SECALE CEREALE. | Rye. |
| | Giant winter. | |
| 7532. | VICIA NARBONNENSIS. | Narbonne vetch. |
| 7533. | VICIA VILLOSA. | Hairy vetch. |
| 7534. | LATHYRUS OCHRUS. | Vetch. |

7535. LUPINUS ANGUSTIFOLIUS. Blue lupine.

From Eustis, Fla. Sent by Mr. F. W. Savage through Mr. W. T. Swingle.
Received September 23, 1901.

A North African variety. Grown from No. 5583.

7536 to 7556.

From Paris, France. Received through Vilmorin Andrieux & Co., September 23, 1901.

A collection of seeds as follows:

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|--------------|----------------------------------|--------------|------------------------|
| 7536. | ALBIZZIA JULIBRISSIN (?) | 7546. | CYCAS NORMANBYANA. |
| 7537. | MORUS ALBA. Hat-var.
MORETTI. | 7547. | LICUALA GRANDIS. |
| 7538. | SCHINUS MOLLE. | 7548. | LIVISTONA JENKINSIANA. |
| 7539. | SCHINUS TEREBINTHIFOLIUS. | 7549. | CINCHONA CALISAYA. |
| 7540. | FICUS ELASTICA. | 7550. | CINCHONA LEDGERIANA. |
| 7541. | CAESALPINIA BONDUCELLA. | 7551. | CINCHONA CALISAYA. |
| 7542. | HURA CREPITANS. | 7552. | CINCHONA SUCCI-RUBRA. |
| 7543. | SWIETENIA MAHAGONI. | 7553. | LESPEDEZA SIEBOLDI. |
| 7544. | COLUIFERA BALSAMINUM. | 7554. | ILEX INTEGR. |
| 7545. | ARENCA SACCHARIFERA. | 7555. | ABRUS PRECATORIUS. |
| | | 7556. | LEUCADENDRON ARGENTUM. |

7557 to 7574.

From St. Albans, England. Received through Sander & Co., September 24, 1901.

A collection of plants as follows:

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|--------------|---|--------------|----------------------|
| 7557. | RICHARDIA sp.
Calla leucoxantha. | 7559. | PANAX AUREUM. |
| 7558. | LEEA SAMBUCINA. | 7560. | PASSIFLORA PRUINOSA. |
| 7561. | DIANTHUS CARYOPHYLLUS.
<i>Ivaahoe.</i> | | Carnation. |

7557 to 7574—Continued.

7562.	DIANTHUS CARYOPHYLLUS. <i>J. Coles.</i>	Carnation.
7563.	DIANTHUS CARYOPHYLLUS. <i>Lily Measures.</i>	Carnation.
7564.	DIANTHUS CARYOPHYLLUS. <i>Mrs. F. Sander.</i>	Carnation.
7565.	DIANTHUS CARYOPHYLLUS. <i>Monica.</i>	Carnation.
7566.	DIANTHUS CARYOPHYLLUS. <i>Mrs. Joicey.</i>	Carnation.
7567.	RICHARDIA sp. Calla Elliottiana Rossii.	
7568.	ACANTHOPHOENIX CRI- NITA.	7571. CYTOSTACHYS RENDA.
7569.	BENTINCKIA NICOBARICA.	7572. HETEROSPATHE ELATA.
7570.	COCOS CORONATA.	7573. PTYCHORAPHIS AUGUSTA.
		7574. KENTIA SANDERIANA.

7575 and 7576. TRITICUM DURUM.

Wheat.

Grown by Oscar C. Snow, Mesilla Park, N. Mex., under contract. Distributed from the New Mexico Agricultural Experiment Station. Reported ready for delivery September, 1901.

7575. *Gharnovka*, grown from No. 5643.

7576. *Kubanka*, grown from No. 5639.

7577. PHYSALIS PERUVIANA.

Cape gooseberry.

From Lima, Peru. Received through Mr. Elmer Stearns, Los Angeles, Cal., September 26, 1901.

Jaranjilla. "Plant 2 to 3 feet tall, branching, leaves large. Fruits abundant. The local name means Little Orange." (*Stearns.*)

7578. TRITICUM DURUM.

Wheat.

From province of Oran, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 721), September 26, 1901.

Marouani. "This wheat is cultivated extensively on the elevated rolling lands in the western part of the province, and is one of the best of the types of durum wheats cultivated by the Arabs. The quantity obtained is from the estate of M. J. Labouresse, at Tessala, near Sidi-bel-Abbès. It has been carefully selected by Mr. Labouresse from year to year until a fairly pure and very vigorous stock has been obtained. The variety is very hardy, resistant to rust, and succeeds fairly well under rather droughty conditions. The grain is especially adapted for the manufacture of semolina. In the province of Oran the wheat is sown in November and ripens in June, but it might succeed as a spring wheat in the spring-wheat region of the northern United States." (*Fairchild and Scofield.*)

7579. TRITICUM DURUM.

Wheat.

From Sidi-bel-Abbès, province of Oran, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 722), September 26, 1901.

Medeah. "This is one of the best-known macaroni wheat varieties of western Algeria. When grown on the high rolling lands in the vicinity of the city of Medeah it produces a grain with very valuable macaroni-making qualities. It was recently introduced into the vicinity of Sidi-bel-Abbès, where it gives promise of being a very valuable sort, ripening ten to fifteen days earlier than the Marouani and similar

sorts grown in that vicinity. It is ordinarily sown here in November and ripens early in June, but it is worth trying as a spring wheat in the northern United States. The sample obtained is from the farm of M. J. Labouresse, of Tessala, near Sidi-bel-Abbès, which latter is one of the noted wheat growing districts of Algeria, possessing a light rich soil." (*Fairchild and Scofield.*)

7580. TRITICUM DURUM.**Wheat.**

From Batna, Constantine, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 729), September 26, 1901.

Ajini. "This wheat is from stock grown by the Arabs on the rolling lands of the Aurès Mountains, east of Batna, where the summer temperature often reaches 100° F. and where it frequently drops to zero in winter. It is a variety highly spoken of by the macaroni manufacturers of Marseille, and, although rapidly deteriorating in quality, when cultivated there, has given very good yields when grown without irrigation on lower lands of the high plateau of the province of Constantine. The soil on these lands is excessively rich in sulphate of magnesia and is of a hard and gravelly nature. Although a winter wheat in Batna, being sown in December or January and harvested early in July, it will be worth a trial in the spring-wheat region. The seed obtained is from Arab growers, whose methods of culture are very primitive, and the Department is indebted to Mr. G. Ryf, manager of the Geneva Society of Setif, for its purchase from them." (*Fairchild and Scofield.*)

7581. TRITICUM DURUM.**Wheat.**

From El-Outaya, Constantine, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 730), September 26, 1901.

Kahla. "This wheat will be found to differ from the *Kahla*, No. 7794, of the high plateau region, as it comes from plants grown by irrigation on the somewhat salty sands of the northern Sahara Desert. It is one of the few sorts of wheats that maintain their good quality when grown year after year in slightly alkaline soils. It is highly valued by the Arabs for its rich content of elastic gluten. It is grown on land that probably has at least 5 per cent of salt in it and the irrigation water itself with which the plants are irrigated is slightly salty, not so salty, however, as to be quite undrinkable. The wheat is planted in El-Outaya in December or January, but it might be worth trying as a spring wheat in the North. This seed is from the farm of Mr. Charles des Places at El-Outaya. As a macaroni wheat its rank is not known, but its ability to grow in alkaline soil makes it especially valuable for any experiments in the irrigated salt lands of America. We were told that a change of seed was especially beneficial on these salt lands. Quantities of wheat are brought down from the neighboring mountains to plant on these salt lands. This change of seed forbids the formation of any salt-resistant race, but does not change the interest in these wheats for other salt lands." (*Fairchild and Scofield.*)

7582. TRITICUM VULGARE.**Wheat.**

From El-Outaya, Constantine, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 731), September 26, 1901.

Fretes. "This variety, sometimes called *Freitiss*, is one of the few soft wheats grown in Algeria. It is particularly noted for its early maturity and is often extensively planted in the Sahara Desert in seasons when the winter rains occur so late that the durum varieties usually grown would not have time to mature. When planted in November, as it is in Algeria, at the same time with durum varieties, it is said to ripen two months in advance of them. The seed obtained was grown on the rather salty desert sands in the vicinity of El-Outaya, north of Biskra, and watered with somewhat alkaline but still drinkable irrigation water. The variety is said to have originated from a shipment of Russian wheat which was made into Algeria at the time of a famine many years ago. Its early maturing qualities attracted attention, and it has been cultivated in small quantities by the Arabs ever since. The seed obtained is from the farm of Mr. Charles B. des Places." (*Fairchild and Scofield.*)

7583. HORDEUM TETRASTICHUM.**Barley.**

From El-Outaya, Constantine, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 732), September 26, 1901.

Beldi. "This and the following variety (No. 7584) are sorts planted on the saline soils of the edge of the Sahara Desert. They are grown by irrigation, but the irriga-

tion water itself is saline. In quality they are neither of them of superior excellence and are little used, if any, for beer-making purposes. The yield is small when compared with that of barley grown on good soils, but it nevertheless seems to pay the French colonists to grow it in these regions where very few plants of any kind succeed. The Arabs feed their horses largely on barley and even eat it themselves. Mr. des Places says, however, that on these saline soils where this barley is grown he finds a change of seed beneficial, even necessary, and he imports every year or two his seed barley and seed wheat from the mountains, because it so rapidly degenerates. These barleys are introduced for a trial on the salt lands of the Southwest. The names given are Arab ones for slightly different strains. Secured of Mr. Charles B. des Places." (*Fairchild and Scofield.*)

7584. HORDEUM TETRASTICHUM.**Barley.**

From El-Outaya, Constantine, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 733), September 26, 1901.

Telli. "A barley for salt lands under irrigation. See No. 7583 for description." (*Fairchild and Scofield.*)

7585. TRITICUM TURGIDUM.**Wheat.**

From Oran, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 734), September 26, 1901.

Black Poulard. "This is one of the so-called Poulard wheats, a class which is commonly grown in France on stiff or heavy soils unfavorable to the culture of less vigorous sorts. The quality of the grain is considered inferior to that of either *T. durum* or *T. vulgare*. It is particularly valuable on account of its vigorous growth and hardness. It is usually grown as an autumn wheat, but is worthy of trial on any land too heavy or too coarse to produce ordinary wheats to good advantage. The seed was secured from M. Vermeil, professor of agriculture at Oran, who has it growing in his experimental plats under the Arabic name of 'Kahla,' a name which, however, is applied in other parts of Algeria to a quite different variety of wheat. (See Nos. 7581 and 7794.) This is not a macaroni wheat, but may be used for flour making." (*Fairchild and Scofield.*)

7586. MEDICAGO SATIVA.**Alfalfa.**

From Setif, province of Constantine, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 735a), November 11, 1901.

"A wild variety which has been introduced into culture by Mr. G. Ryf, of Setif, who is conducting experiments, the results of which are published by the "Comice Agricole," of Setif, of which Mr. Ryf is a prominent member. This variety has been remarkable in its variation since its introduction to cultivation, and the seed should prove an excellent foundation stock from which to select varieties for special soils and conditions. In general it has been found very resistant to drought and well adapted to soils rich in phosphates. Mr. Ryf has an interesting method of cultivating it. He plants the seed in rows 39 inches apart and cultivates between the rows the first season. The following season the crops of hay are cut as rapidly as they come on, and the plants spread out, forming broad bands or rows. The season following, the space between the rows and all but a narrow band 8 inches wide of the alfalfa is plowed under and well tilled. After this cultivation a crop of wheat is sown between the rows of alfalfa, and when this is matured and removed a light cultivation is given, and the following year the rows of alfalfa are allowed to spread out and crops of hay are taken off. In this way wheat and alfalfa are alternated from year to year. Mr. Ryf finds that by following this method the perennial leguminous forage crops give much better results than annual ones. This he attributes largely to the extra amount of cultivation that this method permits. In fact he finds that for his conditions an extra cultivation of the soil gives better results in the following crop than the planting of an annual leguminous crop, with which cultivation is impossible. This is seed from a procumbent form of the plant." (*Fairchild and Scofield.*)

7587. MEDICAGO SATIVA.**Alfalfa.**

From Setif, Constantine, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 735a), November 11, 1901.

A wild variety, with erect form. (See No. 7586.)

7588. MEDICAGO MEDIA.

Sand lucern.

From Setif, Constantine, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 735a+), November 11, 1901.

Luzerne rustique.

7589. BAUHINIA sp.

White bauhinia.

From Mount Silinda, Melssetter district, Rhodesia, South Africa. Received through Dr. Wm. L. Thompson, October 1, 1901.

"Is quite rare. The flowers are large and beautiful and very abundant, but very delicate. The plant seems quite sensitive to frost and many plants have been injured by it this year." (*Thompson.*)

7590. BAUHINIA sp.

Red bauhinia.

From Mount Silinda, Melssetter district, Rhodesia, South Africa. Received through Dr. Wm. L. Thompson, October 1, 1901.

"The red variety is very widely and generally distributed over this region." (*Thompson.*)

7591 to 7630.

From London, England. Received through James H. Veitch & Sons, October 3, 1901.

A collection of ornamental plants as follows (nomenclature is that of the seedsmen):

7591. BEGONIA sp. **Begonia.**

Winter Cheer.

7592. BEGONIA sp. **Begonia.**

Adonis.

7593. BEGONIA CARMINATA. **Begonia.**

7594. BEGONIA sp. **Begonia.**

Ensign.

7595. BEGONIA EUDOKA. **Begonia.**

7596. BEGONIA INCOMPARABILIS. **Begonia.**

7597. BEGONIA sp. **Begonia.**

John Heal.

7598. BEGONIA sp. **Begonia.**

Mrs. Heal.

7599. BEGONIA sp. **Begonia.**

Venus.

7600. BEGONIA sp. **Begonia.**

Winter Perfection.

7601. CODIAEUM VARIEGATUM. **Croton.**

Mrs. McLeod.

7602. CODIAEUM VARIEGATUM. **Croton.**

Aigburth Gem.

7603. CODIAEUM VARIEGATUM. **Croton.**

Mrs. Iceton.

7591 to 7630—Continued.

7604. CODIAEUM VARIEGATUM. <i>Princess of Wales.</i>	Croton.
7605. DRACAENA sp. <i>Duchess of York.</i>	7613. MEDINILLA BORNENSIS.
7606. DRACAENA sp. <i>Esckhantei.</i>	7614. MEDINILLA MAGNIFICA.
7607. DRACAENA sp. <i>The Sirdar.</i>	7615. MUSSAENDA GRANDIFLORA.
7608. DRACAENA sp. <i>Exquisite.</i>	7616. ROUPALA POHLII.
7609. DRACAENA sp. <i>Donsetti.</i>	7617. VRIESIA FENESTRALIS.
7610. AMASONIA CALYCINA.	7618. TILLANDSIA LINDENIANA.
7611. MARANTA MAJOR.	7619. GUZMANIA MUSAICA.
7612. ALLAMANDA BLANCHETII.	7620. URCEOLINA PENDULA.
7625. DIANTHUS CARYOPHYLLUS. <i>Blush White.</i>	7621. ZINGIBER OFFICINALE.
7626. DIANTHUS CARYOPHYLLUS. <i>Lady Grimstone.</i>	7622. RICHARDIA ELLIOTTIANA.
7627. DIANTHUS CARYOPHYLLUS. <i>Lord Rosebery.</i>	7623. RICHARDIA PENTLANDI.
7628. DIANTHUS CARYOPHYLLUS. <i>Trumpeter.</i>	7624. HEDYCHUM GARDNERIANUM.
7629. DIANTHUS CARYOPHYLLUS. <i>George Maquat.</i>	Carnation.
7630. SEMELE ANDROGYNA.	Carnation.

7631 to 7636. PHOENIX DACTYLIFERA.

Date palm.

From Egypt. Received through Mr. D. G. Fairchild (No. 597) from Mr. Em. C. Zervudachi, Alexandria, October 2, 1901.

7631.

Amri. "One of the best varieties, of large size; color, garnet verging on black." (*Zervudachi.*)

7632.

Oga of Bedrichen. "Of medium size; color, garnet verging on black." (*Zervudachi.*)

7633.

Nagl-el-Basha. "One of the best varieties, of large size; color, yellowish." (*Zervudachi.*)

7631 to 7636—Continued.**7634.***Sultani* or *Soubaa-el-Sitti*. "One of the best varieties, of medium size; color, yellowish." (*Zervudachi*.)**7635.***Birke-el-Haggi*. "Of medium size; color, garnet verging on black." (*Zervudachi*.)**7636.***Am-hat*. "Of small size and yellowish color." (*Zervudachi*.)**7637. LATHYRUS TINGITANUS.****Tangier scarlet pea.**

From Algeria. Received through Mr. D. G. Fairchild, September 26, 1901.

7638. CICER ARIETINUM.**Chick-pea.**

From Rouïba, Algeria. Received through Mr. D. G. Fairchild, September 26, 1901.

7639. LATHYRUS SATIVUS.

From Rouïba, Algeria. Received through Mr. D. G. Fairchild, September 26, 1901.

7640 to 7645.

From Tunis, Tunis. Received through Mr. D. G. Fairchild (Nos. 697 to 702), October 4, 1901.

Samples of miscellaneous seeds presented by the School of Agriculture of Tunis.

7640. HORDEUM VULGARE.**Naked barley.***Chair-en Nebbi*. "Originated in Tunis, but grown in the trial gardens of the college for three years." (No. 697.) (*Fairchild*.)**7641. HORDEUM VULGARE.****Naked barley.**"From Turkestan. Grown three years in Agricultural College garden, Tunis." (No. 698.) (*Fairchild*.)**7642. TRIGONELLA FOENUM-GRAECUM.****Fenugreek.**"The grain is eaten by the Jewish women of Tunis in large quantities in order to increase their avoirdupois, it being the fashion to weigh as much as 200 pounds or more. Primarily, however, a forage and soiling crop." (No. 699.) (*Fairchild*.)**7643. ANDROPOGON HALAPENSIS.***Sorgho d' Alep*. "This is an important grain crop of north Africa. It hybridizes easily with broom corn and causes the latter to deteriorate." (No. 700.) (*Fairchild*.)**7644. CARTHAMNUS TINCTORIUS.****Safflower.**"Grown as an oil plant." (No. 701.) (*Fairchild*.)**7645. GUIZOTIA ABYSSINICA.**"An oil-producing plant used like sesame. It is grown similarly." (No. 702.) (*Fairchild*.)**7646. PENNISETUM SPICATUM.****Pearl millet.**

From Tunis, Tunis. Received through Mr. D. G. Fairchild (No. 696), October 4, 1901.

Millet de Chandelles. "Probably grown extensively in the south of the province of Tunis, about Gabez. Arabs use it for food, Europeans for forage. May be useful for breeding. From School of Agriculture, Tunis." (*Fairchild*.)

7647. GOSSYPIUM sp.**Cotton.**

From Tunis, Tunis. Received through Mr. D. G. Fairchild (No. 695), September 26, 1901.

Coton brune de Mallaganza. "Single boll of a brown cotton from the collection of cottons at the School of Agriculture of Tunis. Its origin is quite unknown." (Fairchild.)

7648. LINUM USITATISSIMUM.**Flax.**

From Oran, Tunis. Received through Mr. D. G. Fairchild (No. 717), September 26, 1901.

"Said to resist drought very well." (Fairchild.)

7649. LINUM USITATISSIMUM.**Flax.**

From Tunis, Tunis. Received through Mr. D. G. Fairchild (No. 716), September 26, 1901.

"Also said to be drought resistant." (Fairchild.)

7650 to 7653. TRITICUM DURUM.**Wheat.**

From Tunis, Tunis. Presented by the School of Agriculture of Tunis through Mr. D. G. Fairchild (Nos. 703 to 706). Received September 26, 1901.

Samples of wheat from the collection in the School of Agriculture of Tunis. They bear the following native names, for whose spelling Mr. R. Gagey, instructor at the college, is responsible:

7650.

Sba er Roumi (Sboa-el-Rcumia).
(No. 706.)

7652.

Médeah. (No. 704.)

7651.

Azizi. (No. 705.)

7653.

Abd-el-Kader. (No. 703.)

7654. CAPSICUM ANNUM.**Red pepper.**

From Tunis, Tunis. Received through Mr. D. G. Fairchild (No. 718), September 26, 1901.

"A large, very fine, long red pepper from market of Tunis." (Fairchild.)

7655. CICER ARIETINUM.**Chick-pea.**

From Tunis, Tunis. Received through Mr. D. G. Fairchild (No. 707, May 27, 1901), September 26, 1901.

"The native chick-pea of Tunis for comparative tests as to nodule-producing properties and resistance to drought. From the School of Agriculture in Tunis." (Fairchild.)

7656. LOTUS TETRAGONOLOBUS.**Square pea.**

From Tunis, Tunis. Received through Mr. D. G. Fairchild (No. 715, May 27, 1901), September 26, 1901.

"A new forage and seed legume being tried at the Tunis Agricultural College. Its root nodules are remarkable for their size and number, and its seed-bearing capacity is extraordinary." (Fairchild.)

7657. TRIFOLIUM ALEXANDRINUM.**Berseem.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 642, May 9, 1901), October 10, 1901.

Saida. "This variety stands somewhat intermediate in character between *Muscovi* and *Fachl*. Its long-root system enables it to withstand dry weather very well, and it is considered in Egypt as a variety of dry-land Berseem. It yields two cuttings

only, and is therefore sown in such regions as can be irrigated two or three times. It should be sown in autumn, on land with a limited power of irrigation, and will yield, on an average, about 6 tons of green fodder per acre at the first cutting and 4 or 5 at the second. It makes better hay than the *Muscovi*, but can not be considered of as great importance as that variety. The root system of this variety is longer than in either of the others." (*Fairchild*.)

7658. TRIFOLIUM ALEXANDRINUM.**Berseem.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 643, May 9, 1901), October 10, 1901.

Fachl. "This variety differs materially from the *Muscovi* (No. 7659), being used on land which is irrigated by the basin system, that is, by being overflowed for forty days in the autumn. The seed is broadcasted at the rate of a bushel an acre on the mud, and no later irrigations are found necessary, as the plant gives only one cutting. This, however, yields 9 tons of green fodder per acre and makes a better hay than the *Muscovi*. In order to secure the seed of this variety it is the practice to sow the same broadcast with wheat or barley, and the seed is separated from the grain by thrashing, it being much smaller and lighter. This variety will be limited in its use to regions where only one irrigation can be given during the winter, or possibly may prove valuable as a spring forage crop." (*Fairchild*.)

7659. TRIFOLIUM ALEXANDRINUM.**Berseem.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 644), October 10, 1901. Secured through the kindness of the secretary of the Khedivial Agricultural Society of Egypt, Mr. George P. Foaden.

Muscovi. "The great fodder and soiling crop of Egypt. An annual, leguminous, green fodder crop, considered indispensable by the Egyptians as a half-year rotation with cotton. Its fodder-producing value, effect upon the soil in storing up nitrogen, and cleansing effect are considered exceptional. It will be best suited to irrigated lands in warm climates, but might also be tested as a spring fodder crop in the northwestern coast States. In Egypt the seed is sown generally in October, after the soil has been thoroughly irrigated to prepare a moist bed for the seed. It is sown broadcast at the rate of not less than 40 pounds per acre. Even as high as 50 to 60 pounds are sown. This is due in part to the prevalence of weevils in the seed, which sometimes destroy the germinating power of a large percentage. The seed should be harrowed into the soil lightly, and when started the young plants should be given plenty of water. In Egypt the plants grow so rapidly that if sown toward the end of October a first cutting can be made after forty-five or fifty days, but if sown later, after the cooler weather has set in, it takes a much longer time for the plants to develop. Depending upon the amount of water and the temperature, the plants yield from four to five cuttings, yielding for the first and second cuttings about 8 tons of green forage per cutting and for the third and fourth cuttings somewhat less. In order to secure seed for next year's planting the plants should be left to stand after the fourth cutting, when they will go to seed. In Egypt the seed production is larger and heavier than in the case of clover. After each cutting a sufficiently long period should elapse before the plants are irrigated again, to allow the cut surfaces of the stems to dry out; otherwise the water will rot the plants. This fodder plant deserves a thorough test in the Colorado Desert region, beet-sugar regions of the Southwest, and as a soiling crop in the orchards of California." (*Fairchild*.)

7660. TRITICUM VULGARE.**Wheat.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 638, May 9, 1901), October 10, 1901.

Boli. "A soft wheat which is grown popularly about Cairo, and is considered one of the best soft wheats of Egypt. This sample comes from the grounds of the Khedivial Agricultural Society and was remarkably free from *Puccinia*, although the American wheat varieties, *Henderson's Pedigreed* and *Gold Corn*, growing adjacent, were very badly rusted. This *Boli* is an early ripening sort, at least one month earlier than above-mentioned American wheats. It is improbable that this variety will withstand a very low temperature, and it ought to do best in irrigated regions of the Southwest. It is planted about the 20th of November in Egypt and is cut the first week in May, although, from an American standpoint, it would be ripe by the last week in April. All wheat is left until dead ripe before cutting in Egypt. The temperature during the winter seldom goes below 40° F." (*Fairchild*.)

7661. SESAMUM INDICUM.**Sesame.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 635, May 9, 1901), October 10, 1901.

White. "This forms an important, profitable crop on the basin irrigated lands. It should be tried as late as the beginning of July after floods of Colorado River have subsided and might mature by the end of October. The seed should be broadcasted on the mud at a rate of about a bushel per acre. If possible, two subsequent waterings should be made, one when a few inches high and another later. If mud is not fresh it would be best to plow the land and harrow in the seed. (See No. 3972, Inventory No. 8, for description of oil making.) Lord Cromer, in his last report, mentions that sesame is exported from Egypt to Europe. It is largely used for making the Turkish sweetmeat *Chacla*(?). Profits in Egypt are estimated at about \$40 an acre. For use in the Colorado River experiments. Secured through the kindness of Mr. George P. Foaden, secretary of the Khedivial Agricultural Society." (*Fairchild.*)

7662. SESAMUM INDICUM.**Sesame.**

From Cairo, Egypt. Received through Mr. D. G. Fairchild (No. 636, May 9, 1901), October 10, 1901.

Brown. "I can not find that this has any advantage over the white, or vice versa, but it may prove better adapted to growth in the Colorado River flood plain. Secured through the kindness of Mr. George P. Foaden, secretary of the Khedivial Agricultural Society." (*Fairchild.*)

7663 to 7677.

From Asia Minor. Received through Mr. George C. Roeding, October 11, 1901. A collection of economic plants secured in September, 1901, as follows:

7663. FICUS CARICA.**Caprifig.**

From Aidin. Designated "F."

7664. FICUS CARICA.**Caprifig.**

From Aidin. "D." "A very large caprifig (same as No. 6832), from the garden of S. G. Magnisalis." (*Roeding.*)

7665. FICUS CARICA.**Caprifig.**

From Aidin. "E." "One of the largest caprifigs from the garden of S. G. Magnisalis. (Same as No. 6836.)" (*Roeding.*)

7666. FICUS CARICA.**Caprifig.**

From Aidin. "I." "A variety from the garden of S. G. Magnisalis, near the ruined mosque. This is not the variety especially mentioned by Mr. W. T. Swingle." (*Roeding.*)

7667. FICUS CARICA.**Caprifig.**

From Aidin. "G." Very largest and finest caprifig from the garden of S. G. Magnisalis. Same as No. 6835." (*Roeding.*)

7668. PISTACIA VERA.**Pistache.**

From Smyrna. "From the Greek nurseryman near Smyrna." (*Roeding.*)

7669. PYRUS sp.**Pear.**

From Smyrna. "Wild pear growing near Smyrna, a good stock, valuable for clay ground." (*Roeding.*)

7670. AMYGDALUS PERSICA.**Peach.**

From Smyrna. "A yellow cling, yellow to the pit, ripening in August. From Pounar Bashi." (*Roeding.*)

7663 to 7677—Continued.

7671. VITIS VINIFERA. **Grape.**

From Smyrna. "A superior variety of Malaga called *Rezaki*. Probably *Datte de Beyrouth*." (Roeding.)

7672. PRUNUS ARMENIACA. **Apricot.**

From Smyrna. "From Pounar Bashi near Smyrna. An apricot with a sweet kernel like an almond." (Roeding.)

7673. PISTACIA TEREBINTHUS. **Terebinth.**

From Smyrna. *Karabanour*. "Buds from male pistachio terebinth." (Roeding.)

7674. PUNICA GRANATUM. **Pomegranate.**

From Smyrna. *Tcherkerdeksis*. "The seedless pomegranate from Pounar Bash." (Roeding.)

7675. OLEA EUROPAEA. **Olive.**

From Smyrna. "Pickling and oil olive from Greek nurseryman near Smyrna." (Roeding.)

7676. PUNICA GRANATUM. **Pomegranate.**

From Smyrna. *Feysinar*. "Pomegranate from Pounar Bashi." (Roeding.)

7677. PUNICA GRANATUM. **Pomegranate.**

From Smyrna. *Kadinar*. "Pomegranate from Pounar Bashi." (Roeding.)

7678. COFFEA ARABICA. **Coffee.**

From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild (No. 386a, February 11, 1900), October 15, 1901. Sent by Hon. K. Auer, United States consul.

Menado. "The bean of this famous coffee is very large. It is one of the highest priced coffees on the market. Sells dry in Amsterdam at 70 to 80 cents Dutch per one-half kilo. Best 'Java Brown' brings no more." (Fairchild.)

7679. VICIA HIRTA.

From Tessala, Algeria. Obtained by Mr. C. S. Scofield, April, 1901. Received October 21, 1901.

"Dried roots and tubercles from barley field at Tessala." (Scofield.)

7680. LATHYRUS SATIVUS.

From Oran, Algeria. Obtained by Mr. C. S. Scofield, April, 1901. Received October 21, 1901.

"Dried roots and tubercles of the 'Pois Carré' from salt-impregnated field near Oran. Much cultivated." (Scofield.)

7681. LUPINUS LUTEUS. **Yellow lupine.**

From Rouïba, Algeria. Obtained by Mr. C. S. Scofield, April 10, 1901, through Dr. L. Trabut. Received October 21, 1901.

"Dried roots and tubercles. Tubercle growth considered by Doctor Trabut as pathological and characteristic of *Lupinus luteus*." (Scofield.)

7682. TRIFOLIUM ANGUSTIFOLIUM.

From Kabyliya, Algeria. Obtained by Mr. C. S. Scofield, April, 1901. Received October 21, 1901.

"Roots and tubercles." (Scofield.)

7683. TRIFOLIUM PANORMITANUM.

From Rouïba, Algeria. Obtained by Mr. C. S. Scofield, April 10, 1901. Received October 21, 1901.

"Roots and tubercles." (*Scofield.*)

7684. AMYGDALUS COMMUNIS.**Almond.**

From Malaga, Spain. Received through Mr. D. G. Fairchild (No. 768, July 31, 1901), October 21, 1901.

"Supposed to be grafted plants of the famous Jordan almond. Upon arrival they proved to be only ungrafted seedlings, and not at all as per the contract made with the Spanish gardener." (*Fairchild.*)

7685. TRITICUM VULGARE.**Wheat.**

From Volo, Greece. Received through Mr. D. G. Fairchild (No. 581, March 23, 1901), September 28, 1901.

Diminum. "A variety of spring wheat called *Diminum*, meaning 'two months.' This is a semihard wheat used in Greece to plant after the failure of the winter wheat. It is not a two-month wheat, as its name implies, but matures in about three months, being planted the last of February and harvested the first of June. It is a light bearer, not very highly esteemed in Greece except for a catch crop, as it were, when winter wheat has failed. Sent by kindness of Mr. Ar. Tsakonas, of Athens, who can secure a large quantity in June, if desired." (*Fairchild.*)

7686. NICOTIANA TABACUM.**Tobacco.**

From Godwinsville, Ga. Received through Mr. H. J. Webber, October 28, 1901.

Asmyr. A Turkish cigarette tobacco. About 6 ounces of seed obtained by Mr. Webber through Mr. Robert Viewig, who imported the original seed from Turkey and grew it at Godwinsville, Ga. A crop was grown in 1899, from which the present seed was taken. Production usually very light, but product of superior quality.

7687. VITIS sp.**Grape.**

From southern Mexico. Received through Dr. J. N. Rose (No. 5349), October 28, 1901.

"A new grape, collected in southern Mexico this past season. It is a very remarkable species in that it dies down to the ground each year, apparently arising from the big deep-set tuber or tuberous root. It produces an immense growth of vines, the internodes often being $1\frac{1}{2}$ to 2 feet long. The fruit is borne in large clusters, sometimes nearly a foot long, individual grapes being about the size of the fox grape." (*Rose.*)

7688. HEERIA JALAPA.

From southern Mexico. Received through Dr. J. N. Rose (No. 6081), October 28, 1901.

"A very beautiful little trailing plant, well suited for baskets or for a carpet plant. It belongs to a genus of plants much cultivated." (*Rose.*)

7689 to 7765.

From Algeria. Secured by Mr. C. S. Scofield, April to June, 1901. Received at the Department in October, 1901. Turned over to the Office of Seed and Plant Introduction and Distribution, March 6, 1903.

"The following collection of leguminous plants was obtained by Mr. C. S. Scofield, in many cases through the kindness of Dr. L. Trabut, government botanist of Algeria. This collection represents the results of many years careful study by Doctor Trabut, who, with Doctor Battangier, published a flora of Algeria, in which some of these species were described for the first time. Doctor Trabut familiarized himself with the indigenous flora of Algeria by many expeditions to all parts of the colony, and some of the

most promising species for culture were found to be very rare in a wild state, having been almost exterminated by herbivorous animals. The collection here enumerated was obtained for study and not for distribution. It is of the very greatest value and the various species are now being cultivated in a preliminary way by the Department of Agriculture to get information as to their adaptability to American conditions. As the life histories of the various species are worked out so that reasonable prognosis can be made as to the value of the plant for forage or for hay or green manure and some information can be given as to the regions where it is most likely to succeed, and where seed can be grown at a reasonable cost, then this species will be introduced into practical culture. It is likely that many plants of the greatest value for the future development of American agriculture, especially in the dry regions of the West, are included in this collection, which is the cream of what has been brought together by twenty years' study in North Africa, one of the richest regions of the world for leguminous plants suitable for field culture." (*Swingle.*)

7689. LUPINUS TERMIS.**White lupine.**

"This plant is one of the prominent lupines which has a place in general culture. It has a vigorous, upright growth." (*Scofield.*)

7690. LUPINUS ANGUSTIFOLIUS.

"Specimen found near Fort National, where the soils are evidently of marble or limestone origin." (*Scofield.*)

7691. ONONIS AVELLANA.

"This plant is too coarse for use as a forage plant; it may have a place as a soil fixer or for green manuring." (*Scofield.*)

7692. MELILOTUS MACROSTACHYS.

"Specimen obtained from trial plats at the botanical station at Rouïba. This is one of the most promising plants of this genus. It is the only one not objectionable for forage purposes on account of its odor. It has a vigorous growth, often reaching $3\frac{1}{2}$ feet in height, and has a large leafy surface." (*Scofield.*)

7693. MELILOTUS SPECIOSA.

"Specimen from botanical garden at Rouïba. Several varieties of this species are under cultivation. It is a fairly good forage plant, being erect and producing an abundance of foliage." (*Scofield.*)

7694. MELILOTUS SULCATA.

"Specimen from the garden of the school of medicine of Algiers. This plant is one of the least valuable of this genus. It has rather harsh stems and does not have an abundant leaf growth. It seeds very freely." (*Scofield.*)

7695. MEDICAGO ARBOREA.**7696. CYTISUS PROLIFERUS.**

"Specimen from botanical station at Rouïba. This plant has been introduced into Algeria from the Canary Islands. It is a shrub, often 12 to 14 feet high; very leafy and producing a large number of seed pods. The new shoots are often trimmed from the tree and used in the dryer countries." (*Scofield.*)

7697. CYTISUS LINIFOLIUS.**7698. SCORPIURUS VERMICULATA.**

"Specimen from botanical station at Rouïba, where it is both wild and cultivated. Plant has creeping habit, rather vigorous, but seldom more than 7 or 8 inches high; fruits very freely. There are large numbers of nodules. The plant is principally for sheep pasturing and for enriching the soil in nitrogen." (*Scofield.*)

7689 to 7765—Continued.

7699. TRIFOLIUM PANORMITANUM.

"Specimen found growing wild near botanical station at Rouïba. This plant closely resembles *T. alexandrinum* in general appearance and habit of growth. The lower tooth of the calyx is very much longer than the other four teeth, making identification simple. This plant is little or not at all cultivated as yet in Algeria, but was found to have gained possession of some wild hay fields near Tizi Ouzou. It is very vigorous and upright in habit of growth, often over 2 feet in height." (*Scofield.*)

7700. LOTUS TETRAGONOLOBUS.

Square pea.

"Specimen found growing wild near botanical station at Rouïba. Plant has a reclining or creeping habit, seldom growing more than 10 or 12 inches in height; it is very vigorous, leaves of a very bright green color, flowers brilliant, rosy red. It fruits freely and bears large numbers of root nodules; has been introduced into America in an experimental way through the Department of Agriculture. It deserves further attention." (*Scofield.*)

7701. VICIA HIRTA.

"Specimen obtained from botanical station at Rouïba, where the plant grows wild. It has been tried in culture there, but has not done well enough to hold a place in competition with other species of the same genus. The stem is upright, but rather weak, sometimes reaching 2 feet in height." (*Scofield.*)

7702. VICIA FABA.

7703. VICIA FULGENS.

"From small plat growing at botanical station at Rouïba. This species is one of the very important ones introduced by Dr. Trabut into culture in Algeria. It seeds very freely and produces a large amount of foliage." (*Scofield.*)

7704. VICIA NARBONNENSIS.

"Specimen from botanical station at Rouïba, where it is both wild and cultivated. This plant is erect, very succulent, and robust. It is often sown with winter oats to be cut for green forage. It seeds freely and matures early in May. A close relative of this plant, possibly a variety of the species, is often confused with it, the other variety being entirely glabrous, while the type is decidedly hispid." (*Scofield.*)

7705. VICIA BENGALENSIS.

(This seed was never turned over to the Office of Seed and Plant Introduction and Distribution, as it was all used in experiments by the Office of Vegetable Pathological and Physiological Investigations.) (See No. 5576.)

7706. VICIA CALCARATA.

"Specimen found near botanical station at Rouïba, probably not from cultivated plats. This plant is commonly found along the Algerian coast, growing in hay fields and waste places. So far as known it is not at all cultivated." (*Scofield.*)

7707. VICIA SATIVA.

Vicia sativa de Toulouse.

7709. VICIA SATIVA.

Vicia sativa de Tunis.

7708. VICIA SATIVA.

Blanche.

7710. HEDYSARUM CORONARIUM.

"Specimen found growing in the garden of the School of Medicine of Algiers. Source of seed not known. Plant very robust; stems rather weak." (*Scofield.*)

7689 to 7765—Continued.

7711. HEDYSARUM PALLIDUM.

"Specimen obtained from near Oran by Mr. D. G. Fairchild. It was nearly matured. The plant is mentioned by Battandier as being perennial, having large, ornamental flowers which are white and streaked with purple; the stem fleshy, decumbent; the leaves somewhat pubescent, not as long as the flower clusters; the leaflets 10 to 20 mm. by 5 to 10; flowers in oblong flower clusters; the pod spiny, 4 to 7 articulations with vertical spines at the ends; common in salty and gypsum soils." (*Scofield.*)

7712. HEDYSARUM MAURITANICUM.

"Specimen from garden of the School of Medicine of Algiers; seed probably brought by Doctor Trabut from somewhere in the province of Oran. The plant is somewhat less vigorous than *H. coronarium*; stems reclining; plant often more than 2 feet in height." (*Scofield.*)

7713. TRIGONELLA FOENUM—GRAECUM.

Fenugreek.

"Specimen from the garden of the School of Medicine of Algiers. This plant has an upright habit of growth, reaching 18 to 20 inches in height; has a very important place in general culture as a soil enricher and a green forage crop. It is often planted in the autumn between rows of grapevine and turned under the following spring, when the cultivation of the grapes begins. When used as a green forage crop, or when the seed is used, the fat producing effect is very noticeable. The plant has a very strong odor when dried, and animals fed on the dry grain or green forage are strongly affected by the odor. Eggs from hens fed on this plant are uneatable. Meat of animals having access to it can not be used as human food; as a horse food it is of considerable importance. The Jewish women eat a meal prepared from the grain of this plant and become enormously fat. It is already used to some extent in Virginia, and very widely cultivated throughout Persia and India. About 1,000 tons of this seed are sold annually by one dealer, Schempf & Co., in the Liverpool Stock Exchange. This seed forms an essential quality of nearly all prepared stock foods. The root bears a large number of nodules." (*Scofield.*)

7714. TRIGONELLA CORNICULATA.

7715. FESTUCA FANARA.

7716. VICIA LUTEA.

7717. VICIA SICULA.

"Specimen found growing wild near the botanical station at Algiers. So far as known, the plant is not cultivated, but is found very commonly along the Algerian coast. The stems are rather small. It is of no present value as a forage plant." (*Scofield.*)

7718. VICIA EGYPTIANA.

(Not in Kew Index.)

7719. ASTRAGALUS BOETICUS.

"Specimen found growing wild in the garden of the School of Medicine of Algiers. So far as known, this plant has not been introduced into culture. The stem is upright, though inclined to be weak, 20 to 24 inches high; rather straggling in habit of growth; plant deserves attention for improvement." (*Scofield.*)

7720. ANTHYLLIS TETRAPHYLLA.

"Specimen found in the woods above Mustapha. This plant is said to be adapted for use in arid regions. It has a creeping habit of growth, fruits very freely, and produces a large number of root nodules." (*Scofield.*)

7721. ANTHYLLIS VULNERARIA.

"Specimen found in the woods above Mustapha. This plant is not common in Algeria. It has a decidedly different habit of growth from that of *A. tetraphylla*. It grows very commonly along the bluffs above Hussien Dey." (*Scofield.*)

7689 to 7765—Continued.

7722. CERATONIA SILIQUA.

Carob.

"Seeds of an improved variety from Blidah." (*Scofield.*)

7723. BRASSICA OLERACEA.

Cabbage.

"A few seeds of a wild cabbage from-Rouïba." (*Scofield.*)

7724. AEGILOPS OVATA.

7725. HEDYSARUM PALLIDUM.

From Bouli Bree (?)

From Oran.

7726. HIPPOCREPIS MULTISILIQUOSA.

"Specimen from the garden of the School of Medicine of Algiers. So far as known, this plant is not of great importance as a forage plant. It rarely reaches 20 inches in height, and has a straggling habit of growth. The stem is hard and produces few leaves." (*Scofield.*)

7727. HYMENOCARPUS CIRCINATA.

"This plant is described by Battandier as being velvety pubescent; stems about 1 foot in height, erect or blanchet; lower leaves entire, obtuse, attenuated at the petiole, 4 to 6 cm. by 2; leaf pinnately divided with an odd leaf at the end; flowers 2 to 4 in a peduncle, umbel exceeding the leaf; pod velvety, flattened, orbiculate, sometimes spiny at the back, sometimes not, 15 mm. in diameter. This plant is extremely rare and difficult to find, but Doctor Trabut is of the opinion that it is of very great value as a forage plant, although it is not yet evident that he has experimental proof to support the belief. Secured by Mr. Fairchild from wild plants growing not far from Oran through assistance of Prof. M. Doumergue, of Oran." (*Scofield.*)

7728. LATHYRUS TINGITANUS.

"This grows from year to year in the garden of the School of Medicine of Algiers, producing a large number of flowers which are nearly or quite all fertile." (*Scofield.*)

7729. LATHYRUS NUMIDICUS.

"Specimen found growing in the garden of the School of Medicine of Algiers. The original seed was found by Doctor Trabut on the rocks near El Kantara. The plant has a creeping habit of growth; matures very early and produces a large number of well filled pods; grain rather small, round, dark gray." (*Scofield.*)

7730. LOTUS ORNITHOPODIODES.

"Specimen from the garden of the School of Medicine of Algiers. This plant is common in waste places near Algiers; has not very robust stems; some reclining; grows in rather poor soil; may reach a height of 15 inches. The roots bear numerous peculiarly globose nodules. The plant bears seed very freely." (*Scofield.*)

7731. LOTUS EDULIS.

"Specimen from garden of the School of Medicine of Algiers. This plant has a creeping habit of growth, and produces many pods which are fleshy, with comparatively small seeds, and the pods when green are sweet to the taste. Doctor Trabut thinks that this plant can be improved to be used as a vegetable." (*Scofield.*)

7732. LUPINUS LUTEUS.

7733. LUPINUS sp.

"A violet lupine of Spanish origin." (*Scofield.*)

7734. MEDICAGO DENTICULATA VAR. APICULATA.

7689 to 7765—Continued.

7735. *MEDICAGO ECHINUS*.

"Specimen found near Oued Smaar, Algeria. This plant is one of the important annual medicagos. It has an inclining or creeping habit of growth; is very vigorous, and produces a large number of fruits." (*Scofield.*)

7736. *MEDICAGO HELIX* VAR. *RIGIDULA*.7737. *MEDICAGO DENTICULATA*.7738. *MEDICAGO ORBICULARIS*.7739. *MEDICAGO TRUNCATULA*.7740. *MEDICAGO TURBINATA*.

"Specimen found in woods above Mustapha. This plant has an inclining, or sometimes upright, habit of growth. It is an annual, and deserves a trial." (*Scofield.*)

7741. *MEDICAGO TRUNCATULA*.7742. *MEDICAGO CILIARIS*.7743. *MEDICAGO SECUNDIFLORA*.

"Obtained on Ain el Hadjar Plateau." (*Scofield.*)

7744. *MELILOTUS MACROCARPA*.

"Specimen found near Hotel Continental, Mustapha. It is not particularly common. The plant is mentioned by Battandier as being upright, profusely branched, with bright green leaflets, very large, obovate, glaucous underneath; flowers about 6 mm. long, pale yellow, in loose bunches, exceeding the leaves. The fruit is almost as large as a small pea, ovoid, obtuse, or spherical; seeds, one or two, large, tuberculate. It is said that Arabs sometimes use these fruits as a spice, since they have the odor of the melilot in a very high degree." (*Scofield.*)

7745. *ONONIS* sp.7746. *ONOBRYCHIS* sp.7747. *ONONIS AVELLANA*.7748. *ERIOBOTRYA JAPONICA*.

Loquat.

(Seed never turned over to the office of Seed and Plant Introduction and Distribution.)

7749. *GENISTA SPHAEROCARPA*.7750. *SCORPIURUS VERMICULATA*.7751. *SCORPIURUS SULCATA*.

"Specimen found near Hotel Continental, Mustapha. This plant seems to be at present of very little value. Like *S. vermiculata* it never attains any considerable height, and is, if anything, less vigorous than *S. vermiculata*. It thrives, however, in very poor soil, and is a harmless weed." (*Scofield.*)

7752. *TRIGONELLA GLADIATA*.

"Nearly related to *T. foenum-graecum*." (*Scofield.*)

7753. *TRIFOLIUM ANGUSTIFOLIUM*.

"Specimen from grounds of Danish consulate, Mustapha. This plant is closely allied to *T. incarnatum*. It does not thrive well in Algeria, seldom reaching more than 1 foot in height, and producing few, if any, branches. Some very vigorous specimens were seen near Oran and west of there, where it is more common than near Algiers. It is an annual, maturing early in May." (*Scofield.*)

7689 to 7765—Continued.

7754. TRIFOLIUM LAPPACEUM.

“Specimen from the grounds of the Danish consulate, Mustapha. This plant is one of the less vigorous of the genus. It has a somewhat reclining habit of growth; stems seldom more than 12 to 15 inches long, rather soft and delicate. This plant is common in waste places in the vicinity of Algiers.” (Scofield.)

7755. TRIFOLIUM GLOMERATUM.

“Specimen found near Oued Smaar, Algeria. This plant has a creeping, or at least an inclining habit of growth; is found on roadsides or in waste places; is as yet of no particular importance as a forage plant.” (Scofield.)

7756. TRIFOLIUM PALLIDUM.

“Specimen from the garden of the School of Medicine of Algiers. This plant is common in the fields and waste places along the coast near Algiers; it resembles *T. pratense* somewhat in habit of growth, though it inclines to be smaller and less vigorous.” (Scofield.)

7757. TRIFOLIUM PANORMITANUM.

7758. TRIFOLIUM REPENS.

“Specimen from nursery of Mr. Labatut, of Tizi Ouzou. It grows to a height of 8 to 10 inches from its creeping stem; produces seed freely; leaves and stems bright green; very succulent.” (Scofield.)

7759. TRIFOLIUM SPUMOSUM.

“Specimen found growing wild near botanical station at Rouïba. The plant is an annual, vigorous and succulent, with rather weak stems, sometimes reaching a height of 20 to 24 inches under favorable conditions, i. e., in soils of limestone origin; the root nodule development is very pronounced. So far as known this plant is not yet cultivated, but it has the appearance of being of great value should it be introduced and somewhat improved by selection. It seeds very freely, producing grains somewhat larger than *T. pratense*.” (Scofield.)

7760. TRIFOLIUM STELLATUM.

“Specimen from near botanical station at Rouïba. This plant is very common along the roadsides and in the waste places of Algiers. It is not of great importance as a forage plant. It seldom reaches a height of more than ten inches, and the stem branches very little.” (Scofield.)

7761. TRIFOLIUM TOMENTOSUM.

7762. VICIA SATIVA.

“Large seeded variety.” (Scofield.)

7762a. VICIA SATIVA.

“A small seeded variety.” (Scofield.)

7763. VICIA SATIVA.

“Specimen from the garden of the School of Medicine of Algiers. There are very many varieties of this species growing wild in Algiers.” (Scofield.)

7764. VICIA HIRTA.

From Tessala, Algeria.

7765. VICIA SATIVA, var. MACROCARPA.

“Specimen found in grounds of Danish consulate, Mustapha Superieure. This is doubtless the variety known as ‘Macrocarpa,’ but very little is definitely known about the varieties of *Vicia sativa*. They grow in very large numbers, and attempts to classify them have up to the present time been fruitless.” (Scofield.)

7766 to 7768.

(Numbers not utilized.)

7769. FRAGARIA spp.**Strawberry.**

From Mexico. Received through Dr. J. N. Rose, October 30, 1901.

Seeds of cultivated varieties for plant-breeding purposes.

7770. SABAL EATONIA.

From Miami, Fla. Received through Mr. H. C. Henricksen, October 26, 1901.

Collected by Mr. P. H. Rolfs.

7771. THRINAX FLORIDANA.

From Miami, Fla. Received through Mr. H. C. Henricksen, October 26, 1901.

7772. SERENOA SERRULATA.

From Miami, Fla. Received through Mr. H. C. Henricksen, October 26, 1901.

7773. INODES PALMETTO.

From Miami, Fla. Received through Mr. H. C. Henricksen, October 26, 1901.

7774. COCCOTHRINAX GARBERI.

From Miami, Fla. Received through Mr. H. C. Henricksen, October 26, 1901.

7775. COFFEA ARABICA.**Coffee.**

From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild (No. 386a, February 11, 1900), October 30, 1901. Sent by K. Auer, United States Consular Agent.

Menado. (See No. 7678.)**7776. PUNICA GRANATUM.****Pomegranate.**

From Oran, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 738, June 14, 1901), October 30, 1901.

"Grafting wood of several varieties of pomegranates of Algerian origin from the *Orphelinat de Misserghin*, near Oran." (*Fairchild.*)**7777. CERATONIA SILIQUA.****Carob.**

From Oran, province of Oran, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 737, June 14, 1901), October 30, 1901.

"Large fruited variety of carob, introduced into Algeria from Spain. Said to be monoecious, not requiring the presence of male trees to make it fruitful. Pods are large, thick, and of reported superior excellence." (*Fairchild.*)**7778 to 7780. AMYGDALUS COMMUNIS.****Almond.**

From Alicante, Spain. Received October 30, 1901.

7778.*Marcona.* Nuts of this Spanish variety of almond.**7779.***Pastaneta.* Nuts of this Spanish variety of almond.**7780.***Costereta.* Nuts of this Spanish variety of almond.

7781. CAPSICUM ANNUM.**Red pepper.**

From Los Angeles, Cal. Received October 26, 1901, from Mr. Elmer Stearns.

"From seed in mixed spices from Japan." (*Stearns.*)

7782. CAPSICUM ANNUM.**Red pepper.**

From Los Angeles, Cal. Received October 26, 1901, through Mr. Elmer Stearns.

"Originally from Juarez, Mexico. Forms a bush nearly 4 feet high, with peppers erect instead of hanging." (*Stearns.*)

7783. CAPSICUM ANNUM.**Red pepper.**

From Los Angeles, Cal. Received October 26, 1901, through Mr. Elmer Stearns.

"Originally from Juarez, Mexico." (*Stearns.*)

7784. HEDYSARUM CORONARIUM.**Sulla.**

From Malta. Received through Mr. D. G. Fairchild (No. 688, May 22, 1901), July 23, 1901.

Gozzo. "An early ripening variety of sulla from the little island of Gozzo, near Malta. This is said to be superior to the kind grown on Malta in seasons when spring rains are scanty, as it matures properly, while the Malta variety fails to ripen well. In seasons of abundant spring rainfall it is not economical, because it matures too soon. The seed in the seed pod is used in Malta, and it was not possible to get cleaned or decorticated seed. According to the literature, sulla should be planted in deep soil. This variety forms the principal fodder and soiling crop of an island where soil is not much over 6 to 8 inches deep on a bed of calcareous rock. It is sown here in July and August on the wheat or barley stubble and allowed to 'scorch' in the burning sun until the September or October rains begin to mature it, as they say. (The use of a seed scratcher might make quick germination possible and probably largely increase the stand.) It is cut here only when in full bloom, for, if left to stand, the leaves fall. The yield per acre is unusual. Some growers report 40 to 90 tons of green fodder, but no definite information on this point was obtained. It is the great green cover crop of Malta, and a rotation of wheat or oats and sulla is very common here. Everywhere the fields are filled with big stacks of the bundles of this plant. In some countries the seed is immersed for five minutes in hot water to hasten germination. The fleshy roots are often dug by peasants and fed to the hogs or horses. They are full of starch and sugar. The root tubercles are rather small and delicate, but very numerous. Attempts to cultivate the specific germ of these tubercles are being made from dried roots sent to Dr. George T. Moore from Malta." (*Fairchild.*)

7785. TRITICUM DURUM.**Wheat.**

From Vesoul-Benian, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 723, June 20, 1901), November 6, 1901.

Pelissier. "This wheat, which is one of the best varieties of macaroni wheats grown in Algeria, is said to have been originated by selection from native Algerian durum wheats by a Mr. Pelissier, at Pont de l'Isser, a small town in western Oran. From there it was introduced into the western part of the province of Algiers. Mr. Paul Chalvin, of Vesoul-Benian, received a small quantity of seed from Doctor Trabut, botanist of the Government of Algeria, and by a rough en masse selection he has kept it almost pure. The variety under the name *Pelissier* is better known in the province of Algiers than in that of Oran, where it is said to have originated; in fact, we found no one growing it, even in Mr. Pelissier's neighborhood. Mr. Chalvin, from whom this seed was bought, sells his whole crop for seed purposes, and has practiced for four years a selection of the best ears. These are collected by his Arab foreman and thrashed by hand. About 200 kilos of this selected grain are sown, and the process is repeated every year. Last year this selection was not done. This wheat sent is about four generations from such selection. Mr. Chalvin believes the field from which it was taken will produce about 45 bushels per acre. At the Paris Exposition Mr. Chalvin took a gold medal on a sheaf of this wheat. Owing to its hardiness, vigorous growth, and large yield, this wheat is gradually replacing all other sorts in the vicinity of Vesoul-Benian, and at Doctor Trabut's botanical experiment station at Rouïba, Algiers, it has ranked among the best in yielding

capacity and resistance to rust. The climate of Vesoul-Benian (altitude 700 meters) is a warm one, $+25^{\circ}$ and $+23^{\circ}$ F. being the usual minimums in winter. The snows, sometimes a foot or more deep, are of very short duration. The mean yield of this variety was about 16 to 22 bushels per acre on stiff clay soil without hardpan. It is on this stiff soil that the variety seems to do best. The resistance to drought shown by this sort is evidenced by the fact that it has proved a success in the Chelif Valley, where as early as the beginning of June the thermometer rises to 107° F., and droughts of long duration are said to occur in the spring. In Algeria the wheat is planted in November and harvested in June, but it is worth while testing it in America as a spring wheat in the northern States. The only noticeable weeds in the fields from which this seed was bought were wild anise, a wild oat (*Avena sterilis*), and a large flowered carrot, none being of a serious character except the wild anise, which ripens about the same time with the wheat. It is, however, a light seeded plant, and its seeds are easily blown out by the fanning mill." (*Fairchild and Scofield*.)

7786. TRITICUM VULGARE. Wheat.

From Kharkof, Russia. Received November 9, 1901, through Dr. A. Boenicke, president of the Kharkof Agricultural Society.

Kharkof. (Same as No. 7467.)

7787. TRITICUM VULGARE. Wheat.

From Rostov-on-Don, Russia. Received through Hon. W. R. Martin, acting United States consular agent, November 9, 1901.

Beloglina. A variety of hard winter wheat from Byelaya Glinskaya station, Don Territory. (See Nos. 6012 and 6013.)

7788. HEDYSARUM CORONARIUM ALBIDUM. Sulla.

From Setif, Province of Constantine, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 735c), November 11, 1901.

"This variety, which differs from the type of the species by having white flowers, is found by Mr. Ryf (see No. 7586) to be much longer lived and in general preferable to the ordinary *H. coronarium* of the region. The seeds, however, are very slow in germinating and should be put through some sort of a seed-scratching device before planting." (*Fairchild and Scofield*.)

7789. HEDYSARUM NAUDINIANUM.

From Setif, Province of Constantine, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 735b), November 11, 1901.

"This is a very hardy, narrow leaved, bushy variety, indigenous to the vicinity of Setif. It has been recently introduced into cultivation by Mr. Ryf (see No. 7586), who is trying it under the same cultural methods that he uses with his new strain of alfalfa. His experiments are not yet completed, but he has reasons to hope that this species will prove of value, especially for dry and rather poor soils." (*Fairchild and Scofield*.)

7790. HEDYSARUM CORONARIUM. Sulla.

From Setif, Province of Constantine, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield, November 11, 1901.

Red Flowered. "This is the ordinary type which is widely grown as a forage or soiling crop in Algeria. It is perennial and yields abundant crops under favorable conditions. It is widely used in all countries bordering on the western Mediterranean. As a hay crop, its greatest weakness is that its leaves fall easily when they become dry." (*Fairchild and Scofield*.)

7791. MELILOTUS sp. Melilot.

From China. Received from Dr. C. Sprenger, Vomero, near Naples, Italy, November 1, 1901.

7792. TRITICUM DURUM.**Wheat.**

From Setif, Constantine Province, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 724, June 20, 1901), November 6, 1901.

Mahmoudi. "This is quite similar to a well-known Algerian variety called 'Nab-el-bel.' It is one of the most highly valued wheats for the macaroni trade which Setif furnishes. The latter locality is probably the largest primary market for macaroni wheats in Algeria. The seed obtained is from that grown by the Arabs in the vicinity of Setif and the purity of type can not be guaranteed. This quantity is secured through the kindness of Mr. G. Ryf, manager for the *Société Genevoise de Sétif*. In the country of its origin, this wheat is sown in November or December and ripens late in June or early in July. It may be worth while trying it, however, in the spring-wheat regions of America, where it would be classed as one of the so-called 'goose' wheats." (*Fairchild and Scofield.*)

7793. TRITICUM DURUM.**Wheat.**

From Setif, Constantine Province, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 725, June 20, 1901), November 6, 1901.

Mohamed ben Bachir. "This variety of wheat is one of the prominent sorts grown by both Arabs and French farmers on the high plateau of the Province of Constantine. It is one of the sorts highly prized by manufacturers of macaroni, although its name has not won for itself a reputation in the trade. It is one of the several valuable sorts commonly cultivated in this justly celebrated wheat region. The saying is that this wheat was originally brought from Mecca by the pilgrim whose name it bears. In botanical characters it is much like the *Pelissier* variety (No. 7785), and it is possible that the *Pelissier* was obtained from this stock. This seed was purchased of Mr. G. Ryf, of Setif, manager of the Geneva Company, and one of the best cultivators in the country." (*Fairchild and Scofield.*)

7794. TRITICUM DURUM.**Wheat.**

From Setif, Constantine Province, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 726, June 20, 1901), November 6, 1901.

Kahla. "This is one of the wheats commonly grown by Arabs throughout Algeria. As the name *Kahla* signifies, this is a black-chaffed sort. It is generally considered to be one of the best of the Algerian wheats for adaptability to a wide variety of adverse conditions. When such are favorable it produces grain of excellent quality for macaroni manufacture. Under certain favorable climatic conditions the chaff loses color somewhat, but under native culture on the gravelly hills of Algeria or in the semiarid plains the purple-black of the chaff is a striking feature. This seed is furnished the Department by Mr. G. Ryf, manager of the Geneva Society of Setif. Commonly planted in November or December and harvested in June or July." (*Fairchild and Scofield.*)

7795. TRITICUM DURUM.**Wheat.**

From Setif, Constantine Province, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 727, June 20, 1901), November 6, 1901.

Richi. "This variety is one of the best known from the Setif region, which latter is perhaps the most important wheat-growing center of Algeria. It is very highly prized for its good qualities as a macaroni-making wheat. The seed introduced was grown by Arabs in the vicinity of Setif, and it may be mixed, but a little careful selection to prominent type should give a good stock of pure seed. This wheat is a vigorous grower, often succeeding fairly well on even very poor soil. As to quality for macaroni making, it ranks very high. It is usually sown in December or January and harvested in June or July, but might be worthy of trial in the spring-wheat region of the United States. Seed was obtained through Mr. G. Ryf, of Setif. The region of Setif is on the high Algerian plateau, 3,500 feet above sea level. The winters there are more severe than in many parts of Algeria, the temperature frequently dropping to zero and snow being not infrequent." (*Fairchild and Scofield.*)

7796. HORDEUM TETRASTICHUM.**Barley.**

From Setif, Constantine Province, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (No. 728, June 20, 1901), November 6, 1901.

Tetcherit. "The barleys of Algeria are nearly all four-rowed or six-rowed varieties and have, as do most barleys grown in hot climates, thick glumes. A cross sec-

tion shows them to be remarkably mealy, and we were told they are exported into Antwerp and Dunkirk, France, for beer-making purposes. The Belgian beer is not noted for its fine quality, and from the appearance of the grain I do not believe it will prove as good a brewing barley as many American sorts. The fact, however, that it is grown in such a warm climate and has nevertheless a certain renommé as a brewing barley, entitles it to a preliminary trial. The types will be found more or less mixed, as no process of selection has been practiced. Resistance to drought will be found one of its primary characteristics. Purchased of Mr. G. Ryf, manager of the Geneva Company of Setif. This latter place is on the high plateau, 3,500 feet above the sea, where the thermometer falls to about zero and where snows of considerable depth sometimes occur. This variety will be found to have much of the 'wild' character objectionable to barley breeders, but may show qualities of hardiness in spring droughts which will be of value. It should be tested in the South-west and in California." (*Fairchild and Scofield.*)

7797. ANDROPOGON SORGHUM.

Sorghum.

From El Outaya, Algeria. Received through Mr. C. S. Scofield, November 14, 1901. Obtained June 16, 1901.

Beshna. "White sorghum. Sample from El Outaya in the edge of the Sahara Desert, where it is used as a summer growing soiling crop. Seed probably came from Kabylie, where this crop is very generally grown. The seed is sometimes used as human food." (*Scofield.*)

7798. PHOENIX DACTYLIFERA.

Date.

From Paris, France. Received through Mr. C. S. Scofield. November 13, 1901.

Deglet noor, probably. Seeds of dates bought in Paris.

7799 to 7847.

From Erfurt, Germany. Received through Haage & Schmidt, nurserymen, November 4, 1901. The nomenclature is, in the main, that of the seedsmen.

A collection of plants as follows:

7799. CALADIUM ADAMANTINUM.

7810. CALADIUM.

Ouro Fino.

7800. CALADIUM ALBANENSE.

7811. CALADIUM.

Rio de Janeiro.

7801. CALADIUM ASSUNGUY.

7802. CALADIUM BILANTRA.

7812. CALADIUM VENOSUM.

7803. CALADIUM CACAPAVA.

7813. RICHARDIA ELLIOTTIANA.

7804. CALADIUM.

7814. RICHARDIA NELSONI.

Comte de Gerniny.

7805. CALADIUM.

7815. RICHARDIA PENTLANDI.

Duchesse de Mortemarte.

7816. EPIPREMNUM MIRABILE.

7806. CALADIUM.

7817. PHYLLOSTACHYS AUREA.

Ibis Rose.

7818. BAMBUSA AUREO-STRIATA.

7807. CALADIUM.

7819. ARUNDINARIA JAPONICA.

L' Insolite.

7820. PHYLLOSTACHYS MITIS.

7808. CALADIUM.

7821. BAMBUSA DISTICHA.

Mavambeia.

7809. CALADIUM.

7822. PHYLLOSTACHYS NIGRA.

Mary Freeman.

7823. ARUNDINARIA SIMONI.

7799 to 7847—Continued.

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|-------|------------------------------|-------|---|
| 7824. | PHYLLOSTACHYS VIOLA-SCENS. | 7838. | HEPATICA TRILOBA fl. CAERULEA pl. |
| 7825. | DESFONTAINEA SPINOSA. | 7839. | (Number not utilized.) |
| 7826. | SPARRMANNIA AFRICANA. | 7840. | HEPATICA TRILOBA fl. RUBRA pl. |
| 7827. | SPARRMANNIA AFRICANA fl. pl. | 7841. | LEUCANTHEMUM ULIGINOSUM. |
| 7828. | HOLBAELLIA LATIFOLIA. | 7842. | VIOLA ODORATA.
<i>Princess Beatrice.</i> |
| 7829. | TESTUDINARIA ELPHANTIPES. | 7843. | VIOLA ODORATA.
<i>Reine des Violettes.</i> |
| 7830. | CASCARILLA MUZONENSIS(?) | 7844. | VIOLA ODORATA, ROSSICA. |
| 7831. | CEDRELA ODORATA. | 7845. | VIOLA ODORATA.
<i>Victoria Regina.</i> |
| 7832. | DORSTENIA CONTRAJERVA. | 7846. | VIOLA ODORATA.
<i>Belle de Châtenay.</i> |
| 7833. | DRACAENA DRACO. | 7847. | VIOLA ODORATA.
<i>Mad. Millet.</i> |
| 7834. | MALPIGHIA URENS. | | |
| 7835. | MYRJSTICA HORSFIELDII. | | |
| 7836. | HELLEBORUS HYBRIDUS. | | |
| 7837. | HELLEBORUS NIGER. | | |

7848 to 7859. LILIUM.

Lily.

From Yokohama, Japan. Received from Suzuki & Iida, American agents of The Yokohama Nursery Company, November 6, 1901.

A collection of lilies as follows:

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|-------|--------------------------------|-------|---|
| 7848. | LILIUM AURATUM RUBRA VITTATUM. | 7854. | LILIUM LONGIFLORUM VARIEGATUM. |
| 7849. | LILIUM AURATUM PLATYPHYLLUM. | 7855. | LILIUM SPECIOSUM. |
| 7850. | LILIUM AURATUM WITTEL. | 7856. | LILIUM JAPONICUM. |
| 7851. | LILIUM MACULATUM. | 7857. | LILIUM ELEGANS.
<i>Alice Wilson.</i> |
| 7852. | LILIUM BROWNI. | 7858. | LILIUM ELEGANS SEMI PLENO. |
| 7853. | LILIUM MAXIMOWICZII. | 7859. | LILIUM RUBELLUM. |

7860 to 7901.

From near Berlin, Germany. Received from Mr. L. Spath, November 14, 1901. A collection of plants as follows (nomenclature of Mr. Spath retained):

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|-------|----------------------------------|-------|------------------------------------|
| 7860. | ACTINIDIA ARGUTA. | 7863. | AMYGDALUS PERSICA DIANTHIFLORA pl. |
| 7861. | AMYGDALUS DAVIDIANA. | 7864. | AMYGDALUS PERSICA fl. pl. |
| 7862. | AMYGDALUS DAVIDIANA fl. ALBA pl. | 7865. | AMYGDALUS PERSICA fol. pur. |

7860 to 7901—Continued.

7866. AMYGDALUS PERSICA.
Kaiser Friedrich III.
7867. AMYGDALUS PERSICA.
Klara Mayer.
7868. AMYGDALUS PERSICA PY-
RAMIDALIS.
7869. BERBERIS ILICIFOLIA.
7870. BERBERIS STENOPHYLLA.
7871. BERBERIS THUNBERGII
MINOR.
7872. BUXUS HANDSWORTHIENSIS.
7873. CERATOSTIGMA PLUMBAGI-
NOIDES.
7874. CERCIDIPHYLLUM JAPONI-
CUM.
7875. CLEMATIS sp.
André Leroy.
7876. CLEMATIS sp.
Barillet Deschamps.
7877. CLEMATIS sp.
Belisaire.
7878. CLEMATIS sp.
Belle of Woking.
7879. CLEMATIS sp.
Blue Gem.
7880. CLEMATIS sp.
Claude de Lorraine.
7881. CLEMATIS sp.
Duchess of Edinburgh.
7882. CLEMATIS sp.
Edith Jackmann.
7883. CLEMATIS sp.
Fairy Queen.
7884. CLEMATIS sp.
Jackmani.
7885. CLEMATIS sp.
Jackmani alba.
7886. CLEMATIS sp.
La Gaule.
7887. CLEMATIS sp. LANUGINOSA.
Marie Defosse.
7888. CLEMATIS sp.
Mrs. Geo. Jackman.
7889. CLEMATIS sp.
Prince of Wales.
7890. CLEMATIS sp.
Lawsoniana.
7891. CLEMATIS sp.
Star of India.
7892. CLEMATIS sp.
Elsa Spath.
7893. CLEMATIS sp. RUBELLA.
7894. CLEMATIS sp.
Madam Granger.
7895. CLEMATIS sp.
Princess Mary.
7896. CLEMATIS sp. VELUTINA
PURPUREA.
7897. LONICERA CAPRIFOLIUM.
7898. LONICERA HUMILIS.
7899. PARROTIA PERSICA.
7900. PRUNUS PANICULATA fl.
ros. pl.
7901. RIBES SANGUINEUM.

7902 to 7907. THEA VIRIDIS.**Tea.**

From "Pinehurst," near Summerville, S. C. Received through Dr. Charles U. Shepard, special agent in charge of tea culture investigations, United States Department of Agriculture, November 18, 1901.

American grown tea seed as follows:

7902.

Japanese. Very hardy.

7903.

Amoy. A very hardy Chinese variety.

7904.

Darjeeling. Tender, but very fine.

7907.

Chinese Dragon's Pool. Very good, but probably the plants are short lived.

7905.

Kangra. Hardy, fragrant, and dwarf.

7906.

Assam Hybrid. Good and reliable.

7908. BETA VULGARIS.**Beet.**

From Eisleben, Saxony. Presented by Mr. Franz Jodl, of Prague, Bavaria. Received November 14, 1901.

Verbesserte Kleinwanzleben. This seed was grown by W. Ramdohr, on the Wimmelburg domain, Saxony.

7909 to 7941a. CHRYSANTHEMUM spp.

From Paris, France. Received from Vilmorin-Andrieux & Co., November 20, 1901.

A collection of 34 varieties of large-flowering chrysanthemums, planted in the Department greenhouses.

7909.

Alcon.

7910.

Alcyone.

7911.

Altair.

7912.

Antares.

7913.

Bellatrix.

7914.

Fatinte.

7915.

Henry.

7916.

Megrez.

7917.

Orves.

7918.

Perfection Rose.

7919.

Perle.

7920.

Princesse Galitzine.

7921.

Mrs. A. Barrest.

7922.

Miss Ida Barwood.

7923.

Mrs. Ch. Birch.

7924.

Alice F. Carey.

7925.

Miss Lucy Chesseman.

7926.

Col. Baden-Powell.

7909 to 7941a—Continued.

7927.

M. Hugh Crawford.

7928.

Madeline Davis.

7929.

Lady Janet Clarke.

7930.

Lord Cromer.

7931.

Major Mathew.

7932.

Meredith.

7933.

Mermaid.

7934.

Florence Molyneux.

7935.

James Molyneux.

7936.

Onion.

7937.

Ralph Hatton.

7938.

Silver Queen.

7939.

Souvenir de Marchioness of Salisbury.

7940.

J. R. Upton.

7941.

Von Andre.

7941a.

Henry Weeks.

7942 to 7945.

From Paris, France. Received through Vilmorin-Andrieux & Co., November 22, 1901.

Seeds of leguminous plants as follows (nomenclature of seed firm retained):

7942. VICIA FABAE EQUINA.

Féverole d'hiver.

Horse bean.

7943. VICIA FABAE EQUINA.

Féverole de Lorraine.

Horse bean.

7944. AVENA SATIVA.

Belgian Winter.

Oat.

7945. MEDICAGO MEDIA.

Luzerne rustique.

Sand lucern.

7946. ERIOBOTRYA JAPONICA.

Loquat.

From Vomero, Naples, Italy. Received through Dr. C. Sprenger, November 27, 1901.

A seedless or one-seeded variety originated by Doctor Sprenger.

7947 and 7948.

(Numbers not utilized.)

7949. PISTACIA VERA.

Pistache.

From Aintab, Turkey in Asia. Received through Rev. A. Fuller, November 15, 1901.

7950. PISTACIA VERA × PALAESTINA. Butum.

From Aintab, Turkey in Asia. Received through Rev. A. Fuller, November 15, 1901.

7951. PISTACIA MUTICA. Menengech.

From Aintab, Turkey in Asia. Received through Rev. A. Fuller, November 15, 1901.

7952. MEDICAGO GETULA.

From Mustapha, Algeria. Received through Dr. L. Trabut, Government Botanist, November 22, 1901.

7953. JUGLANS CINEREA. Butternut.

From Biltmore, N. C. Received through Dr. C. A. Schenck, November 25, 1901.

7954. JUGLANS NIGRA. Black walnut.

From Biltmore, N. C. Received through Dr. C. A. Schenck, November 25, 1901.

7955 and 7956. ABERIA CAFFRA. Kei apple.

From Cape Town, South Africa. Presented by Prof. Peter MacOwan, botanist and horticulturist, department of agriculture of Cape Colony. Received November 26, 1901.

7955. Seeds gathered in June, 1901.

7956. Seeds gathered October 30, 1901.

7957 to 7961.

From Paris, France. Received through Vilmorin-Andrieux & Co., November 30, 1901.

A collection of asparagus seed as follows:

7957. ASPARAGUS OFFICINALIS.
Violette de Hollande.

7960. ASPARAGUS VERTICILLATUS.
Grimpante.

7958. ASPARAGUS OFFICINALIS.
Blanche d'Allemagne.

7961. ASPARAGUS SPRENGERI.

7959. ASPARAGUS OFFICINALIS.
Tardive d'Argenteuil.

7962 to 7968.

From Mexico. Received through Dr. J. N. Rose (Nos. 345 to 351), U. S. National Museum, November 26, 1901.

A collection of Mexican seeds and plants as follows:

7962.

"Unknown variety of shrubby plant. Elevation nearly 6,000 feet. Flowers yellow and fine. Plant given for identification." (*Rose.*) (No. 345.)

7963. CHRYSANTHEMUM sp.

"Flowers white and very floriferous. Worthy of introduction." (*Rose.*) (No. 346.)

7964. COSMOS sp.

"Includes three or four varieties of *Cosmos* and seeds of two new plants, one of the latter tuberous rooted and valuable." (*Rose.*) (No. 347.)

7962 to 7968—Continued.

7965.

“New tuberous-rooted plant.” (*Rose.*) (No. 348.)

7966. DAHLIA SILVESTRE.

“Red and yellow; single. I also send tubers.” (*Rose.*) (No. 349.)

7967. DAHLIA sp.

“Red.” (*Rose.*) (No. 350.)

7968. DAHLIA sp.

“Yellow.” (*Rose.*) (No. 351.)

7969 and 7970. HORDEUM VULGARE.

Barley.

From Smyrna, Asia Minor. Received through Mr. George C. Roeding, Fresno, Cal., from Mr. B. J. Agadjanian, of Smyrna, November 15, 1901.

7969. *White.*

7970. *Black.*

7971. CRESCENTIA ALATA.

From Jalisco, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., November 15, 1901.

7972. CUCUMIS MELO.

Winter muskmelon.

From Zante, Greece. Presented by Count N. Salamo Luizi through Mr. D. G. Fairchild. Received September 25, 1901.

Green. See No. 6363.

7973. LESPEDEZA BICOLOR.

Bush clover.

From Japan. July, 1901. Presented by John D. Jones, esq., Augusta, Ga., through Dr. B. T. Galloway.

Said to be a fine fodder plant.

7974. CANAVALIA ENSIFORMIS.

Knife bean.

From Japan. Received through Dr. B. T. Galloway, July, 1901.

7975 to 7984.

From Erfurt, Germany. Received through Haage & Schmidt, December 6, 1901.

A collection of seeds obtained for experimental work on rust diseases, being conducted by Mr. John L. Sheldon, of the University of Nebraska:

7975. ASPARAGUS OFFICINALIS.

Schneekopf.

7979. DIANTHUS ALPINUS.

7980. DIANTHUS ARENARIUS (?)

7976. ASPARAGUS OFFICINALIS.

Ruhm von Braumschweig.

7981. DIANTHUS ARMERIA (?)

7982. DIANTHUS CHINENSIS.

7977. ASPARAGUS OFFICINALIS.

Erfurt Giant.

7983. DIANTHUS CHINENSIS.

7978. ASPARAGUS OFFICINALIS.

Burgunder Riesen.

7984. DIANTHUS CHINENSIS.

7985 to 7989. AMYGDALUS COMMUNIS.**Almond.**

From Alicante, Spain. Received through Mr. D. G. Fairchild (Nos. 740-765), December 7, 1901.

A collection of young almond trees budded on Myrobolan stocks by M. Georges Boucher, Paris, France, with buds secured in Spain by Mr. Fairchild, as follows:

7985.*Mollar.* (*Fairchild.* No. 740, July 19, 1901.)**7986.***Planeta.* (*Fairchild.* No. 741, July 19, 1901.)**7987.***Castillet.* (*Fairchild.* No. 745, July 20, 1901.)**7988.***Pastaneta.* (*Fairchild.* No. 755a, July 19, 1901.)**7989.***Jordan.* (*Fairchild.* No. 765, July 30, 1901.)**7990 and 7991. HICORIA PECAN.****Pecan.**

From Morgan City, La. Received through Mr. B. M. Young, December 7, 1901.

7990.*Frotscher.* "Very large, soft shelled." (*Young.*)**7991.***Stuart.* "Very large, soft shelled." (*Young.*)**7992. HORDEUM DISTICHUM.****Barley.**

From Munich, Bavaria. Received through Mr. D. G. Fairchild (No. 467, November 10, 1900), January, 1901.

"A variety of barley grown by Mich. Hartmann, of Mainstockheim, Bavaria, which took a prize at the Munich Barley and Hop Exposition, 1900." (*Fairchild.*) (See Nos. 5788-5792.)

7993 to 8071. VITIS VINIFERA.**Grape.**

From Thomery, France. Received through Etienne Salomon & Sons, December 11, 1901.

A collection of grafted grapevines, as follows:

7993. ADMIRAL DE COURTILLER ON RIPARIA RUPESTRIS, 3309.**7994.** AGOSTENGA ON RIPARIA RUPESTRIS, 3306.**7995.** BICANE ON RIPARIA GLOIRE.**7996.** BLACK ALICANTE ON RIPARIA RUPESTRIS, 3306.**7997.** BLANC D'AMBRE ON RIPARIA RUPESTRIS, 3306.**7998.** CHASSELAS DORÉ ON RIPARIA GLOIRE.**7999.** CHASSELAS CIOTAT ON RIPARIA RUPESTRIS, 3306.**8000.** CHASSELAS BOUCHES DU RHONE ON RIPARIA RUPESTRIS, 3309.**8001.** CHASSELAS BESSON ON RIPARIA RUPESTRIS, 3306.**8002.** CHASSELAS NEGROPONT ON RIPARIA GLOIRE.

7993 to 8071—Continued.

8003. CHASSELAS DUHAMEL ON ARAMON RUPESTRIS, G. No. 1.
8004. CHASSELAS MUSQUE VRAI ON RUPESTRIS DU LOT.
8005. CHASSELAS NAPOLEON ON RIPARIA RUPESTRIS, 3306.
8006. CHASSELAS ROSE ROYAL ON ARAMON RUPESTRIS, G. No. 1.
8007. CHASSELAS TOKAY DES JARDINS ON ARAMON RUPESTRIS, G. No. 1.
8008. CHASSELAS VIBERT ON RIPARIA RUPESTRIS, 3306.
8009. CHASSELAS VIBERT ON ARAMON RUPESTRIS, G. No. 1.
8010. CINSAULT ON RIPARIA GLOIRE.
8011. CLAIRETTE GROS GRAINS ON RIPARIA RUPESTRIS, 3306.
8012. CLAIRETTE MAZEL ON RIPARIA GLOIRE.
8013. CLAIRETTE MAZEL ON ARAMON RUPESTRIS, G. No. 1.
8014. CLAIRETTE MUSQUE TALABOT ON ARAMON RUPESTRIS, G. No. 1.
8015. CORNICHON BLANC ON RIPARIA GLOIRE.
8016. CORNICHON VIOLET ON RIPARIA GLOIRE.
8017. CORNICHON VIOLET ON ARAMON RUPESTRIS, G. No. 1.
8018. FOSTER'S WHITE SEEDLING ON RIPARIA GLOIRE.
8019. FRANKENTHAL HATIF ON RIPARIA RUPESTRIS, 101-114.
8020. GEN. DE LA MARMORA ON RIPARIA RUPESTRIS, 3306.
8021. GOLDEN CHAMPION ON ARAMON RUPESTRIS, G. No. 1.
8022. GRADISKA ON RIPARIA GLOIRE.
8023. JOANNENC CHARNU ON ARAMON RUPESTRIS, G. No. 1.
8024. LE COMMANDEUR ON RIPARIA RUPESTRIS, 3306
8025. MADELEINE BLANCHE ON RIPARIA RUPESTRIS, 3306.
8026. MADELEINE BLANCHE DE JACQUES ON ARAMON RUPESTRIS, G. No. 1.
8027. MADELEINE ROYALE ON RIPARIA RUPESTRIS, 3306.
8028. MADELEINE ROSE ON RIPARIA GLOIRE.
8029. MALAGA BLANC ON RUPESTRIS DU LOT.
8030. MAMELON ON RIPARIA RUPESTRIS, 3306.
8031. MESLIER HATIF ON ARAMON RUPESTRIS, G. No. 1.
8032. MORILLON BICOLOR ON RIPARIA RUPESTRIS, 3306.
8033. MUSCAT ALBARIANS ON RUPESTRIS DU LOT.
8034. MUSCAT BIFERE ON ARAMON RUPESTRIS, G. No. 1.
8035. MUSCAT BIFERE ON RIPARIA RUPESTRIS, 3306.
8036. MUSCAT DE HAMBURGH ON RUPESTRIS DU LOT.

7993 to 8071—Continued.

8037. MUSCAT ROUGE DE MADERE ON RIPARIA RUPESTRIS, 3306.
8038. PETITE ST. JEAN ON RIPARIA GLOIRE.
8039. PIS DE CHEVRE DES ALPES ON RIPARIA RUPESTRIS, 3306.
8040. PRECOÇE DE KIENZHEIM ON RIPARIA GLOIRE.
8041. ROSAKI ON RIPARIA RUPESTRIS, 3306.
8042. RAISIN BOISSELOT ON RIPARIA RUPESTRIS, 3306.
8043. ROUSSANNE ON RIPARIA RUPESTRIS, 3306.
8044. SAINT ANTONIO ON RIPARIA GLOIRE.
8045. SATINE JAUNE ON RIPARIA RUPESTRIS, 3306.
8046. SERVAN BLANC ON RIPARIA RUPESTRIS, 3306.
8047. SICILIEN ON RIPARIA, G. No. 1.
8048. SOUVENIR DU CONGRESS ON RIPARIA RUPESTRIS, 3306.
8049. SUCRE DE MARSEILLE ON RIPARIA RUPESTRIS, 3306.
8050. SULTANIEH ROSE ON RIPARIA RUPESTRIS, 3306.
8051. TENERON VAUCLUSE ON RUPESTRIS DU LOT.
8052. TOKAY ANGEVIN ON RIPARIA GLOIRE.
8053. TRENTHAM BLACK ON RIPARIA RUPESTRIS, 3306.
8054. CHASSELAS VIBERT ON ARAMON RUPESTRIS, G. No. 1.
8055. BURGRAVE DE HONGRIE ON RUPESTRIS DU LOT.
8056. PIS DE CHEVRE NOIR ON RUPESTRIS DU LOT.
8057. VERDELHO DE MADERE ON RIPARIA GLOIRE.
8058. SULTANINA ON RUPESTRIS DU LOT.
8059. LEANI ZOLO ON RUPESTRIS DU LOT.
8060. PRESIDENT CARDENAU ON RUPESTRIS DU LOT.
8061. SAUVIGNON BLANC ON RUPESTRIS DU LOT.
8062. TSIEN TSIEN ON MOURVEDRE RUPESTRIS, 202.
8063. ULLIADE BLANCHE ON RUPESTRIS DU LOT.
8064. CHASSELAS BULHERY ON RIPARIA GLOIRE.
8065. PRECOÇE DE KIENZHEIM ON RIPARIA GLOIRE.
8066. SEIBEL No. 1, AMERICAN HYBRID.
8067. SEIBEL No. 2, AMERICAN HYBRID.
8068. BOURRISQUOU 3907, AMERICAN HYBRID.
8069. ARAMON RUPESTRIS G. No. 1, AMERICAN LOT.

7993 to 8071—Continued.

8070. OLIVIER DE SERRES ON ARAMON RUPESTRIS, G. No. 1.

8071. OLIVETTE DE CADENET ON RIPARIA RUPESTRIS, 3306.

(By "American Lot" is understood in France the stock on which the European Lot is grafted.)

8072 to 8121. PÆONIA MOUTAN.

Tree peony.

From Yokohama, Japan. Received through the Yokohama Nursery Company, November 23, 1901.

A collection of grafted plants as follows:

8072.	<i>Yoyo-no-homare.</i>	8087.	<i>Kumo-no-nishiki.</i>
8073.	<i>Yaso-okino.</i>	8088.	<i>Anyoji.</i>
8074.	<i>Kamadafuji.</i>	8089.	<i>Iwato-Kagami.</i>
8075.	<i>Kumoi-dsuru.</i>	8090.	<i>Yuki-arashi.</i>
8076.	<i>Gioku-sho-kaku.</i>	8091.	<i>Kokirin.</i>
8077.	<i>Aduma-saki.</i>	8092.	<i>Akasho-jishi.</i>
8078.	<i>Nishiki-gawa.</i>	8093.	<i>Hakubanrya.</i>
8079.	(Number not utilized.)	8094.	<i>Hakugan.</i>
8080.	<i>Kumoma-no-tsuki.</i>	8095.	<i>Hinode-dsuru.</i>
8081.	<i>Fuji-araski.</i>	8096.	<i>Tokiwadsu.</i>
8082.	<i>Adzuma-nishiki.</i>	8097.	<i>Asahi-minato.</i>
8083.	<i>Ginfukurin.</i>	8098.	<i>Ruriban.</i>
8084.	<i>Michi-shiba.</i>	8099.	<i>Kame-asobi.</i>
8085.	<i>Renkaku.</i>	8100.	<i>Saishoji.</i>
8086.	<i>Kagurajima.</i>	8101.	<i>Konron-koku.</i>

8072 to 8121—Continued.

8102.	<i>Akashi-gata.</i>	8112.	<i>Gioku-senshin.</i>
8103.	<i>Bunbudo.</i>	8113.	<i>Seirin.</i>
8104.	<i>Nishikishima.</i>	8114.	<i>O-sakadasuki.</i>
8105.	<i>Adzumakagami.</i>	8115.	<i>Fukashigi.</i>
8106.	<i>Fuji-no-mine.</i>	8116.	<i>Kausenden.</i>
8107.	<i>Hana-tachabana.</i>	8117.	<i>Daikagura.</i>
8108.	<i>Shishi-gashiri.</i>	8118.	<i>Muhensai.</i>
8109.	<i>Shi-un-ryu.</i>	8119.	<i>Saigyo sakura.</i>
8110.	<i>Gabisan.</i>	8120.	<i>Momo-zono.</i>
8111.	<i>Shoki-kaguru.</i>	8121.	<i>Ivo-no-seki.</i>

8122 to 8188.

From Yokohama, Japan. Received through Suzuki & Iida, American agents of The Yokohama Nursery Company, New York, December 13, 1901.

A collection of plants as follows (the nomenclature in the main is that of the nursery company):

8122.	MICHELIA COMPRESSA.	8133.	QUERCUS GLANDULIFERA.
8123.	CLERODENDRON SQUAMATUM.	8134.	QUERCUS GLAUCA.
8124.	DEUTZIA SIEBOLDIANA.	8135.	QUERCUS LACERA (?)
8125.	STYRAX JAPONICA.	8136.	QUERCUS LAEVIGATA (?)
8126.	STYRAX OBASSIA.	8137.	QUERCUS PHILLYREOIDES.
8127.	LIGUSTRUM CILIATUM.	8138.	QUERCUS PINNATIFIDA.
8128.	PITOSPORUM TOBIRA.	8139.	QUERCUS SERRATA.
8129.	QUERCUS ACUTA.	8140.	GINKGO BILOBA VARIEGATA.
8130.	QUERCUS CUSPIDATA.	8141.	CHAMAECYPARIS OBTUSA, var. KAMUKURA-HIBA.
8131.	QUERCUS DENTATA.	8142.	CHAMAECYPARIS OBTUSA, var. HOTARU-HIBA.
8132.	QUERCUS DENTATA AUREA.		

8122 to 8188—Continued.

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| 8143. CHAMAECYPARIS OBTUSA,
var. EMBI-HIBA. | 8165. ACER KINUKASAYAMA. |
| 8144. CHAMAECYPARIS OBTUSA,
var. KANA-AMI. | 8166. ACER AOBA. |
| 8145. DAPHNE GENKWA. | 8167. ACER HATCUYUKI KAIDO. |
| 8146. EDGEWORTHIA GARDNERI. | 8168. ACER AUREUM. |
| 8147. KADSURA JAPONICA. | 8169. ACER SCOLOPENDRIFOLIUM
RUBRUM. |
| 8148. KADSURA JAPONICA, spotted. | 8170. ACER SCOLOPENDRIFOLIUM
(green). |
| 8149. KADSURA JAPONICA, white
variegated. | 8171. ACER ATROPURPUREUM VA-
RIEGATUM. |
| 8150. ACER TANABATA.
Various cultural varieties. | 8172. ACER AKIKAZE-NISHIKI. |
| 8151. ACER SANGUINEUM. | 8173. ACER ROSA-MARGINATIA. |
| 8152. ACER ATROPURPUREUM. | 8174. ACER CARPINIFOLIUM. |
| 8153. ACER OSHIU-BENI. | 8175. ACER TRIFIDUM. |
| 8154. ACER JAPONICUM. | 8176. ACER RUFINERVE. |
| 8155. ACER SANGUINEUM, Seigen. | 8177. ACER TSUMAGAKI. |
| 8156. ACER ROSEUM. | 8178. ACER TSURU-NISHIKI. |
| 8157. ACER VERSICOLOR. | 8179. ACER MUSATORIYAMA. |
| 8158. ACER OSAKA-ZUKI. | 8180. ACER PICTUM ALBUM. |
| 8159. ACER ATRO-DISSECTUM VA-
RIEGATUM. | 8181. ACER JAPONICUM FILICI-
FOLIUM. |
| 8160. ACER ATROPURPUREUM DIS-
SECTUM. | 8182. ACER NISHIKIGASANE. |
| 8161. ACER RETICULATUM. | 8183. ACER PICTUM AUREUM. |
| 8162. ACER OKUSHIMO. | 8184. ACER MURAKUMO. |
| 8163. ACER ATRO-DISSECTUM
(green). | 8185. ACER KOMONUISHIKI. |
| 8164. ACER URIME. | 8186. ACER JAPONICUM. |
| | 8187. ACER JAPONICUM. |
| | 8188. ACER JAPONICUM. |

8189 to 8192.

From Yokohama, Japan. Received through Suzuki & Iida, American agents of the Yokohama Nursery Co., New York City, December 17, 1901.

A collection of seeds as follows:

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| 8189. HAMAMELIS JAPONICA. | 8191. XANTHOXYLON PIPERITUM. |
| 8190. STERCULIA PLATANIFOLIA. | 8192. PODOCARPUS MACROPHYL-
LIA. |

8193 to 8199.

From Lucknow, India. Received through the Government Horticultural Garden, December 16, 1901.

A collection of plants as follows:

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| 8193. BOMBAX MALABARICUM. | 8197. STIGMAPHYLLON PERIPLOCAEFOLIUM. |
| 8194. CLAUSENA EXCAVATA. | 8198. RONDELETIA CHINENSIS. |
| 8195. DILLENIA SPECIOSA. | 8199. RUSCUS HYPOPHYLLUM. |
| 8196. FICUS INDICA. | |

8200 to 8203. HICORIA PECAN.**Pecan.**

From Ocean Springs, Miss. Received through The Stuart Pecan Company, December 21, 1901.

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| 8200. | 8202. |
| <i>Russell.</i> | <i>Jewett.</i> |
| 8201. | 8203. |
| <i>Stuart.</i> | <i>Van Deman.</i> |

8204. PISTACIA VERA × PISTACIA TEREBINTHUS.

From San Francisco, Cal. Received through Mr. W. T. Swingle from Mr. G. P. Rixford, secretary of the California Academy of Sciences, December 23, 1901.

8205 and 8206.

From Paris, France. Received through Vilmorin-Andrieux & Co., December 27, 1901.

- 8205.** CINCHONA OFFICINALIS.
8206. AGATHIS AUSTRALIS.

8207. COFFEA ARABICA.**Coffee.**

From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild from Hon. Karl Auer, United States Consul, December 28, 1901.

Timor.

8208. JUGLANS REGIA.**Walnut.**

From Zante, Greece. Presented by Mr. Alfred L. Crow, through Mr. D. G. Fairchild, January 6, 1902.

Large Zante.

8209. CYDONIA SINENSIS.**Chinese quince.**

From Zante, Greece. Presented by Mr. Alfred L. Crow, through Mr. D. G. Fairchild. Received January 6, 1902.

Scented quince.

8210. CITRUS NOBILIS × CITRUS BIGARADIA.**Orange.**

From Mustapha, Algiers, Algeria. Received through Dr. L. Trabut, Government Botanist, January 7, 1902. (A second packet January 14, 1902.)

Clementine. A hybrid of *Citrus nobilis* and *Citrus bigaradia sinensis salicifolia*, var. *granito*.

"Fruit very fine and beautiful. I recommend it." (*Trabut.*)

- 8211. COFFEA ARABICA.** **Coffee.**
 From Macassar, Celebes. Received through Messrs. Lathrop and Fairchild, from Hon. Karl Auer, United States Consul, January 7, 1902.
Chemnitz (?).
- 8212 and 8213. TRITICUM DURUM.** **Wheat.**
 From Uralsk, Russia. Purchased from the Ural Millers' Association. Received January 9, 1902.
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| <p>8212.
 <i>Kubanka.</i> Crop of 1900.</p> | <p>8213.
 <i>Kubanka.</i> Crop of 1901.</p> |
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- 8214. PROSOPIS JULIFLORA.** **Mesquite.**
 From Honolulu, Hawaiian Islands. Received through Mr. Jared G. Smith, director of the agricultural experiment station, January 10, 1902.
- 8215. POLYGONUM TATARICUM.** **India wheat.**
 From the Himalaya Mountains. Received through Dr. C. Sprenger, Vomero, near Naples, Italy, January 15, 1902.
 "A large growing specimen." (*Sprenger.*)
- 8216 to 8218. CYPERUS ESCULENTUS.** **Chufa.**
 From Spain. Received through Mr. D. G. Fairchild (No. 772, Aug. 9, 1901), January 14, 1902. Secured through kindness of Hon. R. M. Bartleman, United States Consul at Valencia.
 "Chufa cultivation in southeastern Spain is one of its most profitable industries; the underground tubers are used to make the *Horchata de chufas*, a favorite ice, sold very extensively in all the large cities in Spain." (*Fairchild.*)
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| <p>8216.
 From Alboraya.</p> <p>8217.
 From Balasuar.</p> | <p>8218.
 From Algemesse.</p> |
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- 8219. CUCUMIS MELO.** **Winter muskmelon.**
 From Valencia, Spain. Received through Mr. D. G. Fairchild (No. 772, August 9, 1902), January 14, 1902.
- 8220 and 8221. TRITICUM VULGARE.** **Wheat.**
 From northern China. Received through Mr. G. D. Brill, January 17, 1902.
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| <p>8220.
 Red.</p> | <p>8221.
 White.</p> |
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- 8222 to 8225. AGARICUS CAMPESTRIS.** **Mushroom.**
 From Paris, France. Received through Dr. B. M. Duggar, January 18, 1902.
 Mushroom spawn from Vilmorin-Andrieux & Co., as follows:
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| <p>8222.
 <i>Triple.</i> Virgin spawn, white variety.</p> <p>8223.
 <i>Double.</i> Virgin spawn, brown variety.</p> | <p>8224.
 <i>Ordinaire.</i> Virgin spawn, brown variety.</p> <p>8225.
 Crop spawn, brown variety.</p> |
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8226 to 8228. THEA VIRIDIS.**Tea.**

From Heneratgoda, Ceylon. Received through J. P. William & Bros., January 18, 1902.

Tea seed, as follows:

8226.

"Assam hybrid tea seed of highest class *Jat*, light leaf variety from Invery Estate, Dickoya, Ceylon, elevation 4,500 feet." (*William.*)

8227.

"Highest class *Jat* Assam Hybrid tea seed from Abbotsford Estate, Dimbulla, Ceylon, elevation 5,500 feet." (*William.*)

8228.

"Pure Manipuri indigenous tea seed, of highest class *Jat*, from Pen-y-len Estate, Dolosbage, Ceylon, over 4,000 feet elevation." (*William.*)

8229. BETA VULGARIS.**Sugar beet.**

From Wimmelburg, near Eisleben, Germany. Presented by Frantisek Jodl, Prague, Bohemia, January 18, 1902.

Kleinwanzleben improved.

8230 to 8232. TRITICUM DURUM.**Wheat.**

From Ambrocievka, Russia. Received from the estate of A. Michalkov, January 21, 1902.

Macaroni wheats as follows:

8230.

Yellow Gharnovka.

8232.

Black Don. (Chernokoloska.)

8231.

Velvet Don. (Chernouska.)

8233 to 8236. ERIOBOTRYA JAPONICA.**Loquat.**

From Mustapha, Algiers, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield (Nos. 690 to 693), January 22, 1902.

8233.

Marcadal. "A nearly seedless variety from the Rev. Mr. Arkwright's garden." (*Fairchild.*)

8234.

Olivier. "From the Rev. Mr. Arkwright's garden. Fruits weigh over 52½ grams apiece." (*Fairchild.*)

8235.

St. Michele. "From the Rev. Mr. Arkwright's garden. Said to weigh as much as 75 grams." (*Fairchild.*)

8236.

Meffre's No. 2. "Said by its originator, M. Henri Meffre, of El Merdj, to exceed in size any of the foregoing and to be of excellent quality." (*Fairchild.*) No. 693.

8237. MINA TRILOBATA.

From Mustapha, Algiers, Algeria. Received from Meffre & Salom Sons, January 22, 1902.

8238. BETA VULGARIS.

Sugar beet.

From Athensleben bei Löderburg, Germany. Received through H. Bennecke & Son, January 23, 1902.

Kleinwanzlebener Nachzucht. This seed was presented to Dr. H. W. Wiley, Chief of Bureau of Chemistry, United States Department of Agriculture.

8239. SOLANUM DREGEI.

Natal thorn.

From Los Angeles, Cal. Received through Mr. Elmer Stearns, January 24, 1902. Grown from seed of No. 1987, Inventory No. 5.

8240. SPONDIAS LUTEA.

Ciruela amarillo.

From Iguala, Guerrero, Mexico. Received through Mr. Elmer Stearns, Los Angeles, Cal., January 24, 1902.

8241 to 8298.

From Nice, France. Received through Mr. A. Robertson-Proschowsky, January 27, 1902.

A collection of seeds as follows: The determination of these species is that of Mr. Robertson-Proschowsky.

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| 8241. AGAPANTHUS UMBELLATUS. | 8254. CASUARINA EQUISETIFOLIA. |
| 8242. AGAVE LOPHANTHA,
Schiede? | 8255. CEANOTHUS AZUREUS Desf.
(HYBRIDUS Hort.)
<i>Gloire de Versailles.</i> |
| 8243. ALBIZZIA LOPHANTHA. | 8256. CLERODENDRON HASTATUM. |
| 8244. ARBUTUS UNEDO. | 8257. CORDYLINAE AUSTRALIS.
<i>Cordylina indivisa</i> of the trade. |
| 8245. ARISTOLOCHIA ELEGANS. | 8258. DOLICHOS LABLAB. |
| 8246. ARTEMISIA ARGENTEA. | 8259. EREMOCARPUS SCABER. |
| 8247. ARAUJIA SERICIFERA Brot.? | 8260. ELAEAGNUS PUNGENS var.
SIMONI. |
| 8248. ASPARAGUS SPRENGERI. | 8261. NICOTIANA GLAUCA. |
| 8249. BIGNONIA TWEEDIANA. | 8262. OLEARIA HAASTI. |
| 8250. CARDIOSPERMUM HALICABUM. | 8263. PASSIFLORA PRUINOSA. |
| 8251. CARICA QUERCIFOLIA. | 8264. PERIMEDIUM DISCOLOR (?) |
| 8252. CASSIA CORYMBOSA. | 8265. PHOENIX RECLINATA. |
| 8253. CASSIA OCCIDENTALIS (?) | |
| 8266. PHOENIX PUMILA × PHOENIX RECLINATA. | |

"Fruits of rather good taste when fresh. In moist climates, like Florida, other species than *Phoenix dactylifera* might in time, through selection and hybridization, produce good varieties." (*Proschowsky.*)

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| 8267. PHORMIUM TENAX. | 8270. POLYGONUM LANIGERUM. |
| 8268. PLECTRANTHUS STRIATUS (?) | 8271. PORONA RACEMOSA (?)
Roxb. |
| 8269. PODACHAENIUM PANICULATUM. | 8272. PROSOPIS GLANDULOSA (?) |

8241 to 8298—Continued.

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| 8273. RICHARDIA AFRICANA Kth. | 8286. THALIA DEALBATA. |
| 8274. RICHARDIA ALBO-MACULATA. | 8287. VITEX INCISA. |
| 8275. RICINUS COMMUNIS, var. 1. | 8288. WIGANDIA sp. (hybrid?) |
| 8276. RICINUS COMMUNIS, var. 2. | 8289. EUPHORBIA sp. |
| 8277. RUSCUS HYPOGLOSSUM. | 8290. FICUS MACROPHYLLA. |
| 8278. SCHINUS MOLLE. | 8291. GOMPHOCARPUS TEXTILIS. |
| 8279. SENECIO LONGIFOLIUS. | 8292. GLOBULARIA SALICINA Lam. |
| 8280. SOLANUM sp. | 8293. HEDYCHIUM GARDNERIANUM Rosc. |
| 8281. SOLANUM LACINIATUM Ait. (S.RECLINATUM l'Herit). | 8294. JACARANDA OVALIFOLIA. |
| 8282. SOLANUM MARGINATUM. | 8295. IOCHROMA TABULOSA Benth. |
| 8283. SOLANUM PSEUDOCAPSICUM. | 8296. LIGUSTRUM JAPONICUM. |
| 8284. SOLANUM WARSZEWICZII. | 8297. MESEMBRYANTHEMUM ACINACIFORME. |
| 8285. SOLLYA HETEROPHYLLA. | |
| 8298. MESPILUS GERMANICA. | Medlar. |

8299. MEDICAGO ELEGANS.

From Mustapha, Algiers, Algeria. Received through Dr. L. Trabut, Government Botanist, January 27, 1902.

8300 to 8306. ORYZA SATIVA.**Rice.**

From Kobe, Japan. Received through Dr. S. A. Knapp, January 27, 1902.

Seed rice as follows, Japanese names being given: —

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| 8300.
<i>Shinriki.</i> From Hyogo district. | 8304.
<i>Miyako.</i> From Yamaguchi district. |
| 8301.
<i>Shiratama.</i> From Fukuoka district. | 8305.
From Chiugoku district. |
| 8302.
<i>Komachi.</i> From Kumamoto district. | 8306.
From Chikuzen district. |
| 8303.
<i>Omasc.</i> From Kumamoto district. | |

8307. JUGLANS REGIA.**Walnut.**

From Aintab, Asia Minor. Received through Rev. A. Fuller, January 28, 1902.
Wild Persian walnuts.

8308 to 8310. CUCUMIS MELO.

Muskmelon.

From Lisbon, Portugal. Received through Señor Abel Fontoina da Costa, January 30, 1902.

8308.

Amarello.

8310.

Palha (Valentien).

8309.

Alpiaca.

8311. KHAYA SENEGALENSIS.

African mahogany.

From Mount Silinda, Melssetter district, Rhodesia, South Africa. Received through Dr. Wm. L. Thompson, January 31, 1902.

Ubaba. This is one of the finest timber trees of South Africa, growing to a large size, sometimes 6 feet or more in diameter. Resists the attacks of insects and is very durable. Generally grows near streams, but is also found in other places. Called by the natives "Ubaba," from the bitter bark.

8312. SIMMONDSIA CALIFORNICA.

Jojoba.

From Las Flores, Lower California, Mexico. Received through Mr. F. Plunk, jr., January 30, 1902.

8313 to 8329.

From Erfurt, Germany. Received through Haage & Schmidt, February 1, 1902.

A collection of seeds as follows:

8313. CARYOTA MITIS.

8322. EUTERPE EDULIS.

8314. COCOS YATAY.

8323. OREODOXA REGIA.

8315. CHRYSALIDOCARPUS LUTESCENS.

8324. CHAMAEDOREA SARTORI.

8316. PYRETHRUM ROSEUM.

8325. OREODOXA OLERACEA.

8317. LEUCADENDRON ARGENTEUM.

8326. ACANTHOPHOENIX CRINITA.

8318. CINNAMOMUM sp.

8327. KENTIOPSIS MACROCARPA.

8319. PAPAVER BRACTEATUM.

8328. BEGONIA REX X DIADEMA.

8320. PHORMIUM TENAX.

8329. KENTIA MACARTHURI.
(Horticultural variety.)

8321. COCOS DATIL.

8330. AMYGDALUS PERSICA.

Peach.

From near North Gate, Canton, China. Received through Messrs. Lathrop and Fairchild (No. 774, December 20, 1901), February 3, 1902.

"A variety of peach growing in a Chinese orchard at Ngau lan Kong. The habit of this tree resembles that of an apricot, and, although I saw none of the fruit, I believe it is quite a distinct type from the ordinary Eagle Beak peach, which is the common variety about Canton. I was not able to get a name for this variety." (Fairchild.)

8331 to 8334. AMYGDALUS PERSICA.

Peach.

Eagle Beak peach from Canton, China. Received through Messrs. Lathrop and Fairchild (No. 775, December 20, 1901), February 3, 1902.

"From orchard trees growing near the Great North Gate of Canton, at Ngau lan Kong, of the *Ying tsui 'o* or Eagle Beak peach. This variety resembles the Honey

closely, except that the pointed tip of the fruit is more curved, according to Dr. J. M. Swan, of the Canton Hospital. I saw no specimen myself. According to Doctor Swan's gardener this variety blooms in March and April, while other sorts here bloom in February. The peach is said to be very sweet, even inclined to be a bit mawkish in flavor. The fruit is brought to the market some time early in July. The market for peaches in Canton is a short one, being in all not over five weeks—the last three weeks of June and the first two weeks of July. The *Peen t'o* type of peach is unknown here in Canton, so far as I can ascertain. It certainly must be a rare form here if it occurs at all. These cuttings were taken from small commercial orchards, and, it being winter, I am obliged to take the identification through an interpreter that they are the Eagle Beak. To insure getting all the varieties in the orchard, I got several lots from the different parts of the orchard. These I have marked 775, a, b, c, respectively. The numbers 8331, 8332, 8333, and 8334 correspond with these numbers. This peach is not larger than the Honey, but may prove later blooming and be valuable on this account." (*Fairchild.*)

8335. MORUS MULTICAULIS.**Chinese mulberry.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 776), February 3, 1902.

"A variety of mulberry cultivated for its leaf, used in feeding silkworms. The method of culture is to plant the cuttings deep in the ground, leaving two buds above the soil. The plant is never allowed to make a tree, but is cut down every year to the ground. The plants are only 6 to 8 inches apart, in rows 1½ feet from one another." (*Fairchild.*)

8336. POPULUS sp. (?)**Poplar.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 777, December 20, 1901), February 3, 1902.

"A low growing poplar with small leaves of a peculiar, truncated shape, which color up in December here in southern China a beautiful wine red. The splashes of color which this poplar gives to the landscape are very beautiful and the species is worth growing as an ornamental for this purpose alone." (*Fairchild.*)

8337. AMYGDALUS PERSICA.**Peach.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 778, December 20, 1901), February 3, 1902.

Ying tsui t'o. "Eagle Beak peach from a garden at Fati, opposite the island of Shameen. Probably much the same as Nos. 8331 to 8334, but as all these peaches seem to be grown from seed and are not grafted it may be slightly different." (*Fairchild.*)

8338. PRUNUS sp.**Red plum.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 779, December 20, 1901), February 3, 1902.

Hung Mui. "The flower and fruit are both said to be red and the latter to be an inch or more in diameter. It flowers somewhat later than the *Tsing Mui*, which is beginning to bloom now. This is from Yat Chun garden, at Fati, near Canton. These Chinese plums are said to be good canners, but likely to have a bitter taste on standing. They are not highly prized by the Europeans, who say they are hard and have a tendency to be astringent. The trees I saw at Fati were not remarkable, except for the great vigor of some young shoots springing from the old trunk which had been cut down. I can not vouch positively for the name of the variety as I worked through an interpreter." (*Fairchild.*)

8339. PRUNUS sp.**Plum.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 780, December 20, 1901), February 3, 1902.

Nam Wa Li. "A variety of plum called the Southern Glorious plum, according to Dr. J. M. Swan's translation. It is a red plum, about three-fourths of an inch in

diameter, quite round, skin not tough, seed small. The sauce made from this variety turns bitter if left to stand for even an hour. If the tree is given good culture it produces fruits $1\frac{1}{2}$ inches in diameter. It flowers in March. The tree I saw was quite vigorous and not grafted." (*Fairchild.*)

8340. AMYGDALUS PERSICA.**Peach.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 781, December 20, 1901), February 3, 1902.

Pak Wat tim 'o. "A slightly sweet, white stone variety of rather small size, preferred by some to the *Ying tsui 'o*, which, it is said, has too sweet a flavor. It has no beak like the latter, but is a typical south Chinese shape, according to Dr. J. M. Swan, of the Canton Hospital, who very kindly described this variety." (*Fairchild.*)

8341. DIOSPYROS KAKI.**Persimmon.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 782, December 20, 1901), February 3, 1902.

Hung tsi. "A soft persimmon, of dark-red color, which is preferred by many Europeans to the hard type that is only edible after soaking in water for an hour. This is grown at Fati, near Canton." (*Fairchild.*)

8342. PRUNUS sp.**Plum.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 783, December 20, 1901), February 3, 1902.

Pak Mai. "A white plum, according to the interpreter. The tree is a fairly vigorous grower and abundant producer of flowers. It is not cultivated extensively here, so far as I can find out, and I have been unable to get a description of the variety." (*Fairchild.*)

8343. AMYGDALUS PERSICA.**Peach.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 784, December 20, 1901), February 3, 1902.

Ying tsui 'o, or the Eagle Beak peach, from Fati, near Canton. "These are from different trees than Nos. 8331 to 8334, and may prove to have superior qualities. All that I have seen are seedling trees. Few peaches seem to be grafted." (*Fairchild.*)

8344. PSIDIUM GUAJAVA.**Guava.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 785, December 20, 1901), February 3, 1902.

"A reputed large-fruited (2 inches or so in diameter) yellow guava of good quality. The guavas about Canton are grown in the same fields with the rice. A single patch is often planted to a mixture of peach and guava trees, and both are grown on low ridges about 6 to 8 feet apart each way. No name was obtained." (*Fairchild.*)

8345. PRUNUS sp.**Plum.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 786, December 20, 1901), February 3, 1902.

Tsing mai. "A white-flowered, green-fruited plum. The fruit reaches 1 inch in diameter and is round in shape. This was just beginning to flower on December 20, much earlier than the *Hung Mai* or *Nam wa li* (*li* is pronounced as if spelled 'lay' in this word)." (*Fairchild.*)

8346. FICUS sp.**Milk tree.**

From Canton, China. Presented by Dr. J. M. Swan, of the Canton Hospital, through Messrs. Lathrop and Fairchild (No. 802, December 20, 1901), February 3, 1902.

Nau Nai Shu. "A large entire-leaved species of *Ficus*, which bears, even when quite young, large quantities of figs, at least an inch in diameter and quite sweet. Used as a shade tree in Canton. This was taken from Doctor Swan's yard at the Canton Hospital." (*Fairchild.*)

8347. CITRUS LIMETTA (?)**Lime.**

From Canton, China. Sent by Messrs. Lathrop and Fairchild (No. 803, December 20, 1901), February 3, 1902.

"Orange-fruited lime. Scions taken from some fruit in the market of Canton of a variety of lime about 2 inches in diameter. In color this lime is as dark orange as a blood orange from Malta, and its flesh is not light, as the lime is generally, but a deep orange. It seems like a very sour orange. It is used everywhere here in place of lemon or other kinds of lime. I did not see the trees growing, so can not describe them." (*Fairchild.*) (These scions were not received.)

8348. AMYGDALUS COMMUNIS.**Almond.**

From Malaga, Spain. Received through Mr. D. G. Fairchild (No. 767, July 31, 1901), February 4, 1902.

Jordan. "Bud sticks sent by Francisco Borgos Himenez, of Alhaurin, a village near Cartama, one and one-half hour's ride from Malaga." (*Fairchild.*)

8349. PISTACIA VERA.**Pistache.**

From Aintab, Syria. Received through Rev. A. Fuller.

8350 to 8352. VIOLA ODORATA.**Violet.**

From Paris, France. Received through Vilmorin-Andrieux & Co., February 4, 1902.

A collection of violet seed for experimental work, as follows:

8350.*Perpetual.***8352.***The Czar.***8351.***Perpetual, white.***8353. VIOLA CORNUTA.****Violet.**

From Paris, France. Received through Vilmorin-Andrieux & Co., February 4, 1902.

*Blue.***8354. VIGNA CATJANG.****Cowpea.**

From Morioka, Japan. Received through Rev. E. Rothesay Miller, February 4, 1902.

A variety of cowpea having pods 3 feet long. Cooked and eaten like string beans.

8355 to 8357. DOLICHOS LABLAB.**Bean.**

From Morioka, Japan. Received through Rev. E. Rothesay Miller, February 4, 1902.

Edible podded beans as follows:

8355.*Green pods.***8357.***Purple pods.***8356.***Purplish pods.***8358. VICIA FABA.****Broad bean.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 791, December 21, 1901), February 5, 1902.

"A green variety of broad bean found on the market of Canton. This is used for human food, and is grown extensively in Central China, and I have seen large gardens of broad beans near Shanghai." (*Fairchild.*)

8359. ORYZA SATIVA.**Rice.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 788, December 21, 1901), February 5, 1902.

Si Mu. "Rice from Ching Shieng district, Canton province, 20 miles from Canton. It is a low-growing variety. This rice is imported to America for Chinese use, and is very highly prized by the Chinese because of its fine quality and especially because of its fine aroma. The price per katty is 6 cents, while ordinary rice costs about 4. Coolies often smuggle this rice out of the country, because there is an export duty on rice in Canton and this kind is the finest known to the Cantonese." (*Fairchild.*)

8360. ORYZA SATIVA.**Rice.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 790, December 21, 1901), February 5, 1902.

No Mai. "Old man's rice, a variety used for flour and pastry making. It is said to be very tough and nutritious and satisfying. Not generally employed for boiling purposes. It is a very expensive rice, bringing 8 cents a katty. Not classed with the ordinary boiling rices." (*Fairchild.*)

8361. ORYZA SATIVA.**Rice.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 789, December 21, 1901), February 5, 1902.

Wong Chin. "A variety of rice grown in Ching Sien or Ching Shien. I am told this is, next to No. 8359, the finest rice in Canton, but is not exported. It brings only 5 cents a katty when the other brings 6 cents. Vermicelli is said to be made of it." (*Fairchild.*)

8362. CASTANEA sp.**Chestnut.**

From Canton, China. Received through Messrs. Lathrop and Fairchild, February 6, 1902.

8363. PRUNUS ARMENIACA.**Apricot.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 800, December 20, 1901), February 5, 1902.

"Dried apricots from the Canton market. There seem to be no apricots grown about Canton, at least none of the Europeans I have talked with have seen any, and these are probably imported from north China." (*Fairchild.*)

8364. CANARIUM ALBUM.**Chinese olive.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 798, December 20, 1901), February 5, 1902.

Pak Lam. "This is a fruit sold in China by the thousands of tons, both in the dried state and pickled, and stained a light-yellow color. The plant is grown in orchards up the river from Canton and forms a very important article of commerce. Scarcely a fruit stall of any size is without it. The methods of preparation seem to be numerous. Worthy of preliminary plantings in Florida and southern California." (*Fairchild.*)

8365. PRUNUS sp.**Plum.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 799, December 20, 1901), February 5, 1902.

"Dried plums from the market in Canton. The origin of the trees is quite uncertain, but the fruit probably came from somewhere up the West or North rivers. The dealer said they came from Foo Chow, but no reliance is to be put on this statement." (*Fairchild.*)

8366. ELEOCHARIS TUBEROSA.**Water chestnut.**

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 801, December 20, 1901), February 5, 1902.

"An especially fine variety of the water chestnut, which is imported in large quantities into Canton from Kwai Lam, up the river. It is larger and better than the

ordinary sort and should be given a trial in California, where the Chinese already grow the ordinary variety. (See Bulletin No. 68 of the Office of Experiment Stations.) There are numerous uses to which this swamp plant is put. "Worthy of consideration as a plant for cultivation in the swamps of the South." (*Fairchild.*)

8367. CITRUS NOBILIS × CITRUS BIGARADIA. Orange.

From Mustapha, Algiers, Algeria. Received through Dr. L. Trabut, Government Botanist, January 5, 1902.

Clementine.

8368. CITRUS NOBILIS × CITRUS DECUMANA. Orange.

From Mustapha, Algiers, Algeria. Received through Dr. L. Trabut, Government Botanist, January 5, 1902.

8369 to 8385.

From Erfurt, Germany. Received through Haage & Schmidt, February 5, 1902. A collection of seeds, as follows:

8369. VIOLA MUNBYANA (?).

8377. VIOLA ODORATA ROSSICA.

8370. VIOLA ODORATA BARRENS-STEINI.

8378. VIOLA ODORATA SEMPER-FLORENS.

8371. VIOLA ODORATA BARRENS-STEINI, fl. ALBO.

8379. VIOLA ODORATA SEMPER-FLORENS fl. ALBO.

8372. VIOLA ODORATA.
Czar.

8380. VIOLA ODORATA SEMPER-FLORENS.

Hamburger treib.

8373. VIOLA ODORATA.
Czar fl. albo.

8381. VIOLA ODORATA.

Victoria Reginae.

8374. VIOLA ODORATA.
Kaiserin Augusta.

8382. CAMPANULA MEDIUM.

8375. VIOLA ODORATA.
Laucheania.

8383. CODONOPSIS VIRIDIFLORA (?).

8376. VIOLA ODORATA.
Reine des Violettes.

8384. DIANTHUS BARBATUS.

8385. DELPHINIUM ZALIL.

8386. THEA VIRIDIS. Tea.

From Tokyo, Japan. Received through The Tokyo Plant and Seed Company, February 10, 1902.

Formosa.

8387 to 8409.

From Yokohama, Japan. Received through L. Boehmer & Co., February 3, 1902.

A collection of plants and bulbs, as follows:

8387. LILIUM LONGIFLORUM.

8392. PAEONIA MOUTAN.

8388. IRIS LAEVIGATA.

8393. CASTANEA CRENATA.

Japanese mammoth chestnut.

8389. IRIS JAPONICA.

8394. *DAPHNE ODORA.

8390. IRIS TECTORUM.
Blue.

Pink.

8391. IRIS TECTORUM.
White.

8395. DAPHNE ODORA.

White.

8387 to 8409—Continued.8396. *HYDRANGEA HORTENSIS* VAR. *AIGAKU*.8397. *HYDRANGEA HORTENSIS* VAR. *AJISAI*.8398. *HYDRANGEA HORTENSIS* VAR. *BENJAKU*.8399. *HYDRANGEA HORTENSIS*.8400. *MAGNOLIA PARVIFLORA* *ERECTA*.8401. *MAGNOLIA PARVIFLORA* *PENDULA*.8402. *MAGNOLIA GRANDIFLORA* *EXONIENSIS*.8403. *CORNUS* *KOUSA*.8404. *CINNAMOMUM LOUREIRII*.8405. *RAPHIOLEPIS* *JAPONICA*.8406. *RHUS SUCCEDANEA*.8407. *RHUS VERNICIFERA*.8408. *ZELKOVA ACUMINATA*.8409. *STAUNTONIA HEXAPHYLLA*.**8410. CITRULLUS VULGARIS.****Watermelon.**

From Elgin, Utah. Received through Mr. John F. Brown, February 12, 1902.

Winter. A round, white melon, which will keep in perfect condition for several months after maturing. Flesh crimson, very sweet and tender. Seeds small and black. Rind quite tough when fully ripe. The average weight of these melons is about 20 pounds, although specimens weighing 40 pounds have been grown.

8411 to 8413. MANGIFERA INDICA.**Mango.**

From Colombo, Ceylon. Presented by Dr. C. Driberg, of the Agricultural School, Cinnamon Gardens, Colombo, through Messrs. Lathrop and Fairchild (Nos. 805 to 807), January 13, 1902. Received February 15, 1902.

Scions of three varieties of mangoes, as follows:

8411.

Jaffna. "A long-fruited, medium-sized green mango. The seed is fairly large; flesh golden yellow. It is edible even before fully ripe. A vigorous grower and good bearer. This is the best market mango in Ceylon, and is the one generally planted about the villages. The name would imply its origin in the northern province of Ceylon, but Doctor Willis, of Peradeniya Gardens, says the variety is scarcely known in that province." (*Fairchild.*) (No. 805.)

8412.

Rupee. "The largest fruited variety of mango grown in Ceylon. It is called the Rupee, or two-shilling mango, because of the price paid for a single fruit. Its origin is unknown. It is very large, sometimes 5 inches long, nearly globular, light green in color when ripe. A shy bearer. Skin tender and easily bruised, rendering it a poor shipper. Flesh a golden yellow. Seed small in proportion to the size of the fruit. A rare variety even in Ceylon. The fruits are considered a great delicacy and much sought after by those who know it. Flesh free from stringiness and flavor delicious, but only when properly and perfectly ripened. The tree is not very robust, and Doctor Driberg does not recommend the variety for general planting." (*Fairchild.*) (No. 806.)

8411 to 8413—Continued.**8413.**

Thurston. "These scions are from a single tree (there is only one on the island of Ceylon) growing directly in front of Doctor Drieberg's bungalow, at the agricultural school at Colombo (Cinnamon Gardens). This tree was planted by a Mr. Thurston, and for convenience I have given it his name. It is not a variety known elsewhere on the island. The tree is between 30 and 40 years old and is a very heavy bearer. The fruit is of medium size, short, and somewhat globular. The stone is of medium size and the skin is dark green even when ripe. It ripens well off the tree. It is a vigorous grower, has a sweet flavor, and, according to Doctor Drieberg, is acid when not fully ripe. The flesh is greenish in color near the skin and slightly fibrous." (*Fairchild.*) (No. 807.)

8414. CITRUS NOBILIS × CITRUS DECUMANA.**Orange.**

From Mustapha, Algiers, Algeria. Received through Dr. L. Trabut, Government Botanist, February 15, 1902.

Seeds.

8415. CITRUS AURANTIUM.**Orange.**

From Mustapha, Algiers, Algeria. Received through Dr. L. Trabut, Government Botanist, February 15, 1902.

Merki. A small packet of seeds of a variety of sweet orange.

8416. CERATONIA SILIQUA.**Carob.**

From Candia, Crete. Presented by H. B. M. consul, Walter E. Lanson, of Candia, through Mr. D. G. Fairchild (No. 579), February 17, 1902.

"Cuttings of the best variety of carob, or St. John's bread, for grafting on seedling trees. I am informed that the Candian variety of carob is one of the best in the market, bringing the highest prices. It is a tree which is being more extensively planted every year on the island of Crete, and its pods already form one of the principal exports, both of Crete and Cyprus. It is exported to England, France, and Italy, where it is used for cattle food and for a surrogate to mix with chocolate. According to the inspector of agriculture of Crete, Cavre. G. M. Fumis, this Candian variety has more sugar in it than the other sorts grown in Crete." (*Fairchild.*)

8417. CARICA PAPAYA.**Papaw.**

From Honolulu, Hawaii. Received through Mr. Jared G. Smith, special agent in charge of the agricultural experiment station, February 17, 1902.

Seed grown from No. 5112, Inventory No. 8.

8418. VIGNA CATJANG.**Cowpea.**

From Monetta, S. C. Received through Mr. T. S. Williams, December 5, 1901.

Iron. This variety of cowpea is noted for its remarkable resistance to wilt disease and root-knot.

8419 to 8421. MANGIFERA INDICA.**Mango.**

From Bombay, India. Received through Messrs. Lathrop and Fairchild (Nos. 810 to 812, January 21, 1902), February 24, 1902.

Scions of three varieties of mangoes, as follows:

8419.

Douglas Bennett's Alphonse. "The Bombay mangoes are noted all over the Orient, and they are generally classed as a single sort, but in reality there are numerous varieties. The Alphonse, or, in Hindustani, Alfoos, is considered by connoisseurs as the very finest. These scions are taken from a tree on the estate of Mr. Cooper, near Goregon Station, one hour's ride from Bombay, and

8419 to 8421—Continued.

represent an especially fine strain of the Alphonse mango, which was called to our attention by Mr. Douglas Bennett, superintendent of markets in Bombay, who desires that it be given his name. He says that all he knows of its origin is that over one hundred and thirty years ago it was discovered by a Parsee merchant, and that grafts were put down at Gwalia Tank Road, below Combali Hill, in Bombay, but that now very few of these are to be seen. The supply of this mango is so limited that fancy prices are paid for it, and few Europeans even have ever tasted the fruit. In size it is 3 by 4 by 2 inches and in color a golden yellow when ripe. The flesh is quite without stringiness, stone small, and flavor, according to Mr. Bennett, the best in the world. It is a large-leaved variety and forms a good-sized tree, but is of scraggly growth." (*Fairchild.*) (No. 810.) (See No. 8727.)

8420.

Bottle. "A good market sort, of Bombay. Green in color, ripening to reddish yellow. Flesh is yellowish in color and is not stringy. The fruit is long and slender, hence the name 'Bottle.' The stone is small. The fruit ripens, as do most of the Bombay mangoes, from April to May." (*Fairchild.*) (No. 811.)

8421.

Pirie. "A green, pointed-shaped variety from the Cooper estate at Goregon. Said by the owner, an inspector in the Bombay markets, to be, next to the *Alphonse*, the best of the Bombay mangoes. The seed is larger than that of the *Alphonse* and the flavor is excellent. Has the undesirable quality of being a poor keeper, losing its flavor quickly after fully ripe." (*Fairchild.*) (No. 812.)

8422 to 8424. GLYCINE HISPIDA.**Soy bean.**

From Yokohama, Japan. Received through Dr. S. A. Knapp, February 24, 1902.

8422.

Its Name. Early.

8424.

Its Name. Late.

8423.

Its Name. Medium.

8425. JUGLANS CORDIFORMIS.**Walnut.**

From Yokohama, Japan. Received through Dr. S. A. Knapp, February 24, 1902.

8426. JUGLANS SIEBOLDIANA.**Walnut.**

From Yokohama, Japan. Received through Dr. S. A. Knapp, February 24, 1902.

8427. PHYLLOSTACHYS MITIS.**Bamboo.**

From Yokohama, Japan. Received through Dr. S. A. Knapp, February 24, 1902.

Moso chiku.

8428. PHYLLOSTACHYS QUILIOI.**Bamboo.**

From Yokohama, Japan. Received through Dr. S. A. Knapp, February 24, 1902.

Madake.

8429. JUNCUS EFFUSUS.**Rush.**

From Yokohama, Japan. Received through Dr. S. A. Knapp, February 24, 1902.

8430 to 8433. PUNICA GRANATUM.**Pomegranate.**

From Valetta, Malta. Presented by Baron Testaferrata Abela, through Mr. D. G. Fairchild. Received February 25, 1902.

Cuttings as follows:

8430.*Giuseppe. Prima quality.***8432.***Frances.***8431.***Duc Colon, di S. Caterina.***8433.***S. Rosa.***8434. ELEUSINE CORACANA.****Ragi millet or Kurakkan.**

From Colombo, Ceylon. Received through Messrs. Lathrop and Fairchild (No. 809, January 13, 1902), February 25, 1902.

"A species of millet which is planted all over Ceylon by the Singalese. It is a most important food crop for the natives, although given little attention by Europeans. Watt's Dictionary of Indian Products, 1890, Vol. III, p. 237, gives a long account of the use of this species in India, where it forms one of the great staples. Ferguson describes it as the most prolific of cultivated grasses. One variety, *E. stricta* Roxb., gives an increase of 120 fold, another 500 fold, and a single seed has been calculated to produce no less than 8,100 seeds in a single year. These seeds are very small, however. The food made from this species is coarse, though nourishing. When boiled the flour forms a sticky paste, which must be eaten with greasy gravy to be palatable. There are two varieties in this sample, mixed together, this being the way the field was sown. The two sorts are called *Hanasu Kurakkan*, or *Black Kurakkan*, and *Kiri* (White or Milk) *Kurakkan*. The seed is broadcasted and raked in or trampled in with the feet in May, in Ceylon, and the crop ripens in three months. It seems, however, to be sometimes planted at other times of the year. These varieties are suited only to irrigated lands and for trial in tropical regions with an abundance of rain. This species is a native of Ceylon, but varieties of the same species are cultivated under the native names of *Marua Kairarii* or *Kevaragu* in continental India. This whole question of the-Indian millets, many of which withstand severe dry weather, Watt says, is worthy of especial attention, and all the best varieties should be secured. Doctor Drieberg, superintendent of School Gardens, Cinnamon Gardens, Colombo, should be applied to for a larger quantity of this seed, which at this season is difficult to secure in good condition. As a chicken food this is reputed to be unsurpassed, fattening poultry with great rapidity. This is grown in a region which has 75 to 100 inches of rainfall a year." (*Fairchild.*)

8435. CITRUS DECUMANA.**Pomelo.**

From Poona, India. Received through Messrs. Lathrop and Fairchild (No. 815, January 26, 1902), February 25, 1902.

"A variety of pomelo which is said to be practically seedless, though not of first quality. It may prove useful for crossing purposes. It is medium large and has a thick skin. The flesh is too dry." (*Fairchild.*)

8436. VITIS VINIFERA.**Grape.**

From Poona, India. Received through Messrs. Lathrop and Fairchild (No. 816, January 27, 1902), February 25, 1902.

Bhokri. "A sweet, white sort, with rather tough skin, but very productive. This is one of the best varieties for general cultivation about Poona, which has a high altitude, tropical climate, temperature as high as 120°, and with 30 inches of rainfall. It is said to have originated in the north of India. It bears two crops a year, only the second one, however, being sweet." (*Fairchild.*)

8437. JASMINUM SAMBAC.**Arabian jasmine.**

From Poona, India. Received through Messrs. Lathrop and Fairchild (No. 817, January 25, 1902), February 25, 1902.

"A variety of jessamine much cultivated by the natives of India and used by them in their worship under the name of *Mogaree*. It is a vigorous growing shrub and

bears an abundance of very large, double, white flowers, which are highly perfumed. Some of these flowers are said to be as large as a camelia blossom. The plant requires rich soil and is very sensitive to cold. It is strictly a tropical plant, although doing well in gardens in Cairo. The cuttings should be treated in the usual way, i. e., rooted in moist sand, and the plants can be set out in a rich border. This is the largest variety of the jessamine I know, and if not already introduced into Hawaii, southern California, or Florida, deserves to be generally propagated and distributed. From the Empress Gardens, in Poona, India." (*Fairchild.*)

8438. POINSETTIA PULCHERRIMA.**Poinsettia.**

From Poona, India. Received through Messrs. Lathrop and Fairchild (No. 818, January 25, 1902), February 25, 1902.

"A double poinsettia of rare beauty. Instead of the usual whorl of bright red leaves characteristic of the ordinary poinsettia this sort has from three to five such whorls. These are at their best when the green leaves have fallen and the light gray stems are quite bare. As a decorative plant for giving a splash of the brightest red to a landscape this plant is unequalled." (*Fairchild.*)

8439. CITRUS AURANTIUM.**Orange.**

From Poona, India. Received through Messrs. Lathrop and Fairchild (No. 819, January 26, 1902), February 25, 1902.

Kowla. "Described by Woodrow in his 'Gardening in India,' page 193, as an indifferent dessert fruit, but considered by the natives of India as well worth attention and, in fact, recommended as a good sort. A distinct variety, and hence worthy of a collection." (*Fairchild.*)

8440. MANGIFERA INDICA.**Mango.**

From Poona, India. Received through Messrs. Lathrop and Fairchild (No. 820, January 26, 1902), February 25, 1902.

Alphonse or *Aphoos.* "From a tree in the Empress Gardens at Poona. It may prove a different strain from Nos. 8419 and 8727. This is the best Bombay mango and is remarkable for its good shipping qualities. It can be picked when still green, laid or shipped in straw with plenty of air, and kept for six weeks. Even after ripe, fruits can be kept for a week or more. A much better shipper than the *Mulgoba* and more productive." (*Fairchild.*)

8441. CITRUS AURANTIUM.**Orange.**

From Poona, India. Received through Messrs. Lathrop and Fairchild (No. 821, January 26, 1902), February 25, 1902.

Ladoo. "This is a popular orange in India and is of the mandarin class, although not so fine looking in appearance. The oil glands are finer and the color is a duller orange, sometimes russet. It deserves a place in every collection of oranges as a distinct type. Woodrow, in his 'Gardening in India,' page 209, figures this variety and recommends it for planting. It is a loose-skinned sort but the skin is more nearly filled by the flesh than the ordinary mandarin and in texture it is unusually crisp and of good flavor. Very little fiber is one of its characteristics. In size it is about the average of the mandarin type. Secured by the superintendent of the Empress Gardens in Poona." (*Fairchild.*)

8442. MANGIFERA INDICA.**Mango.**

From Poona, India. Received through Messrs. Lathrop and Fairchild (No. 822, January 26, 1902), February 25, 1902.

Borsha. "See Woodrow, Gardening in India, page 248. Fruit weighs on an average 10 ounces. Ripens by the first of July. Flesh is as dry as that of *Mulgoba* or *Alphonse* and can be cut like cheese. It is three to four weeks later in ripening than the *Alphonse* and is considered almost its equal in quality. One large tree of this variety is said to have often yielded over \$150 worth of fruit in a single crop. It should be planted in alluvial soil and given plenty of bone ash. The banks of a river or irrigation canal are especially well suited to mango culture. This variety is distinguished from the *Mulgoba* by its young shoots, which are distinctly reddish in color. Mangoes are sometimes shipped from Bombay to London, which is eighteen days' or more of sea travel." (*Fairchild.*)

8443. CITRUS sp.

From Poona, India. Received through Messrs. Lathrop and Fairchild (No. 823, January 26, 1902), February 25, 1902.

Jamburee or *Jambooree*. "A variety of *Citrus* which is used in India extensively for stocks on which the orange is grafted. Considerable discussion regarding its influence on the scions of sweet oranges will be found in Woodrow's 'Gardening in India,' pages 214 and 215. In one place Woodrow calls this a lime, in another a citron." (*Fairchild*.)

8444. MANGIFERA INDICA.**Mango.**

From Poona, India. Received through Messrs. Lathrop and Fairchild (No. 824, January 26, 1902), February 25, 1902.

Pakria. "Described at some length by Woodrow, page 247, in his *Gardening in India*, and considered by some as one of the three best mangoes in the Bombay presidency; at any rate it is a sort in big demand for planting. It ripens three or four weeks later than the *Alphonse*—i. e., from the end of May to the end of June. Secured through the kindness of Mr. Kannekar, superintendent of Empress Gardens in Poona. (*Fairchild*.)

8445. THYSANOLAENA AGROSTIS.

From Poona, India. Received through Messrs. Lathrop and Fairchild (No. 825, January 26, 1902), February 25, 1902.

"Two pieces of rhizome of an ornamental cane from the Himalayas. It flowers profusely and remains in flower for four months. The inflorescences are steel-gray and great masses of them are produced. The plant grows to a height of 8 to 10 feet and forms large clumps like pampas grass or like some species of *Arundo*. It is altogether the handsomest cane for borders that I have ever seen. It deserves a wide distribution in Hawaii and southern California. As seeds were not procurable the experiment of sending two rhizomes in a perforated tin case by sample post has been attempted. If successful more can be had of the superintendent of the Empress Gardens in Poona. Seed may be had of the Calcutta Botanic Gardens. The plant requires good rich soil and plenty of moisture. In the Poona Gardens it is grown on irrigated land because there are only about 25 inches of yearly rainfall. The cuttings should be given such treatment as would be given the ordinary ornamental canes." (*Fairchild*.)

8446. CITRUS AURANTIUM.**Orange.**

From Poona, India. Received through Messrs. Lathrop and Fairchild (No. 826, January 26, 1902), February 25, 1902.

Citra or *Suntara*. "Woodrow (*Gardening in India*, p. 210), says this is the finest orange in India. It weighs from 7 to 10 ounces. One sort has loose skin, the other tightly fits the pulp. It has very few seeds, and is often quite seedless. The flesh is unusually crisp and has almost no fiber, but is somewhat lacking in sweetness. The oil glands are very small and close together in the skin. The color is not so bright as that of the mandarin of Japan. This variety is of especial interest only because of its reported seedlessness and the fiberless nature of the flesh, which is quite remarkable. I am assured this is the tight-skinned variety, which is superior to the loose-skinned one. The type is distinctly a mandarin one. Through the kindness of Superintendent Kannekar of the Empress Gardens, Poona." (*Fairchild*.)

8447. CITRULLUS VULGARIS.**Watermelon.**

From the Agricultural Experiment Station, Pomona, Cal. Received February 20, 1902.

Khanna or *Tamma*. This melon is very valuable for stock feeding in dry countries, as it thrives with very little water. (Grown from No. 4322.)

8448 to 8453. PYRUS MALUS.**Apple.**

From Misserghin, near Oran, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield, from the Nursery of the Orphelinat de l'Annonciation, February 26, 1902.

8448 to 8453—Continued.

Apple trees and scions as follows:

8448.	8451.
<i>Algerienne.</i>	<i>Nain Paradis.</i>
8449.	8452.
<i>D' Eve.</i>	<i>Precoçe de Tunis.</i>
8450.	8453.
<i>De Chataignier.</i>	<i>Nain de Mahon.</i>

8454 and 8455. CYDONIA VULGARIS.**Quince**

From Misserghin, near Oran, Algeria. Received through Messrs. D. G. Fairchild and C. S. Scofield from the Nursery of the Orphelinat de l'Annonciation, February 26, 1902.

Quince scions as follows:

8454.	8455.
<i>De Laghouat.</i>	<i>De Mahon.</i>

8456 to 8460.

From San Giovanni á Teduccio, Italy. Received through Dammann & Co., March 3, 1902.

8456. VIOLA CORNUTA.	8459. VIOLA CORNUTA.
	<i>Blue Perfection.</i>
8457. VIOLA CORNUTA ALBA.	
8458. VIOLA CORNUTA.	8460. VIOLA ODORATA SEMPER-FLORENS.
<i>Admiracion.</i>	

8461. LATHYRUS sp.

From the Vomero, Naples, Italy. Received through Dr. C. Sprenger, March 5, 1902.

"A native of Mexico." (*Sprenger.*)

8462. VITIS VINIFERA.**Grape.**

From Kurrachee, India. Received through Messrs. Lathrop and Fairchild (No. 827, February 2, 1902), March 10, 1902.

Sufetha. "An indigenous white grape, grown successfully at Kurrachee. It is one of the three best in cultivation here, where there is only 7 inches of rainfall and the temperature in summer goes to 110° F. from March to the end of June, and the soil is noticeably alkaline. Berry large and round; bunches 4½ pounds in weight; long, crowded, heavy cropper; flavor good; skin thick and leathery. It is said to be a good keeper and shipper, being shipped from Kurrachee to Bombay and Lahore. These cuttings are from the Kurrachee Public Gardens." (*Fairchild.*)

8463. VITIS VINIFERA.**Grape.**

From Kurrachee, India. Received through Messrs. Lathrop and Fairchild (No. 829, February 2, 1902), March 10, 1902.

Goolabie. "An indigenous variety of grape which thrives better than such forms as the *Black Hamburg*, and, according to our informant, Mr. Lester, superintendent of the public gardens of Kurrachee, it is considered superior in flavor to the *Black Hamburg*. This is the favorite grape for Kurrachee conditions, which resemble those of Tulare (California) and Arizona, being a desert where only 7 inches of rain falls and where, for the summer months, a temperature of 110° is of daily occurrence. The soil is decidedly alkaline, in fact too much so for ordinary European grapes. The variety is said to be a purple, small-berried kind, a very heavy cropper, fruit-

ing the end of April. The bunches weigh $1\frac{1}{2}$ to 2 pounds. The berry has a very thin skin and two or three seeds. The name means 'rose flavored' and the flavor is that of rose petals. It was introduced into Poona, India, but did not succeed there." (*Fairchild.*)

8464. VITIS VINIFERA.

Grape.

From Kurrachee, India. Received through Messrs. Lathrop and Fairchild (No. 828, February 2, 1902), March 10, 1902.

Kandhari. "A long-berried, thin-skinned, white grape with very large bunches, 3 to 4 pounds in weight. It is a vigorous grower, but light bearer. An indigenous sort, of fine flavor, suited to an arid climate, and alkaline soil in a very warm climate." (*Fairchild.*)

8465 to 8475. CITRULLUS VULGARIS.

Watermelon.

From Monetta, S. C. Received through Mr. T. S. Williams, November 5, 1901.

Seeds from hand-pollinated melons, grown from seeds imported by the Office of Seed and Plant Introduction:

8465. From No. 16.

Melon of average size with dark-green stripes. Flesh orange-colored and of very fine flavor. Vine small and not vigorous. This is an excellent melon for home use.

8466. From No. 35.

A small green melon with white spots. The flesh is deep red and very fine. The vine is small, but strong.

8467. From No. 68, which is evidently mixed seed.

A large, pale-green melon with broad, dark stripes. The flesh is orange-colored and of very fine flavor. The vine is very vigorous.

8468. From No. 68.

A medium-sized, pale-green melon with broad, dark-green stripes. The flesh is orange colored and of good flavor. The vine is very vigorous.

8469. From No. 46.

A large, light-gray melon. The flesh is deep red and of fine flavor. The vine is very vigorous.

8470. From No. 93.

A rather large, gray melon, with green stripes. The flesh is pink and of very fine flavor. The vine is vigorous.

8471. From No. 2847.

A fairly good, green melon of average size. The flesh is pale red and of good flavor. The vine is strong.

8472. From No. 2847.

A medium-sized, mottled-green melon. The flesh is red and of good flavor. The vine is strong.

8473. From No. 2848.

A large, white melon. The flesh is deep red, of fine texture and very fine flavor.

8474. From No. 2849.

A medium-sized, dark-green melon, with small white stripes. The flesh is deep red, of fine texture and delicious flavor.

8475. From No. 6151.

A very large, dark-green, striped melon. The flesh is pink, of rather coarse texture, but fine flavor.

8476. PISTACIA MUTICA. Menengech.

From Aintab, Syria. Presented by Rev. A. Fuller, through Mr. W. T. Swingle.
Received March 10, 1902.

8477 and 8478. PISTACIA VERA. Pistache.

From Aintab, Syria. Presented by Rev. A. Fuller, through Mr. W. T. Swingle.
Received March 10, 1902.

8477.

Large red.

8478.

Large green.

8479 to 8482. PISTACIA VERA. Pistache.

From Aintab, Syria. Presented by Rev. A. Fuller, through Mr. W. T. Swingle.
Received March 10, 1902.

8479.

Selected mixed fresh pistache nuts from the market.

8480.

Aleppo red. Very large and fine.

8481.

A large, unnamed, green variety.

8482.

Koz. Known as the "Walnut" pistache.

8483. PISTACIA VERA × (?). Butum.

From Aintab, Syria. Presented by Rev. A. Fuller, through Mr. W. T. Swingle.
Received March 10, 1902.

Fresh, selected "Butum" nuts.

8484. PISTACIA MUTICA. Menengech.

From Aintab, Syria. Presented by Rev. A. Fuller, through Mr. W. T. Swingle.
Received March 10, 1902.

Selected fresh seeds.

8485. PISTACIA MUTICA. Menengech.

From Aintab, Syria. Presented by Rev. A. Fuller, through Mr. W. T. Swingle.
Received March 10, 1902.

Ordinary seeds from the market.

8486 to 8501.

From Washington, D. C. Received March 10, 1902.

A collection of seeds grown on the Potomac Flats by Mr. W. R. Beattie from seeds furnished by the Office of Seed and Plant Introduction.

8486. PHASEOLUS MUNGO. Grown from No. 6321.

8487. PHASEOLUS MUNGO. Grown from No. 6417.

8488. PHASEOLUS MUNGO. Grown from No. 6318.

8489. GLYCINE HISPIDA. Grown from No. 6314.

8490. GLYCINE HISPIDA. Grown from No. 6333.

8491. GLYCINE HISPIDA. Grown from No. 6334.

8486 to 8501—Continued.

8492. *GLYCINE HISPIDA.* Grown from No. 6386.
 8493. *GLYCINE HISPIDA.* Grown from No. 6396.
 8494. *GLYCINE HISPIDA.* Grown from No. 6336.
 8495. *GLYCINE HISPIDA.* Grown from No. 6397.
 8496. *GLYCINE HISPIDA.* Grown from No. 6416.
 8497. *GLYCINE HISPIDA.* Grown from No. 6312.
 8498. *VIGNA CATJANG.* Grown from No. 6311.
 8499. *VIGNA CATJANG.* Grown from No. 6327.
 8500. *VIGNA CATJANG.* Grown from No. 6328.
 8501. *VIGNA CATJANG.* Grown from No. 6413.

8502. MAGNOLIA KOBUS.**Magnolia.**

From Yokohama, Japan. Received through L. Boehmer & Co., March 13, 1902.

8503. PAEONIA MOUTAN.**Tree peony.**

From Yokohama, Japan. Received through L. Boehmer & Co., March 13, 1902.

8504. ZAMIA FLORIDANA.**Coontie.**

From Miami, Fla. Received through Prof. P. H. Rolfs, in charge of the Sub-tropical Laboratory of the United States Department of Agriculture.

8505. THEA VIRIDIS.**Tea.**

From Heneratgoda, Ceylon. Presented by Messrs. J. P. William & Bros. Received March 17, 1902.

*Formosa.***8506 and 8507. FICUS CARICA.****Fig.**

From the island of Chios, Turkey. Presented by Mr. N. J. Pantelides, through Mr. D. G. Fairchild. Received March 19, 1902.

Fig cuttings as follows:

8506.*Figue de Chios.* "Very fine when fresh." (*Pantelides.*)**8507.***Figue de Syria. Lombardica.* "A very fine, large variety, blackish on the outside and bright red inside." (*Pantelides.*)**8508 to 8515. ORYZA SATIVA.****Rice.**

From Japan. Received through Dr. S. A. Knapp, March 19, 1902.

Seed rice as follows:

8508.*Fusakichi.* From Bizen district.
(I)**8512.**

From Iyo district. (M)

8509.*Mansaku bozu.* From Fukuoka
district. (J)**8513.**

From Higo district. (N)

8510.

From Ise district. (K)

8514.

From Bizen district. (O)

8511.

From Buzen district. (L)

8515.

From Banshu (?) district. (P)

8516. CANNABIS SATIVA. Hemp.

From Danville, Ky. Received through Mr. George Cogar, March 20, 1902.

8517 to 8520. PISTACIA VERA. Pistache.

From Marseille, France. Received through Mr. Claude Montel, March 21, 1902.

8517. Grafted female pistache trees. **8519.** Female pistache scions.

8518. Grafted male pistache trees. **8520.** Male pistache scions.

8521. PISTACIA TEREBINTHUS. Terebinth.

From Marseille, France. Received through Mr. Claude Montel, March 21, 1902.
Terebinth stocks for grafting.

8522 and 8523. TRITICUM DURUM. Wheat.

From Brookings, S. Dak. Seed grown in 1901 under contract by Prof. J. H. Shepard, of the South Dakota Agricultural Experiment Station.

8522.
Kubanka. Grown from No. 5639.

8523.
Velvet Don. Grown from No. 5644.

8524 to 8529.

From Paris, France. Received from Vilmorin-Andrieux & Co., March 27, 1902.

8524. LINUM USITATISSIMUM. Flax.
Original *Riga*.

8525. CANNABIS SATIVA. Hemp.
Russian.

8526. THYMUS VULGARIS. Thyme.

8527. THYMUS SERPYLLUM. Creeping thyme.

8528. LAVANDULA VERA. Lavender.

8529. LAVANDULA SPICA. Spike lavender.

8530 to 8537.

Received from J. M. Thorburn & Co., of New York City, March 29, 1902. A collection of foreign-grown seeds of medicinal plants, for use in experimental work under the direction of Dr. R. H. True, of the Department of Agriculture.

8530. ATROPA BELLADONNA. Belladonna.

8531. ARNICA MONTANA. Mountain tobacco, or mountain snuff.

8532. DIGITALIS PURPUREA. Foxglove.

8533. GLYCYRRHIZA GLABRA. Licorice.

8534. DATURA STRAMONIUM. Thorn apple.

8535. HYOSCYAMUS NIGER. Henbane.

8536. PAPAVER SOMNIFERUM. Poppy.

8537. ACONITUM NAPELLUS. Aconite.

8538. AVENA SATIVA.**Oat.**

From Bozeman, Mont. Presented by the Director of the Agricultural Experiment Station. Received April 1, 1902.

Swedish Select. Grown from No. 2788.

8539 to 8542.

From Poona, India. Received through Dr. S. A. Knapp, April 1, 1902.

8539. PHASEOLUS ACONITIFOLIUS.

Math. "This legume is grown in the Deccan and the Gujarat as a 'kharif,' or rain crop, sown only in the rainy season. It does well on light, stony, upland soil, with an average annual rainfall of 30 inches. The usual method is to sow a mixture of 8 pounds of *Bajri* (*Pennisetum typhoideum*) and 1½ pounds of *Math* per acre in July, the crop being harvested in November or December." (*Knapp.*)

8540. PHASEOLUS MUNGO.

Mug. "This plant is largely grown as a 'kharif,' or rain crop, and also as a 'rabi' (cold-weather crop) in many parts of India. As a 'kharif' crop it is mixed with sorghum (*Jowari*), while as a 'rabi' crop it is sown after rice has been harvested. It does best in a deep, black soil, with an average rainfall of from 30 to 35 inches. It ripens in three months after sowing." (*Knapp.*)

8541. PHASEOLUS RADIATUS.

Udid. "This bean is largely cultivated in India as a subordinate crop with sorghum (*Jowari*), the usual amount sown being 6 pounds of *Jowari* and 3 pounds of *Udid*. It does best if sown in June in deep, black soil, with a rainfall of from 30 to 35 inches, being harvested in September. *Udid* is also grown in some sections as a second crop after rice." (*Knapp.*)

8542. DOLICHOS UNIFLORUS.

Kulthi. "This plant is largely grown on light soils of a strong or sandy nature, and thrives with a moderate rainfall. It is usually sown with bulrush millet (*Pennisetum typhoideum*), the rate per acre being 8 pounds of millet to 2 pounds of *Kulthi*." (*Knapp.*)

8543 to 8547.

From Nagpur, India. Received through Dr. S. A. Knapp, April 1, 1902.

8543. ORYZA SATIVA.**Rice.**

Dhan. A quick-ripening variety.

8544. TRITICUM DURUM.**Wheat.**

Haura Gahoo.

8545. DOLICHOS LABLAB.**Lablab bean.**

Tal, Val, or Popat.

8546. ANDROPOGON SORGHUM.**Sorghum.**

A late variety used for forage.

8547. ANDROPOGON SORGHUM.**Sorghum.**

Used for forage.

8548 to 8552.

From Lahore, India. Received through Dr. S. A. Knapp, April 1, 1902.

A collection of wheats as follows:

8548. TRITICUM VULGARE.

Pure red wheat, grown without irrigation on land near the river. (No. 1.)

8548 to 8552—Continued.

8549. TRITICUM VULGARE.

Pure white wheat, grown on slightly salty land irrigated with canal water. (No. 2.)

8550. TRITICUM DURUM.

Round red wheat, grown on slightly salty land irrigated with canal water. (No. 3.)

8551. TRITICUM DURUM.

Round white wheat, grown on strong black soil irrigated with canal water. (No. 4.)

8552. TRITICUM DURUM.

Wadanak. Grown on light, slightly sandy soil irrigated with well water.

8553 to 8562.

From Christiania, Norway. Presented by Prof. C. Doxrud, of the Christiania School of Technology, for testing in comparison with seeds from other countries. Received April 2, 1902.

8553. PHLEUM PRATENSE.	Timothy.
8554. DACTYLIS GLOMERATA.	Orchard grass.
8555. TRIFOLIUM PRATENSE.	Red clover.
8556. TRIFOLIUM HYBRIDUM.	Alsike clover.
8557. PISUM SATIVUM.	Pea.
<i>Early.</i>	
8558. AVENA SATIVA.	Oat.
8559. HORDEUM HEXASTICHUM.	Barley.
8560. HORDEUM DISTICHUM.	Barley.
8561. TRITICUM VULGARE.	Wheat.
<i>Red spring.</i>	
8562. PISUM SATIVUM.	Pea.
<i>Sueding.</i>	

8563 and 8564. PHOENIX DACTYLIFERA. Date.

From Kurrachee, India. Received through Messrs. Lathrop and Fairchild (No. 830, February 1, 1902), April 4, 1902.

Cupcap, Chupchap, or Cupcup. "This is a variety of the *Karak pokhta*, or cooked dates, and is considered one of the best of its class. These cooked dates are prepared in the following way: The fruits are picked before fully ripe, while still full, plump, and slightly astringent. They are boiled for an hour in fresh water, to which one handful of salt per gallon of water is added. After boiling they are spread out in the sun to dry. These boiled dates are sold in large quantities in India. They form an indispensable part of every marriage feast. Higher prices are paid for them in India, I am informed, than for the dates shipped to America. This sort is, when properly prepared, quite sweet, in fact, tastes quite as if candied. The slight flavor of tannin may be due to careless preparation. It is a fairly early date, coming into fruit about Maskat in July. It is also a good date to eat fresh. It keeps almost indefinitely. There are several qualities of this variety. That marked *a* came from Kurrachee, while *b* was secured in Maskat." (*Fairchild.*)

8565. CAPSICUM ANNUUM.**Red pepper.**

From Kurrachee, India. Received through Messrs. Lathrop and Fairchild (no number), April 4, 1902.

Bird's bill.

8566. CAPSICUM ANNUUM.**Red pepper.**

From Kurrachee, India. Received through Messrs. Lathrop and Fairchild (No. 828, February 6, 1902), April 4, 1902.

"The common red pepper in use in Kurrachee. It is mild in comparison with the Maskat variety. It is dark wine-red in color, and long and conical in shape. Bought in a Maskat market." (*Fairchild.*)

8567. PHOENIX DACTYLIFERA.**Date palm.**

From Kurrachee, India. Received through Messrs. Lathrop and Fairchild (no number), April 4, 1902.

"*Bagist* or *Dairi* dates, a second-class variety eaten by the common people." (*Fairchild.*)

8568. CAPSICUM ANNUUM.**Chili pepper.**

From Maskat, India. Received through Messrs. Lathrop and Fairchild (No. 837, February 6, 1902), April 4, 1902.

"A very hot orange or light-red variety of red pepper, reputed to be one of the hottest peppers on the Persian Gulf. Bought in a Maskat bazaar." (*Fairchild.*)

8569. PHOENIX DACTYLIFERA.**Date palm.**

From Maskat, India. Received through Messrs. Lathrop and Fairchild (No. 831, February 6, 1902), April 4, 1902.

Burni. "Dried dates of one of the *Karak pokhta* or cooking class. This date is also said to be a first-class drying or pressed date, but with poor keeping qualities. It is so delicate that it can not be sent successfully to America, but it is considered superior in flavor to the *Fard* date, which is the variety commonly shipped to America. It is the earliest date known at Maskat, and one of the very finest flavored sorts. It ripens in Maskat in June, but this region of Maskat has a temperature in summer of 110° and even 117° F. in the shade, so that the sort might ripen later if transplanted to a region with a cooler summer temperature. The dates sent are of the boiled sort only, the dried kind being quite unobtainable." (*Fairchild.*)

8570. PHOENIX DACTYLIFERA.**Date palm.**

From Kurrachee, India. Received through Messrs. Lathrop and Fairchild (No. 834, Feb. 2, 1902), April 4, 1902.

Jahadi. "Dried dates of one of the second quality sorts shipped into India from the Persian Gulf. This variety is probably shipped to America." (*Fairchild.*)

8571. PHOENIX DACTYLIFERA.**Date palm.**

From Maskat, India. Received through Messrs. Lathrop and Fairchild (No. 833, February 6, 1902), April 4, 1902.

Khanezi. "Dried dates of a first-class Persian Gulf sort sent largely to America. This is considered inferior to the *Fard*, but still ranks as a very good sort." (*Fairchild.*)

8572. PHOENIX DACTYLIFERA.**Date palm.**

From Kurrachee, India. Received through Messrs. Lathrop and Fairchild (No. 832, February 5, 1902), April 4, 1902.

Fard. "Dried dates of the variety most commonly shipped from the Persian Gulf to America. This is not considered the finest of the dates, but is one of the best shippers. It is a dark, medium-sized sort, of good quality. It is grown about Maskat and the southern part of the Persian Gulf. It is a medium early date, later than *Burni.*" (*Fairchild.*)

8573. PHOENIX DACTYLIFERA.**Date palm.**

From Bahrein, Arabia. Received through Messrs. Lathrop and Fairchild (No. 835, February 10, 1902), April 4, 1902.

Khalasa. "Dried dates of one of the finest varieties in the Persian Gulf. These dates are so delicate that they are not shipped to America, although they may be kept several months, as is evidenced by the present samples. They are reported to suffer by the sea voyage. The date has very little fiber, being a sticky sort with a decidedly caramel-like texture. The flavor is superior to that of the best *Fard* date and the skin is soft and delicate. The stone is small, but not unusually so. It is considered the best date on the Persian Gulf by Mr. J. C. Gaskin, British consul, who has been a dealer in one of the largest date firms at Bassorah, and by Mr. S. M. Zwemer, who has traveled all over Arabia. Personally I prefer the *Pangh Ghur* date and the *Deglet Noor*, but the *Khalasa* approaches these closely for sweetness and delicacy. It is sticky, however, and might not be well suited to such style of packing as is in vogue with the French packers in Algiers. Secured through the kindness of Messrs. Gaskin and Zwemer, of Bahrein." (*Fairchild.*) (See No. 8753.)

8574. PISTACIA VERA.**Pistache.**

From Bunder Abbas, Persia. Received through Messrs. Lathrop and Fairchild (No. 839, February 11, 1902), April 4, 1902.

"Bought in the market of Bunder Abbas. They were said to have been brought down some nineteen days by caravan from the town of Kerman, in the interior. They were fresh in December or November. The trees were probably grafted, although no definite information on this point could be obtained. Kerman is said to have a temperate climate." (*Fairchild.*)

8575. LAGENARIA sp.**Gourd.**

From Jask, Persia. Received through Messrs. Lathrop and Fairchild (No. 840, February 11, 1902), April 4, 1902.

"A white, edible gourd growing to a large size, 1½ feet long by 8 inches in diameter. It forms a pretty trellis plant in Jask, where the temperature rises to 110° F. and no rain falls. It is grown by irrigation. It may prove of value in the Colorado desert region. It is prepared by boiling in salt water like any of the squash family. The leaves are large and the flowers are white with long tubes to the corolla." (*Fairchild.*)

8576. VITIS CANDICANS.**Mustang grape.**

From Tiger Mill, Texas. Presented by Mr. H. T. Fuchs to Hon. A. S. Burleson and by him to this Department. Received April 7, 1902.

Seeds of the finest wild grapes of Texas, according to Mr. Fuchs' letter.

8577. CARICA PAPAYA.**Papaw.**

From Mexico. Presented by Mr. Elmer Stearns, 3226 Manitou avenue, Los Angeles, Cal. Received March 29, 1902.

"These seeds were from a fruit 6 inches long by 3½ inches in diameter, grown in the hot country southwest of Guadalajara." (*Stearns.*)

8578. OPUNTIA sp.**Prickly pear.**

From Guadalajara, Mexico. Presented by Mr. Elmer Stearns, 3226 Manitou avenue, Los Angeles, Cal. Received March 29, 1902.

Tuna colorado. "These seeds were from a fruit 2 inches by 1½ inches in diameter." (*Stearns.*)

8579. OPUNTIA sp.**Prickly pear.**

From City of Mexico, Mexico. Presented by Mr. Elmer Stearns, 3226 Manitou avenue, Los Angeles, Cal. Received March 29, 1902.

Tuna amarilla.

8580. CEREUS sp.**Pitahaya.**

From Mexico. Presented by Mr. Elmer Stearns, 3226 Manitou avenue, Los Angeles, Cal. Received March 29, 1902.

"These seeds were from a fruit weighing 1 pound, grown in the foothills 75 miles west of Tampico, Mexico." (*Stearns.*)

8581 to 8583. VITIS VINIFERA.**Grape.**

From Aintab, Syria. Received through Rev. A. Fuller, April 15, 1902.

Grape cuttings as follows:

8581.

Aintab Summer (Nabodada). "A large, oblong, white grape. The flesh is rather coarse, but it is much prized for table use." (*Fuller.*)

8582.

Aintab Autumn (Kabbajuk). "A medium-sized, round, white grape, much prized for table use. It ripens in July and August." (*Fuller.*)

8583.

Aintab Winter (Hunisa). "A large, wine-colored, oblong grape. It ripens in October and November and keeps until March." (*Fuller.*)

8584 to 8589.

From Chin-kiang, China. Received through Dr. S. A. Knapp from Rev. Dr. S. P. Barchet, Shanghai, China, April 15, 1902.

8584. GLYCINE HISPIDA.**Soy bean.**

"A very prolific, nearly white variety, used for making oil and also for food. It is sometimes ground into flour and used for making cakes." (*Knapp.*)

8585. PHASEOLUS sp.**Bean.**

"Used for food and for making starch. It grows well on sandy soil." (*Knapp.*)

8586. GLYCINE HISPIDA.**Soy bean.**

"A very oily variety, used chiefly for fattening purposes. Planted in July or August." (*Knapp.*)

8587. VICIA FABA.**Broad bean.**

"A large, rank-growing variety that will stand frost. It is planted in November." (*Knapp.*)

8588. PISUM sp.**Pea.**

"A rank-growing variety used for food. It is planted in November." (*Knapp.*)

8589. TRITICUM VULGARE.**Wheat.**

"A hardy, rust-proof variety. Sown in October or November." (*Knapp.*)

8590 to 8592.

From Shanghai, China. Received through Dr. S. A. Knapp from Rev. Dr. S. P. Barchet, April 15, 1902.

8590. ORYZA SATIVA.**Rice.**

"An early variety. It is sown late in May or early in June." (*Knapp.*)

8590 to 8592—Continued.

8591. ORYZA SATIVA. **Rice.**

“A late variety. It is sown late in June or early in July.” (*Knapp.*)

8592. VICIA FABA. **Broad bean.**

“Quite similar to No. 8587, but not so large.” (*Knapp.*)

8593 and 8594. ORYZA SATIVA. **Rice.**

From Kiang-si Province, China. Received through Dr. S. A. Knapp from Rev. Dr. D. W. Nichols, Nan-chang, China, April 15, 1902.

8593.

Wan Ku (late rice). “A beautiful white grain, quite flaky when cooked.” (*Nichols.*)

8594.

Tsoa Ku (early rice). “A crop of this and the preceding variety can be grown on the same ground the same year.” (*Nichols.*)

8595. THEA VIRIDIS. **Tea.**

From Calcutta, India. Received from the Pashok Tea Company (Limited), Kilburn & Co., agents, April 15, 1902.

Pashok Darjeeling.

8596. VICIA FABA. **Broad bean.**

From Sheridan, Mont. Presented by Mr. S. M. Wilson, April 15, 1902.

These beans are said by Mr. Wilson to come from northern Sweden, and to endure a degree of cold that kills other tender vegetation.

8597 and 8598.

From Erfurt, Germany. Received through Haage & Schmidt, seedsmen, April 19, 1902.

8597. CARYOTA URENS. **Wine or toddy palm.**

8598. RAVENALA MADAGASCARIENSIS. **Travelers' tree.**

8599. PUNICA GRANATUM. **Pomegranate.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 883, March 8, 1902), April 21, 1902.

Achmar or *Red*. “This variety bears fruit of a very large size. I have seen a specimen over 2 pounds in weight. The skin is thin, but there are many thick walls dividing the segments. The seeds are large, each with a deep, very juicy, wine-red arillus. Remarkable for its size and red color.” (*Fairchild.*)

8600. ZIZYPHUS JUJUBA. **Jujube.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 887, March 8, 1902), April 21, 1902.

Nebuk or *Nabug ajam*. “A Persian variety, called the red jujube. A variety larger than the *Bagdad*, but not of as good flavor. These jujube trees, as they are grown in Mesopotamia, are the most picturesque, in fact the only conspicuous shade trees in the region, and are worthy of trial along irrigation canals. They bear enormous crops of small fruits, about the size of cherries, which are greedily sought after by the children. The fruits taste much like baked apples. There is a variety in which the seed, instead of being hard, like a date stone, is thin shelled, and one can eat it easily.” (*Fairchild.*) (See No. 8702.)

8601. CITRUS LIMONUM.**Lemon.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 889, March 8, 1902), April 21, 1902.

Hameth. "A Bagdad variety which is of most excellent quality and characterized by a dark orange 'blush' at the stem end, making it a peculiar and showy fruit. The skin is very thin, and the fruit very juicy and of medium size. The shape of those I saw was almost that of an egg." (*Fairchild.*)

8602. CITRUS AURANTIUM.**Orange.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 890, March 8, 1902), April 21, 1902.

Portugal Asfar. "A common Bagdad orange which is in all respects, except the presence of seeds, a remarkably fine orange. It does well in the alluvial adobe soil of Bagdad, and even where there is some alkali in the soil. These scions came from the garden of Abdul Kader Kederry, at Bagdad." (*Fairchild.*)

8603. CITRUS AURANTIUM.**Orange.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 891, March 8, 1902), April 21, 1902.

Aboul serra. "A navel orange, with seeds, of especially fine aroma, I am told, which is cultivated by Sheik Abdul Kader Kederry, and is worth testing as a new variety. The oranges of Bagdad are in general excellent, and this one, although I was unable to test it, may be no exception." (*Fairchild.*)

8604. CITRUS AURANTIUM.**Orange.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 892, March 8, 1902), April 21, 1902.

Narinji. "A variety of orange with a 'button' at the flower end; from a tree in the garden of Sheik Abdul Kader Kederry. It has an excellent flavor and has few seeds. This is one of the common varieties of Bagdad, and is an excellent orange." (*Fairchild.*)

8605. VITIS VINIFERA.**Grape.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 893, March 9, 1902), April 21, 1902.

(L. & F. No. 893 is *Citrus aurantium*, but the tube so marked contained grape cuttings without data.)

8606. CITRUS DECUMANA.**Pomelo.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 894, March 9, 1902), April 21, 1902.

"A species of pomelo or shaddock, of which the skin is used for making preserves. I did not have an opportunity to taste the fruit, but presume it is of second quality." (*Fairchild.*)

8607 to 8642. CITRULLUS VULGARIS.**Watermelon.**

From Monetta, S. C. Received November 5, 1901.

A collection of seeds of hand-pollinated watermelons grown by Mr. T. S. Williams from seed furnished by the Office of Seed and Plant Introduction.

8607. Grown from No. 18.

8611. Grown from No. 39.

8608. Grown from No. 25.

8612. Grown from No. 48.

8609. Grown from No. 26.

8613. Grown from No. 55.

8610. Grown from No. 33.

8614. Grown from No. 84.

8607 to 8642—Continued.

8615. Grown from No. 84.	8629. Grown from No. 2845.
8616. Grown from No. 85.	8630. Grown from No. 106.
8617. Grown from No. 86.	8631. Grown from No. 2846.
8618. Grown from No. 86.	8632. Grown from No. 2850.
8619. Grown from No. 87.	8633. Grown from No. 3680.
8620. Grown from No. 88.	8634. Grown from No. 3680.
8621. Grown from No. 98?	8635. Grown from No. 4899.
8622. Grown from No. 98?	8636. Grown from No. 6149.
8623. Grown from No. 102.	8637. Grown from No. 6170.
8624. Grown from No. 104.	8688. Grown from No. 6038.
8625. Grown from No. 2739.	8639. Grown from No. 6039.
8626. Grown from No. 2740.	8640. Grown from No. 6046.
8627. Grown from No. 2843.	8641. Grown from No. 6052.
8628. Grown from No. 2844.	8642. Grown from No. 6056.

8643. PUNICA GRANATUM.

Pomegranate.

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 847, February 26, 1902), April 22, 1902.

Mellasi. "A large 'seedless' pomegranate with light-colored flesh. This is said to be the best variety in Arabia and to be quite free from seeds; i. e., the coats of the seeds are probably so delicate that they offer no resistance to the teeth when eating the fruit. Secured through the kindness of Mr. Raphael Sayegh, of Bassorah." (*Fairchild.*)

8644. PYRUS MALUS.

Apple.

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 848, February 26, 1902), April 22, 1902.

Persian. "This apple will grow well in a region where dates are produced and where for three months the thermometer keeps about the 100° F. mark. It is not of the best quality, but is quite edible, and should be tested in the desert regions of the Colorado River and in the dry regions of Texas. It requires irrigation." (*Fairchild.*)

8645. CYDONIA VULGARIS (?)

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 849, February 26, 1902), April 22, 1902.

Bahamro. "A stock which is used in Arabia, especially in Mesopotamia, on which to graft apples, pears, and quinces. It is reported to be an excellent stock in this very hot region of the Tigris Valley, where the thermometer stands for three months near the 100° F. mark and where it often rises to 117° F. It is cultivated here on adobe soil under irrigation." (*Fairchild.*)

8646. PUNICA GRANATUM.

Pomegranate.

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 850, February 26, 1902), April 22, 1902.

Nejidi. "A red-fleshed variety of pomegranate which is considered second only to the seedless or *Mellasi* variety. The fruit is large and has a very thin skin." (*Fairchild.*)

8647. VITIS VINIFERA.**Grape.**

From Bassorah, Arabia. Presented by Hadji Abdulla Negem through Messrs. Lathrop and Fairchild (No. 854, February 25, 1902). Received April 22, 1902.

Abiat. "A white grape which is medium in time of ripening and of reputed excellent quality. It is trained from trunk to trunk of the date palms at Abu Kasib. Soil an adobe with abundant moisture in it." (*Fairchild.*)

8648. VITIS VINIFERA.**Grape.**

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 855, February 25, 1902), April 22, 1902.

Asuad Suamee. "A black, early grape, with very large berries and rather tough skin, which is cultivated among the date groves at Abu Kassib. The quality of this sort is reported to be exceptionally good. The practice of grape growing under the palms is rapidly spreading in Mesopotamia. It is worthy of trial in Arizona and southern California." (*Fairchild.*)

8649. VITIS VINIFERA.**Grape.**

From Bassorah, Arabia. Presented by Hadji Abdulla Negem through Messrs. Lathrop and Fairchild (No. 856, February 25, 1902). Received April 22, 1902.

Bengi. "A late, black grape of superior quality, according to the report of Europeans in the region. It is said to be the best variety here in Bassorah and to be really 'as fine as the hothouse-grown *Black Hamburgh.*' Grown under the date palms at Abu Kassib." (*Fairchild.*)

8650. AVENA SATIVA.**Oat.**

From Mustiala, Finland. Received through Messrs. Lathrop and Fairchild from Mustiala Landtbruks och Mejeri-Institut, April 25, 1902.

North Finnish Black.

8651. FATSIA JAPONICA.

From Paris, France. Received through Vilmorin-Andrieux & Co., April 26, 1902.

8652. TRITICUM DICOCCUM.**Emmer.**

From Dunseith, N. Dak. Received through Mr. Arthur Hagendorf, April 29, 1902.

8653. ANONA CHERIMOLIA.**Custard apple.**

From Chile. Presented by Dr. A. W. Thornton, of Ferndale, Wash. Received April 28, 1902.

Cherimoya. Seeds of a choice variety.

8654 to 8679a.

From Ootacamund, India. Presented by R. L. Proudlock, esq., Curator of the Government Botanic Gardens. Received April 30, 1902.

8654. ACROCARPUS FRAXINIFOLIUS.

8660. CEDRELA TOONA.

8655. CUPRESSUS TORULOSA.

8661. CLEMATIS WIGHTIANA.

8656. LASIOSIPHON ERIOCEPHALUS.

8662. DALBERGIA LATIFOLIA.

8657. MELIOSMA ARNOTTIANA.

8664. ILEX WIGHTIANA.

8658. ROSA GIGANTEA.

8665. PHOTINIA LINDLEYANA.

8659. ACER OBLONGUM.

8666. PTEROCARPUS MARSUPIUM.

8654 to 8679—Continued.

8667. RHODOMYRTUS TOMENTOSA.	8674. PHOENIX RUPICOLA.
8668. URCEOLA ESCULENTA.	8675. AGAPANTHUS UMBELLATUS.
8669. CELTIS SEROTINA.	8676. CASSIA GRANDIS.
8670. MICROTROPIS OVALIFOLIA.	8677. PEDICULARIS ZEYLANICA.
8671. TURPINIA POMIFERA.	8678. PINUS LONGIFOLIA.
8672. ELETTARIA CARDAMOMUM.	8679. SANTALUM ALBUM,
8673. MICHELIA NILAGIRICA.	8679a. LITSEA ZEYLANICA.

8680. MANGIFERA INDICA.

Mango.

From Colombo, Ceylon. Received through Messrs. Lathrop and Fairchild (No. 948, April 6, 1902), May 5, 1902.

Jaffna. "For a description of this variety see No. 8411. I have tasted this mango but find it, although not stringy, far inferior to the *Alphonse* Bombay mango. It lacks the fine aroma and dark orange colored flesh." (*Fairchild.*)

8681 and 8682.

From Heneratgoda, Ceylon. Received through J. P. William & Bros., May 5, 1902.

8681. COFFEA LIBERICA.	Coffee.
8682. COFFEA HYBRIDA.	Coffee.

8683. LUFFA AEGYPTIACA.

Sponge gourd.

From Springfield, Mo. Presented by Mr. Joe P. Wilson. Received May 10, 1902.

Grown from No. 3982, Inventory No. 8.

8684 and 8685.

From Poona, India. Received through Dr. S. A. Knapp, May 10, 1902.

8684. TRITICUM DURUM.	Wheat.
<i>Kala Kushal.</i>	
8685. ANDROPOGON SORGHUM.	Sorghum.
<i>Hasar.</i> Grown in Sampayam, Belyaum district.	

8686 to 8692.

From Surat, India. Received through Dr. S. A. Knapp, May 10, 1902.

8686. DOLICHOS LABLAB.	Bean.
<i>Kadvá Vál</i> or <i>Kadvá Wál.</i>	
8687. VIGNA CATJANG.	Cowpea.
<i>Chowali, Chola, or Choli.</i>	
8688. ORYZA SATIVA.	Rice.
<i>Kamoda.</i> From Ahmedabad, Geyarat.	
8689. ORYZA SATIVA.	Rice.
<i>Sunkhavel.</i> From Surat, Geyarat.	
8690. ORYZA SATIVA.	Rice.
<i>Ambamore.</i> From Surat, Geyarat.	

8686 to 8692—Continued.

- 8691.** ANDROPOGON SORGHUM. **Sorghum.**
Sholapuri.
- 8692.** ANDROPOGON SORGHUM. **Sorghum.**
Perio.

8693. THEA VIRIDIS. Tea.

From Colombo, Ceylon. Received through Messrs. Lathrop and Fairchild (No. 947, April 6, 1902), May 14 and May 29, 1902.

Assam. "Sent by Mr. Hadden, of Kotiyagala, Ceylon, through Director John C. Willis, of the Peradeniya Gardens." (*Fairchild.*)

8694 to 8697.

From Santiago, Chile. Presented by Señor Federico Albert, chief of the Section of Zoological and Botanical Investigations. Received May 14, 1902.

- 8694.** ARISTOTELIA MACQUI. **Maqui.**
- 8695.** KAGENECKIA sp.
- 8696.** TREVOA QUINQUENERVIA. **Tralhuen.**
- 8697.** TREVOA TRINERVIA. **Trevu.**

8698. HIBISCUS SABDARIFFA. Roselle.

From Punjab, India. Presented by Abdulla Khan, clerk in the office of director of land records, through Dr. S. A. Knapp, agricultural explorer. Received May 14, 1902.

Patma. Common red.

8699. ORYZA SATIVA. Rice.

From Hongkong, China. Received through Dr. S. A. Knapp, agricultural explorer, May 16, 1902.

Simi.

8700. PRITCHARDIA GAUDICHAUDII. Fan palm.

From Honolulu, Hawaii. Presented by Mr. Jared G. Smith, director of the Hawaii Agricultural Experiment Station. Received May 22, 1902.

8701. MANGIFERA INDICA. Mango.

From Saigon, Cochin China. Received through Messrs. Lathrop and Fairchild (No. 949, April 16, 1902), May 22, 1902.

Cambodiana or *Xoài Vôi.* "This is a delicious mango, of medium size, furnished with a short beak, yellow when ripe, with a faint but agreeable aroma. The flesh varies slightly from light to deep orange in color. Has an excellent, fine, delicate flavor and is never stringy. It is not as rich as the *Alphonse*, of Bombay, either in aroma or flavor, but nevertheless worthy of rank among the best mangoes I have ever eaten. Doctor Haffner, of the botanic gardens of Saigon, informs me that this sort is never grafted, but is a variety which reproduces itself from seed. This being the case, I deem it probable that out of the lot of over a hundred seeds which we are sending some remarkable ones ought to be secured. I believe there is a slight variation among the seedlings, although it is a surprisingly constant variety." (*Fairchild.*)

8702. ZIZYPHUS JUJUBA. Jujube.

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 851, February 26, 1902), May 22, 1902.

Nabug. "The seed in this fruit, instead of being covered with a very hard shell, is like paper, giving the variety the name of being seedless. The tree is the most

satisfactory shade tree in this hot region, having a spreading top with somewhat drooping branches covered with small, dark-green leaves. The plant is a most prolific bearer. The fruits when ripe are like Haws in mealiness, and they are keenly relished by the Arabs. They are about one-half to three-fourths inch in diameter. This so-called seedless sort is, paradoxically enough, propagated by seed, and is said to come true to them. It is a tree well suited to the banks of irrigation canals in the hottest regions which we have." (*Fairchild.*)

8703. ZIZYPHUS JUJUBA.**Jujube.**

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild, May 22, 1902.

"Seeds of the common jujube largely grown throughout this arid country." (*Fairchild.*)

8704. QUERCUS CORNEA.**Oak.**

From Hongkong, China. Received through Messrs. Lathrop and Fairchild (No. 950, April 29, 1902), May 22, 1902.

"Edible acorns from a species of oak which grows in southern China, even on the island of Hongkong. The acorns have a hard, horny shell and a sweet flesh of very agreeable flavor. The acorns are sent in very large quantities to Hongkong from Canton. They are eaten by the Chinese with great pleasure, and are often roasted. They would be acceptable, I believe, to Americans, and the tree ought to do well in the Southern States. If the tree, which is a pretty one, proves a success, large quantities can be had through the botanic gardens at Hongkong, but only at this season of the year." (*Fairchild.*)

8705. PRUNUS sp.**Plum.**

From Hongkong, China. Received through Messrs. Lathrop and Fairchild (No. 951, April 19, 1902), May 22, 1902.

"A beautiful little plum, said to be grown in Canton. It was purchased on the Hongkong market. It is of a beautiful, transparent, wine red color, with a delicate skin which is covered with the finest, most delicate pubescence imaginable, resembling a bloom which can not be rubbed off. When ripe the fruit has a delicate, agreeable aroma, which is that of a half-ripe Japanese quince. In taste the plum is not very good, but decidedly refreshing. It is sour with a slightly bitter taste. The flesh is yellow in color and inclined to be solid and stringy. The stone is a cling, being covered with many long fibers. In shape it is pointed with a distinct keel. The skin is very delicate but in flavor is *intensely bitter*. It separates from the flesh with difficulty." (*Fairchild.*)

8706. CITRUS AURANTIUM.**Orange.**

From Kabylia, Algeria. Presented by Dr. L. Trabut, Government Botanist, Mustapha, Algiers, Algeria. Received May 26, 1902.

Bandja. A late, sweet orange, which reproduces itself from seed.

8707. PISTACIA MUTICA.**Menengech.**

From Smyrna, Asia Minor. Presented by Mr. George C. Roeding, of Fresno, Cal. Received May 26, 1902.

8708. PRITCHARDIA MARTII.**Fan palm.**

From Olaa, Hawaii. Presented by Mr. Jared G. Smith, special agent in charge of the Hawaii Agricultural Experiment Station at Honolulu.

From an altitude of from 2,000 to 2,500 feet.

8709. EUCOMMIA ULMOIDES.

From Paris, France. Received through Vilmorin-Andrieux & Co., May 29, 1902.

Tu Chung. Rooted cuttings of this Chinese plant. It is used medicinally. It is claimed that the leaves contain a large amount of gutta-percha.

8710 to 8726. PYRUS MALUS.**Apple.**

From New South Wales, Australia. Presented by Messrs. Hunter & Sons, of "The Penang," near Gosford, through Hon. D. C. McLachlan, undersecretary, department of mines and agriculture, Sydney, to replace trees and cuttings received in bad condition in June, 1901. Received May 29, 1902. Hunter & Sons' numbers are given.

Apple trees as follows:

8710.	8715.
<i>Allsops early.</i> (No. 237.)	<i>Lady Hopetown.</i> (No. 234.)
8711.	8716.
<i>American Golden Pippin.</i> (No. 256.)	<i>Menagerie.</i> (No. 220.)
8712.	8717.
<i>Carrington, Small's.</i> (No. 238.)	<i>Perfection, Shepherd's.</i> (No. 4.)
8713.	8718.
<i>Early Richmond.</i> (No. 83.)	<i>Sharp's Early.</i> (No. 232.)
8714.	8719. (Label missing.)
<i>George Neilson.</i> (No. 157.)	

Apple scions as follows:

8720.	8724.
<i>Autumn Tart.</i>	<i>Lord Wolseley.</i> (No. 50.)
8721.	8725.
<i>Chestnuttee.</i> (No. 221.)	<i>Ruby Pearmain.</i> (No. 228.)
8722.	8726.
<i>Fall Beauty.</i> (No. 80.)	<i>Yarra Bank.</i> (No. 252.)
8723.	
<i>Jupp's Carrington.</i> (No. 210.)	

8727. MANGIFERA INDICA.**Mango.**

From Bombay, India. Received through Messrs. Lathrop and Fairchild (No. 814, January 28, 1902), June 5, 1902.

Douglas Bennett's Alphonse. "Named in honor of the superintendent of markets in Bombay, who has called our attention to this superlative strain and who has very kindly donated to the American Government the trees which he guarantees to be of this special variety. This sort should be compared with No. 8419, which latter number is composed of scions from the tree of which these are believed to be grafts." (*Fairchild.*)

8728. GOSSYPIUM BRASILIENSE (?)**Kidney cotton.**

From Ciego de Avila, Cuba. Presented by Mr. Felix M. Catala. Received June 5, 1902.

Wild Cuban kidney cotton.

8729 to 8734. MANGIFERA INDICA.**Mangoes.**

From Bombay, India. Received through Messrs. Lathrop and Fairchild (No. 944, March 30, 1902), June 7, 1902.

A collection of trees donated to the Department by Mr. J. N. Tata, of Bombay, who has a very large collection of the best mangoes from all over India. These are

those he considers the finest of his whole collection, which is one of the largest in the world. These include, doubtless, some of the most valuable sorts of mangoes of all India.

8729.

Noushirvani.

8732.

Totafari.

8730.

Paheri.

8733.

Hafu or Alphonse.

8731.

Ameeri.

8734.

Jamshedi.

8735. CURCUMA LONGA.

Turmeric.

From Bombay, India. Received through Dr. S. A. Knapp, June 7, 1902.

8736. ZINGIBER OFFICINALE.

Ginger.

From Bombay, India. Received through Dr. S. A. Knapp, June 7, 1902.

8737. TRITICUM DURUM.

Wheat.

From Bombay, India. Received through Dr. S. A. Knapp, June 7, 1902.

Hansoli. Grown at Surat, in Gujarat.

8738 to 8745. PHOENIX DACTYLIFERA.

Date palm.

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (Nos. 866 to 873, March 10, 1902), June 7, 1902.

8738.

Kustawi. "Considered one of the two best dates in the region of Bagdad. It is a variety which, though acknowledged to be far superior to the sorts which are sent to America, is not exported because of its poor shipping quality. If this date succeeds in America it can, without doubt, be easily shipped by rail, as I have eaten here in Bagdad good specimens over five months old. It is a sticky sort, as packed by the Arabs, although I believe its skin is thick enough to allow of its being packed as the *Deglet Noor* of Algiers is packed. The fruit is not over 1½ inches long, as judged by dry specimens, and has a seed about seven-eighths inch in length by five-sixteenths inch in diameter. The flesh is not very thick, but exceedingly sweet and, like the other good dates of this region, of a decidedly gummy consistency. It is placed by the Arabs second in rank to the *Maktum*, which is richer in sugar and somewhat fleshier. I have only tasted the *Maktum* once, but I believe it superior in flavor to the *Kustawi*, owing to the fact that the region of Bagdad is much drier than that of Bassorah. This date is probably better suited to conditions prevailing in California and Arizona than the sorts grown in Bassorah. It is considered, however, one of the most delicate dates to cultivate, requiring much more care than such sorts as the *Zehedy*, *Ascherasi*, and *Bedraihe*. Not being a date for export the price is low, as is the case with the *Berhi* of Bassorah. It sells for about \$2.60 to \$3 per 210 pounds, while the *Bedraihe* brings about \$4 to \$4.40. This variety begins to ripen about the 1st of August in this exceedingly hot climate. It should be planted with the growing bud 2 inches above the soil. The best ground will be an adobe, like the silt of the Colorado River, or such as occurs in certain places on the experimental farm at Phoenix. This sort is said to be a good bearer, but I do not know just how heavy the yields are. There is very little fiber to the date, and it is altogether an exceptionally fine sort." (*Fairchild.*) (No. 866.)

8739.

Ascherasi. "One of the highest-priced dates on the market in Bagdad. It is, as I have seen it, always a more or less dry sort, never pressed into a conglomerate mass in the way the other sorts are. It is the sort preferred by

8738 to 8745—Continued.

Bagdadians to eat with walnuts, and is preferred by many to any other kind. Personally, I found it a very eatable date, and it has the very great advantage of not soiling the hands. The flesh is, however, even when fresh, hard enough to allow shipping. In fact the dates are even sent, when fresh, from Mundeli to Bagdad in skins. Generally, however, the fruit is allowed to dry on the tree until it becomes hard. It is not exported from Bagdad, but consumed in Mesopotamia. The price sold dry is about \$3.20 to \$3.60 per 100 kilos on the Bagdad market. It is suited to a region with less water than that of Bassorah. It matures about the middle of September to the 1st of October in Bagdad." (*Fairchild.*) (No. 867.)

8740.

Bedraïhe. "This ripens in September and the first of October, and is allowed to dry on the trees. As sold here in the markets it is a yellow date, about $1\frac{1}{2}$ to $1\frac{1}{2}$ inches long and three-fourths inch to 1 inch in diameter. The base of the date is quite dry, as I have seen it, but the tip is transparent or semitransparent and quite sweet, although at this season of too gummy a consistency to be agreeable. In Bagdad this date is generally sold dry, and brings \$4 to \$4.20 for 210 pounds, i. e., it is the most expensive according to weight, but the other sorts, having a great deal of water in their composition, contain proportionately less food. Many Bagdadians prefer this sort, when fresh and softer, to all other kinds. There is an immense consumption of this variety in Bagdad. I believe this date would be a success in America because it is so different from other sorts, and for the reason that it is a remarkably good keeper, and when not too old is really very good eating. It is far superior to the dry dates of Egypt, and not to be confused with dry dates in general, for it has scarcely any disagreeable fibers about the seed. It deserves attention in American plantations." (*Fairchild.*) (No. 868.)

8741.

Maktum. "Considered by the Arab sheik, Abdul Kader Kederry, of Bagdad, to be the finest date, except one, in the world, the *Mirhage* from Mandele, which it resembles, being superior. It is a date not often seen on the Bagdad market, and I was unable to get any of good quality to taste. A very fine date, which was said to be of the *Maktum* sort, which I tasted, was a richer date than the *Kustawi*, although of the same general type. The probabilities are that this is a delicate sort which produces only a small quantity of fruit. The date I tasted came from Kasimain, but the tree is cultivated up the river from Bagdad. These trees were donated to the Department by Sheik Abdul Kader Kederry, of Bagdad." (*Fairchild.*) (No. 869.)

8742.

Burni. "For a description of this date see No. 8569. I believe it properly belongs to Maskat. It being winter I am not able to verify the identification of these varieties, but must buy the plants of Arabs or others who know the sorts." (*Fairchild.*) (No. 870.)

8743.

Zehedi. "This is probably the commonest date about Bagdad. It is the *quickest to develop* and the *heaviest yielder of all the dates about Bagdad*, according to Mr. Raphael Casparan, of Bagdad, who very kindly donated a lot of twenty-four palms to the Department, including part of these. It is a cheap date here, selling for only \$1.40 to \$2 per 210 pounds. The date is small, not over $1\frac{1}{2}$ inches long by three-fourths inch in diameter. It is not entirely like Egyptian dates, but is so dry that the individuals do not stick together. They have very little fiber, the stone is small, and the flesh quite sweet even when dry. When fresh this sort is packed in skins and exported to Egypt and Singapore, under the name of *Kursi*. It is often sold on the bunch when fresh and called *Zehedi Gus*, in which shape it is very highly thought of. I tasted the so-called *Kursi* and found it decidedly inferior in flavor and amount of flesh to the *Kustawi*. The variety is, however, I am assured, *the most resistant of any, so far as water is concerned, being quite drought resistant*, and although the

8738 to 8745—Continued.

product is a cheap one, the heavy yields make it a very profitable sort. It ripens about September or October. It sells in Bagdad (dry), I am told, for \$1.40 to \$2 per 210 pounds." (*Fairchild.*) (No. 871.)

8744.

Barban. "This date is reported to ripen in July and yield only fairly good fruits. It is the earliest ripening of the Bagdad dates, I am told, and deserves a place in the gardens for this reason. This variety is red before ripening but turns black when mature. It is not a very sweet sort, and not very highly thought of by the Bagdadians. It is rarely cultivated except outside of Bagdad. Its early ripening qualities are what make it worthy of trial in America. It is probable that this sort will not ripen so early in America because the amount of heat is probably considerably less." (*Fairchild.*) (No. 872.)

8745.

Sukeri. "A very large variety of date, said by Mr. Raphael Casparkan to be 2 inches or more in length, and when fresh, to be of good quality. Mr. Casparkan donated these to the Government, and the determinations are his, for I could not distinguish the different varieties which he selected. Worthy of trial in Arizona on account of its large size." (*Fairchild.*) (No. 873.)

8746 to 8752. PHOENIX DACTYLIFERA.**Date palm.**

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (Nos. 895 to 901, February 25, 1902), June 7, 1902.

8746.

Berhi. "A variety of date which, though never shipped to the American market, is said by every one in this region to be unquestionably the best date in this part of the Persian Gulf, inferior only to the *Khalasa* date of Hassa. It ripens, as do most all these Shat-el-Arab dates, in the month of September, and it is therefore likely to prove very valuable because of its superior quality and its early ripening character. It ripens in September in Bassorah, where the temperature goes to 117° F. in the shade. It is a sticky date, but nevertheless a variety with a very fine flavor, and grows well on adobe alluvial deposits. It is watered by canal irrigation as often during the year as the tide rises, viz, twice a day. I have tasted this *Berhi*, and it is superior to the *Halawi*, the principal export sort, and also to the *Taberzal*. The seed is very small." (*Fairchild.*) (No. 895.)

8747.

H'weis or *Hevezi.* "One of the best dates of the Persian Gulf. A delicate, light-colored date of medium size, with medium-sized stone. It ripens in Bassorah in September. It is very little known, even at Bassorah. Grown, as are all of the dates on the Shat-el-Arab River, in stiff clay, almost adobe soil, in raised areas surrounded by canals, which are flooded twice a day by water from the river as it is backed up by the tides, the variety is a sticky sort, but deserves the serious attention of experimenters with date palms, on account of its superior flavor and excellent color. The summer temperature of Bassorah rises to 117° and sometimes to 120° F. in the shade. In winter it drops to below 50°. The soil where the date is grown is distinctly saline. This date has not been shipped to American markets, but would be a good selling date, and for this reason it is well worth planting in southern California (Colorado Desert) and Arizona." (*Fairchild.*) (No. 896.)

8748.

Sayer or *Ustaamran.* "A variety of date darker in color than the *Halawi*, but of fair flavor. A standard sort in New York. It is said to do best on a light sandy soil, and to require less water than No. 8747. *Sayer* is a word also used to indicate a mixed lot of dates, but these trees are of a distinct long fruited dark sort. The trees are taller than those of the variety *Halawi*, and not so uniformly straight. This sort is most likely to succeed on sandy soils, or, at least, to do better on sandy than on ordinary adobe soil. It is inferior in quality to *Halawi* and *Khadrawi*, but, nevertheless, a good market date. It is grown here very extensively." (*Fairchild.*) (No. 897.)

8746 to 8752—Continued.

8749.

Gunnami. A male variety. "Considered by Hadji Abdulla Negem as the best pollen-producing male in this region. It holds its pollen best, and the latter is found to be 'stronger' than that of any other sort. One male tree suffices for 100 female trees." (*Fairchild*.) (No. 898.)

8750.

Halawi. "One of the standard sorts grown on the Shat-el-Arab River, of Arabia, and it is one of the principal dates shipped to the American market. There must be millions of trees of this variety along the river. A fairly light-colored date, short and thick, with a good-sized stone, and very little fiber about the seed. Grown under the same conditions as No. 8747, and ripens in September." (*Fairchild*.) (No. 899.)

8751.

Khadrawi. "A darker colored, longer date than the *Halawi*, and inferior to it. It is one of the standard sorts for shipment to America, but is not a delicate skinned variety; therefore an excellent packing date. It is a sticky date, and ripens in September or the first of October." (*Fairchild*.) (No. 900.)

8752.

Unnamed variety. "Sent without label from Abu Kassib, by Hadji Abdulla Negem, with Nos. 8746 to 8752, for all of which I am indebted to the kind assistance of Mr. H. P. Chalk, agent of Hills Bro. & Co., of New York." (*Fairchild*.) (No. 901.)

8753. PHOENIX DACTYLIFERA.

Date palm.

From Hassa, Arabia. Received through Messrs. Lathrop and Fairchild (No. 905, March 17, 1902), June 7, 1902.

Khalasa or *Khalasi*. "This date is known all over the Persian Gulf as one of the three best dates. It certainly has few equals, and its only rivals are the *Maktum*, *Taberzal*, and *Berhi*, and probably also, though I have not tasted it, the *Mirhage*. Palgrave, author of 'Travels in Eastern Arabia,' 1863, says the literal translation of the name *Khalasi* is 'quintessence,' and that it 'is easily first of its kind.' The country in which it is grown is, according to Zwemer, a sandy one, with underground springs or water courses, water being reached only a few feet below the surface of the soil. This country of Hassa or El Hassa lies 60 miles or so inland from Bahrein Island, and these palms were brought by camels from that region. The climate in winter is hot in daytime, but cold at night, and in summer it is excessively hot. This variety matures its fruit, I presume, sometime in August or September, though I can not state this positively. It is a variety worthy the serious consideration of our date growers, as it will probably be better suited to our conditions than the Bassorah dates, which will require more water to bring them to full development. We are indebted to H. B. M. Vice-Consul J. C. Gaskin, of Bahrein, for securing these sets and for many other favors, and also to Mr. H. M. Zwemer for information about Hassa dates." (*Fairchild*.)

8754 to 8761. PHOENIX DACTYLIFERA.

Date palm.

From Maskat, Arabia. Received through Messrs. Lathrop and Fairchild (Nos. 906 to 913, March 21, 1903), June 7, 1903.

8754.

Fard. "A long, large-sized, late date, of dark color but good flavor. About 1,000 tons of this date are exported from Maskat to America every year, it being the principal export date of the region of Maskat. These young palms were brought from Semail, 50 miles in the interior, where there are extensive plantations of this and other sorts. There are estimated by Vice-Consul MacKirdy, who very kindly secured these for the Department, to be half a million date trees in the Semail Valley. This date ripens in August and sells for \$40 Mexican per 1,800 pounds. It is the best flavored soft packing date in the region. It is adapted to the hottest regions in America." (*Fairchild*.) (No. 906.)

8754 to 8761—Continued.**8755.**

Burni. "This is a light-colored date about the same size as the *Fard*, but thinner, also from Semail. It ripens in Maskat in July. It was formerly shipped to America, but was found to be a poorer keeper than the *Fard*, and now it is no longer demanded. Because of its scarcity it sells for \$50 Mexican per 1,800 pounds." (*Fairchild.*) (No. 907.)

8756.

Nagal. "An early variety from Semail, 50 miles in the interior, ripening in June. It is a light-colored date about 1½ inches long and three-fourths inch in diameter. It is not as sweet as the *Fard*, but is highly prized because it is the earliest date in the region. It is consumed locally and only in a fresh condition. High prices are paid for it by the Arabs. It is a soft sort, resembling the *Fard*." (*Fairchild.*) (No. 908.)

8757.

Mubsali. "From Semail, 50 miles inland from Maskat. This date is a long, large variety, which is picked before being ripe, boiled for an hour in salt water, and then spread out in the sun to dry. (See Nos. 8563 and 8564.) These dates, which are as hard as stick candy, and almost as sweet, are sold in India, where there is a big demand for them, and where higher prices are paid than for the ordinary *Fard* variety. They sell for \$80 Mexican per 1,800 pounds. This belongs to the *Karak pokhta* class of dates, which are served in India at every wedding and festival. They are sometimes eaten fresh. It is the best paying date in Maskat. Suitable for dry, hot regions. It ripens in July." (*Fairchild.*) (No. 909.)

8758.

Khanezi. "From Semail, 50 miles inland from Maskat. An almost round, soft, very sweet sort, only consumed locally. It is a rare variety, ripening in July. It is eaten in the fresh state and considered one of the best of this kind in Maskat." (*Fairchild.*) (No. 910.)

8759.

Khassab. "From Semail, 50 miles inland from Maskat. A red variety when ripe, somewhat shorter in shape than the *Fard*. It ripens in August. It is a soft variety, therefore not a shipping date. It is reported to be the heaviest yielder of any, as much as 450 pounds being borne by a single tree. It is not as sweet as the *Fard*, but is still of good quality." (*Fairchild.*) (No. 911.)

8760.

Hellali. "From Semail, a date region 50 miles back of the town of Maskat. It is as round fruited as a walnut, light colored and soft. It is not a packing date but is used fresh. The bunches are exceedingly large. A rare sort even in Maskat." (*Fairchild.*) (No. 912.)

8761.

"*Fachl* or *Fahel*, meaning male date, from the valley of Semail, 50 miles in the interior behind Maskat. This is the variety used in this great valley, where half a million trees are grown, as the pollinator. It might be called simply *Semail Fahel*, to distinguish it from the Egyptian *Fahel* or male sent in 1900." (*Fairchild.*) (No. 913.)

8762 to 8785. PHOENIX DACTYLIFERA.**Date palm.**

From Kej, Baluchistan. Received through Messrs. Lathrop and Fairchild (Nos. 914 to 937, March 23, 1902), June 7, 1902.

A collection of date palms secured through the kindness of Lieutenants Grant and Maxwell, of the First Baluchistan Light Infantry, from Kej, a region six days by

camel from Guadur, near the Pangh Ghur region. The soil is an adobe but mixed with small rocks. It is watered from artificial wells. The palms are as follows:

8762.

Mozati. One of the finest flavored dates in the world. It is sent in earthen jars, packed in the sirup of inferior sorts, to Kurrachee and Bombay. It is said to ripen in July. It is a large, round sort with small stone, golden brown flesh, and delicate skin. (No. 914.)

8763.

Gush. A male variety. (No. 915.)

8764.

Apdandon. (No. 916.)

8765.

Sooni Gora. (No. 917.)

8766.

Hashma. (No. 918.)

8767.

Gonzelli. (No. 919.)

8768.

Jalghi. (No. 920.)

8769.

Bagum Jurghi. (No. 921.)

8770.

Shukkeri. (No. 922.)

8771.

Koroch. (No. 923.)

8772.

Hattani. (No. 924.)

8773.

Shapego. (No. 925.)

8774.

Dishtari. (No. 926.)

8775.

Chupshook. (No. 927.)

8776.

Korroo. (No. 928.)

8777.

Rogani. (No. 929.)

8778.

Churpan. (No. 930.)

8779.

Kharba. (No. 931.)

8780.

Dundari. (No. 932.)

8781.

Subzoo. (No. 933.)

8782.

Gond Gorbug. (No. 934.)

8783.

Washclont. (No. 935.)

8784.

Kalara. (No. 936.)

8785.

Hurshut. (No. 937.)

8786 to 8793. PHOENIX DACTYLIFERA.**Date.**

From the vicinity of the Persian Gulf. Received through Messrs. Lathrop and Fairchild, June 7, 1902. Samples of dried dates as follows:

8786.

Bedraihc. From Bagdad market. (No. 868.) (See No. 8740.)

8787.

A variety sold in the Kurrachee market in two-gallon earthen jars. It is said to come from the interior of Baluchistan. Its name is not known.

8788.

Kodrawi. (No. 900.) (See No. 8751.)

8786 to 8793—Continued.**8789.**

Kustawi. From Bagdad market. (No. 866.) (See No. 8738.) A very fine date, though somewhat stringy.

8790.

Berhi. Dates as packed in paper cartons for European market. (No. 895.) (See No. 8746.)

8791.

Halawi. Dates as packed in paper cartons for export to all parts of the world. (No. 899.) (See No. 8750.)

8792.

Busser. From Bassorah, Arabia. An inferior variety.

8793.

Zehedi. "From Bagdad market." (*Fairchild.*) (No. 871.) (See No. 8743.)

8794. PHOENIX DACTYLIFERA.**Date.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 885, March 10, 1903), June 7, 1902.

Taberzal. "Sample of dried dates. This is a rare date even at Bagdad, and I did not find it on the markets. Agha Mohammed, British consular agent at Kasimain, very kindly donated these to the Department. It is a small date $1\frac{1}{4}$ to $1\frac{3}{8}$ inches long by about seven-eighths inch in diameter. When dry it is of an amber color. The skin is a lighter shade than the flesh, is loose, rather papery in texture, and can be removed with the fingers from the dried flesh. The flesh is never dry in the sense of being hard, but has the consistency of a chocolate caramel and is sweet and of characteristic date flavor. The seed is of medium size and fits loosely in the dry flesh. There is scarcely any fiber about the seed. The stem has a trifle too large disk (involucre), but is easily removed with the fingers. When fresh it is considered one of the most delicate dates in Bagdad, though not so fine or so large as the *Berhi* (No. 8746), which it resembles. I have not seen the *Berhi*, but take this as the opinion of a date shipper. These dates, if not pressed into skins or cases, are dry enough to be handled with the fingers. This is a point of great importance. The *Deglet Noor* of Algiers would probably be quite as unappetizing if pressed into baskets or boxes. I secured these samples too late to make it possible to secure plants, but they can be had through Vice-Consul Hürner, of Bagdad, from Agha Mohammed, who donated these." (*Fairchild.*)

8795. PHOENIX DACTYLIFERA.**Date.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild, June 7, 1902.

Ascherasi. Samples of dates. (See No. 8739, L. & F. No. 867.)

8796 and 8797. VITIS VINIFERA.**Grape.**

From Kandahar, India. Received through Messrs. Lathrop and Fairchild, June 7, 1902.

Samples of raisins bought in the Kurrachee market.

8796.

Seedless. Very sweet and thoroughly candied.

8797.

A large, light-colored raisin with seeds.

- 8798. GOSSYPIMUM sp. Cotton.**
 From Arabia. Received through Messrs. Lathrop and Fairchild, June 7, 1902.
 "Probably from the garden of Abdul Kader Kederry, on the Tigris River."
 (*Fairchild.*)
- 8799. CAPSICUM ANNUM. Red pepper.**
 From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 852, February 26, 1902), June 7, 1902.
 "A lance-shaped variety of red pepper from the market of Bassorah. The fruits are not over 1 inch to 1¼ inches long." (*Fairchild.*)
- 8800. PISTACIA VERA × (!) Butum.**
 From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 874, March 9, 1902), June 7, 1902.
 "A small packet of seeds from the market of Bagdad. These may be hardier than the European butum." (*Fairchild.*)
- 8801. PISTACIA MUTICA. Menengech.**
 From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 874, March 9, 1902), June 7, 1902.
 "Sample of seed from Bagdad market. These may prove hardier stocks than the European sorts." (*Fairchild.*)
- 8802. (Undetermined.) Sissi.**
 From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 875, March 11, 1902), June 7, 1902.
 "Seeds brought from the mountains of Persia beyond Mosul. They are edible and are eaten by the Arabs as the Chinese eat melon seeds. The flesh is sweet, but there is little of it. The plant which produces these fruits is said to be a shrub and likely to withstand desert conditions." (*Fairchild.*)
- 8803. AMARANTHUS HYPOCHONDRIACUS (!) Chagoggee.**
 From Wönsau, Korea. Presented by Mr. C. F. S. Billbrough, of Wönsau, through Messrs. Lathrop and Fairchild (No. 773), June 10, 1902.
 "Used in Korea as an ornamental, having masses of bright red foliage. The plant is an annual, 6 feet high. It is used by the natives for food, being boiled like cabbage. It is, further, much relished by stock. It should be grown for identification and may prove a new thing as an ornamental or may be of use as a fodder plant." (*Fairchild.*)
- 8804. ORYZA SATIVA. Rice.**
 From Niuchwang, China. Presented by Hon. Henry B. Miller, United States consul, through the Department of State. Received June 10, 1902.
K'ien Tzu. "Dry land rice, sown the last of April or the first of May and harvested early in September. It grows best on low land or on rich yellow soil. It must not be flooded, but requires rain at the time the grain is forming. It will not grow on high, dry clay land." (*Miller.*)
- 8805. PANICUM MILIACEUM. Broom-corn millet.**
 From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 853, February 25, 1902), June 7, 1902.
Dukkm. "A kind of millet which is sown on the mud after flooding the soil with irrigation water and left to mature its crop without further watering. It is said to produce and ripen its heads in forty days, so that two crops are generally grown each year on the same soil. This is sent for trial in the Colorado Desert region and western Texas." (*Fairchild.*)

8806. MEDICAGO SATIVA.**Alfalfa.**

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 904, March 15, 1902), June 7, 1902.

Djet. "This is treated like any alfalfa (see No. 8823). This is given a separate number as it comes from 500 miles south of the locality whence No. 8823 was sent. Secured through the assistance of Mr. Raphael Sayegh, of Bassorah." (*Fairchild.*)

8807. CICER ARIETINUM.**Chick-pea.**

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 903, March 15, 1902), June 7, 1902.

Humus. "Sold everywhere on the markets of Mesopotamia. It is suited to very hot regions with little water. Sent for trials in California and Arizona." (*Fairchild.*)

8808. TRITICUM DURUM.**Wheat.**

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 902, March 16, 1902), June 7, 1902.

Karun. "A hard wheat which is grown on the river Karun in Persia. It is reported to be the best wheat coming to the Bassorah market and is grown in a region where scant rains fall and which is exposed to excessive hot weather. Suited for our dry, hot Southwest." (*Fairchild.*)

8809. HORDEUM TETRASTICHUM.**Barley.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 886, March 10, 1902), June 7, 1902.

Black. "The native barley of the Tigris Valley above Bagdad. It should be suited to culture in our dry Southwest, as it is a short season variety and depends on the scanty rains in January and February for its moisture. I understand that this barley is sometimes exported to Europe." (*Fairchild.*)

8810. LATHYRUS CICER.**Pea.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 880, March 9, 1902), June 7, 1902.

Hortuman. "A species of the pea family, which in the market is called *Hortuman*, but, according to the dictionaries, *Hortuman* means *oat*, and this is evidently one of the Leguminosæ. It is cultivated by planting in hills or drills, and grows, according to the very unsatisfactory information which I could pick up, to a height of about 2 feet. The grains are produced in a pod and they form the valuable product of the plant. The straw is, however, also said to be fed to cattle, but has not any great value. The grain is exceedingly hard and requires grinding before it can be used. It is then cooked with rice or boiled and eaten alone. It is grown without much water, but generally on irrigated lands. It is suitable for trial in the extremely hot regions of the Colorado Desert. Its use as a soiling crop is quite unknown, but it may be of considerable value, nevertheless, for people here are evidently quite ignorant of soiling crops. Bought in the bazar at Bagdad, where it is not at this season a very common grain." (*Fairchild.*)

8811. TRITICUM DURUM.**Wheat.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 879, March 9, 1902), June 7, 1902.

Hurma. "A large-grained, hard wheat which is called *Hurma*, meaning widow, because of the large size of the grains. This sample comes from the wheat-growing region of Mosul and is cultivated without irrigation. It deserves a trial in our arid-region experiments." (*Fairchild.*)

8812. TRITICUM VULGARE.**Wheat.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 878, March 9, 1902), June 7, 1902.

Kermansha. "The finest looking soft wheat to be found on the Bagdad market. It comes from Kermansha, in Persia, where it is grown without irrigation. It brings

a lower price than the *Kurdistan* and *Karoon* wheats, because it is soft and has not the 'strength' of the latter, which is necessary in the making of the Arabic 'Hubus' or pancake-like bread. It is worth a trial in dry regions." (*Fairchild.*)

8813. TRITICUM DURUM.**Wheat.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 877, March 9, 1902), June 7, 1902.

Kurd. "A wheat grown in Kurdistan and brought down to the Bagdad market. It is used for bread making and brings good prices, being, in fact, one of the highest priced wheats in the Bagdad market. Bread from this wheat is made in thin sheets like German pancakes and has a decided mixture of the macaroni wheat flour in it. This wheat is harder than No. 8812. The *Kurd* wheats and the *Karun* or *Karoon* wheats are considered the best sorts sold in Bagdad and I understand they are grown without irrigation, depending only upon the scanty rains. They should be tested to show their resistance to rust and drought." (*Fairchild.*)

8814. PHASEOLUS VIRIDISSIMUS.**Bean.**

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 864, March 3, 1902), June 7, 1902.

Maash. This is grown in Mesopotamia and used as food. It is employed with rice and even boiled and eaten alone. It is planted in drills or hills, like ordinary string beans, and grows to a height of 2 feet or more. This resembles, I am informed, the *Merjemek* of Turkey. I think this is the same species as No. 6430 sent in 1901 as *Phaseolus viridissimus*, secured in Athens, Greece. This bean should be tested in the irrigated lands of the Southwest, and as a vegetable throughout the Southern States of America." (*Fairchild.*)

8815. ANDROPOGON SORGHUM.**Sorghum.**

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 863, February 25, 1902), June 7, 1902.

Edra. "A kind of sorghum like the *Dura* of the Egyptians. This is a white variety grown in this hot region where the temperature often goes to 117° F. and during the summer ranges between 85° and 99° F. day and night. No other irrigation than that of the rains is received by the plants, and yet it is said that it can be relied upon generally to give a fair crop. It is worth trying on the scorching deserts of California. The grain makes excellent second-class food." (*Fairchild.*)

8816 to 8819. TRITICUM.**Wheat.**

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (Nos. 857 to 861, February 25, 1902), June 7, 1902.

"A collection of wheats from the Euphrates, Tigris, and Karun river valleys, which are the three great wheat growing regions of Mesopotamia. These wheats are not generally grown by irrigation but depend upon the rains for their water, and as the climate is a dry and excessively hot one and the soil an adobe, inclined to be alkaline, these wheats deserve trial in similar excessively hot regions in America. Their rust-resisting qualities I know nothing about. With the exception of the Karun variety they are not especially fine wheats, but from their very long culture here in Mesopotamia they should be tried in the Colorado Desert region and on any stiff soil which is subject to droughts. Larger quantities may be had by corresponding with Mr. H. P. Chalk, of Bassorah, referring to the varieties by name. These are exposed two months to a summer shade temperature of 117° to 120° F. and stand it well. The wheats are as follows." (*Fairchild.*)

8816. TRITICUM DURUM.

Buetha. A hard wheat from Arag, on the Euphrates River. (No. 858.)

8817. TRITICUM VULGARE.

Bagdad. A soft variety from Bagdad. (No. 859.)

8816 to 8819—Continued.**8818.** TRITICUM DURUM.

Koola. A hard wheat from Kurdistan; exact origin in doubt. (No. 860.)

8819. TRITICUM DURUM.

Humera. A hard sort of dark color, from Arag, on the Euphrates River.

8820. TRITICUM DURUM.**Wheat.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 876, March 9, 1902), June 7, 1902.

Hurma. "A hard wheat grown at Desphuli, in Persia, near the Karun River. This sample was bought on the market in Bagdad. It is grown in a region noted for its extreme summer heat and scanty rains and should be suited to arid-land conditions. Exact data were unobtainable." (*Fairchild.*)

8821. PANICUM MILIACEUM.**Broom-corn millet.**

From Kurrachee, India. Received through Messrs. Lathrop and Fairchild (No. 943, March 27, 1902), June 7, 1902.

San China. "Grown on the Sewage Farm at Kurrachee. It is an excellent forage crop, and should be tried, though not new to America, in the Colorado Desert region. The grain is fed to cattle and working bullocks. It is coarse, but is said to be a profitable crop. The yields are large. It is possibly a different strain from the ordinary." (*Fairchild.*)

8822. ZEA MAYS.**Maize.**

From Bagdad, Arabia. Received through Messrs. Lathrop and Fairchild (No. 884, March 11, 1902), June 7, 1902.

"A Mesopotamian maize, given me by Agha Mohammed, of Kasimain. It is the variety commonly grown in the region and is sent as illustrating the low condition of agriculture in this wonderful region." (*Fairchild.*)

8823. MEDICAGO SATIVA.**Alfalfa.**

From Bagdad, Arabia. Presented by Agha Mohammed, the Nawab at Kasimain and consular agent at that place for His British Majesty. Received through Messrs. Lathrop and Fairchild (No. 881, March 10, 1902), June 7, 1902.

Djet or El-djet. "A larger quantity of seed can be secured through arrangement with the American vice-consul at Bagdad, Mr. Rudolph Hürner. Although the Nawab admits this to be the best plant for horses he has ever grown, he says that he is the first in the region of Bagdad to grow it, and this, notwithstanding the fact that at Kerbella, only a day's journey away, large areas have been planted to it from ancient times. In the especially hot summers the fields are irrigated three times a month; in the cooler summers only twice. From 9 to 10 cuttings are taken each year, and the fields are manured with stable manure after each cutting. The life, i. e., profitable life, of a field of this *djet* is seven years. This variety should be admirably suited to our irrigated lands in California and Arizona, and deserves a trial in comparison with the Turkestan alfalfa. It should also be tested as to alkali resistance." (*Fairchild.*)

8824. PRUNUS sp.**Plum.**

From Kurrachee, India. Received through Messrs. Lathrop and Fairchild (No. 940, February 26, 1902), June 7, 1902.

Kandahar. "A peculiar dried plum sold on the market in Kurrachee and said to have come down from Kandahar. I have never eaten this plum stewed, so do not know of what quality it is. Sent for breeding purposes." (*Fairchild.*)

8825. PRUNUS ARMENIACA.**Apricot.**

From Kurrachee, India. Received through Messrs. Lathrop and Fairchild (No. 938, February 26, 1902), June 7, 1902.

"Dried apricots which were bought on the market in Kurrachee as coming from Kandahar. These apricots, when stewed and served as they are in India, have a really very delicious flavor. There is a bit of disagreeable fiber about the stone, but altogether they struck me as a novelty worthy of attention. Should they prove valuable, cuttings may be obtained by correspondence." (*Fairchild.*)

8826. PRUNUS sp.**Plum.**

From Arabia. Received through Messrs. Lathrop and Fairchild, June 7, 1902.
No data furnished.

8827. PRUNUS sp.**Plum.**

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild (No. 865, February 26, 1902), June 7, 1902.

Aluche. "A variety sold on the markets of Bassorah as coming from Persia. A sour variety, which may be useful to breeders." (*Fairchild.*)

8828. ZIZYPHUS JUJUBA.**Jujube.**

From Bassorah, Arabia. Received through Messrs. Lathrop and Fairchild, June 7, 1902.

Samples of a variety similar to No. 8702.

8829 to 8847. FICUS CARICA.**Fig.**

From Italy. Received through Mr. W. T. Swingle (Nos. 101 to 119), June 13, 1902.

"The following collection of caprifig cuttings was obtained during the spring of 1902 at Naples, the classic ground for the study of caprifigs and caprification. Considerable attention was given to the study of the botanical characters of the caprifig trees, and detailed descriptions were drawn up of seven of the principal varieties of caprifigs occurring in this region. It was found possible to draw up a key for the determination of the different varieties of caprifig, based on these characters, which key is given below. It applies only to those of the caprifigs which were carefully studied, but it will doubtless prove useful to investigators who wish to study the caprifigs of Naples. This collection, like that included under numbers 6473 to 6491 and 6773 to 6823, has been introduced to this country in the hope of securing an assortment of caprifigs adapted to all the climatic and soil conditions occurring in California, where all of these caprifigs will be tested as soon as possible. A few varieties of figs are also included in this collection." (*Swingle.*)

KEY TO SEVEN PRINCIPAL VARIETIES OF NEAPOLITAN CAPRIFIGS.

Leaves *nearly entire* or but slightly lobed, small, short, covered with a golden pubescence; middle lobe obtuse and rounded. *Petioles short and very stout*, also pubescent. Veins reddish on drying. Profichi ovate with few male flowers; flower pedicels green. No. 8838.

Leaves decidedly lobed, or, if not, nearly smooth.

Leaves *velvety pubescent*, *petioles short and very stout*, also pubescent. Leaves many (5-7) lobed.

Middle lobe with obtuse and rounded apex. Veins green on drying. Lamina yellow dotted.

Profichi small *oval* with many male flowers. No. 8844.

Leaves not velvety, hairy; profichi ovate.

Petioles very long (reaching beyond sinuses when reflexed). Sinuses very deep and narrow. Middle lobe with rounded apex. Leaf long and narrow with U-shaped base. Veins reddish on drying. No. 8829.

Petioles short or medium in length (not reaching to sinuses if reflexed).

Profichi depressed at apex. Flower cavity broader than long. Leaves with *deep and narrow sinuses*;

medium sized, regular in outline; 3-lobed, middle lobe with acute straight-sided apex.

Lamina decurrent on petiole. Veins drying reddish; flower pedicels purplish. No. 8834.

Sinuses open, usually shallow. Profichi not depressed at apex. Flower cavity longer than broad.

Middle lobe rounded and obtuse. Leaf and petiole moderately hairy. Sinuses shallow and open. Veins drying reddish. Lamina not decurrent. No. 8832.

Middle lobe with acute, straight-sided apex.

Leaves large, irregularly 3-5 lobed. Sinus shallow, usually very open. Lamina decurrent. Veins drying reddish. Flower pedicels purplish. No. 8845.

Leaves medium sized. Lamina not decurrent. Veins green on drying. *Petioles and palmate veins very glabrous*. Flower pedicels green. No. 8837.

8829 to 8847—Continued.

8829.

From Naples. "A medium-sized tree in a garden on Posilipo hill on Strada Nuova di Posilipo, evidently a cultivated sort. It bore a fair number of *mamme*; full of *Blastophaga* on April 19, and still had a few *mamme* attached on May 14. The *profichi* are abundant. Apparently a valuable late sort. Its botanical characters are as follows: *Petioles very long*, when reflexed reaching beyond base of sinuses. Leaves small, long, and narrow, smoothish, 3-lobed, with deep and narrow sinuses, sometimes closed above. Middle lobe much expanded, with a blunt rounded apex; lateral lobes unusually narrow. Base U-shaped, with decurrent lamina. Veins drying reddish. Petioles very long and slender; slightly hairy. Profichi ovate, medium sized, 45 x 30 mm. Very unlike other sorts in leaf characters. Resembles most No. 8834, but has very much longer petioles, while No. 8834 has acute, straight-sided apex and profichi depressed at tip. No. 8832 has similar U-shaped base, but differs greatly in having shallow sinuses, shorter petioles, and abruptly attached lamina." (*Swingle.*) (No. 101.)

8830.

From Naples. "A large tree in the Botanic Garden, covered with *profichi*, but destitute of *mamme*. The *profichi* were far advanced and had abundant male flowers; but one that had been injured was soft, and this may indicate that this variety has the drawback of producing *profichi* which soften as they ripen. A valuable early sort." (*Swingle.*) (No. 102.)

8831.

From Naples. "A medium-sized tree, evidently of a cultivated sort, in a garden on Posilipo hill, near Villanova. Bore both *mamme* and *profichi*." (*Swingle.*) (No. 103.)

8832.

From Naples. "A medium-sized tree, of a cultivated sort, in a garden on Posilipo hill. It had a few *mamme* still attached and many *profichi*. Its botanical characters are as follows: *Leaf U-shaped with shallow open sinuses and rounded apex*. Leaf medium sized, slightly hairy, 3-lobed, with shallow and rather open sinuses. Base U-shaped, with abruptly joined lamina. Apex of middle segment rounded. Veins slightly reddish on drying. Petiole medium length and not very slender; somewhat hairy. Profichi ovate, 58 x 37, with abundant male flowers. Near to No. 8837, but has a rounded instead of an acute apex and more hairy petioles. See under 8829. Differs from No. 8834 with U-shaped leaves in having open shallow sinuses and rounded apex." (*Swingle.*) (No. 104.)

8833.

From Naples. "A small seedling tree, growing from a wall retaining a roadway on Posilipo hill. Floral envelopes long and nearly hiding the flowers, which were still immature on May 9, 1902. Probably a seedling fig, but possibly a very large caprifig." (*Swingle.*) (No. 105.)

8834.

From Resina, near Naples. "A large tree in Villa Amelia, bearing a few *mamme* and abundant *profichi*. Evidently a cultivated sort. The tree had been caprifigged with *mamme*, in spite of the presence of a fair number of *mamme* attached to the branches. Its botanical characters are as follows: *Profichi depressed at apex*. Leaves small, rounded, regular in outline, 3-lobed, slightly hairy, with deep, narrow sinuses, often closed. Middle lobe with acute, straight-sided apex. Base U-shaped, with decurrent lamina. Veins drying reddish. Petiole medium or short, slender, slightly hairy. Profichi ovate, depressed at apex, 52 x 36. Some of the flower pedicels purplish. Differs from No. 8845 in smaller leaves, regular in outline, and narrower sinus, and from No. 8837 in having reddish veins on drying and a decurrent lamina. See also under No. 8829, which has longer petioles and rounded tip." (*Swingle.*) (No. 106.)

8829 to 8847 — Continued.

8835.

From Resina, near Naples. "A medium-sized tree in Villa Amelia, probably the same as No. 8834." (*Swingle.*) (No. 107.)

8836.

From San Giovanni a Teduccio, near Naples. "A large tree, which had been cut back for grafting; growing in the garden of Dammann & Co. Owing to the presence of only young trees, there were no *mamme*, but a few *profichi* with very long pedicels were seen." (*Swingle.*) (No. 108.)

8837.

From Naples. "A medium-sized tree, evidently of a cultivated sort, growing in a garden on Posilipo hill. Had a few *mamme* and abundant, very large *profichi*, with numerous male flowers. A promising sort. Its botanical characters are as follows: *Petioles almost glabrous*. Leaves medium sized, slightly hairy, 3-lobed, with rather deep and narrow sinuses. Middle lobe narrow below and bulging above, with very acute, straight-sided apex, bulging moderately. Base cordate; lamina not decurrent, broad space between margin and first palmate vein. Veins drying green. *Petioles glabrous*, or nearly so; slender. *Profichi* very large ovate, 71 x 42, with very many male flowers. Flower pedicels green. Principal palmate vein glabrous. Skin marked with small reddish brown specks. Resembles No. 8834, but has not decurrent lamina and has flower pedicels and veins of dried leaves green, besides petioles which are less hairy. Very like No. 8845, q. v., and No. 8832." (*Swingle.*) (No. 109.)

8838.

From Naples. "A small tree growing in a garden. No *mamme* were seen, but there were numerous medium-sized *profichi*, which had only a few male flowers. Leaves nearly entire, with golden pubescence. Its botanical characters are as follows: *Leaves nearly entire*, small, short, pubescent, with golden hairs, as are the short, thick petioles; sinuses present, shallow and open, not extending one-third way to middle. Middle lobe blunt deltoid, nearly straight-sided, over 90 mm. long. Veins reddish on drying. Base cordate; lamina abruptly attached to petiole. Ultimate veinlets very fine and visible by transmitted light. *Profichi* ovate, 53 x 30 mm., with few male flowers. Skin with large, nearly white spots. Resembles No. 8844 in pubescence, which is, however, *less* marked, and in having short, stout petioles. No. 8844 differs in having lobed leaves and *oval* small *profichi*, and yellow spots on dried leaves. Slightly resembles the slightly lobed No. 8832, but has much shallower sinuses, and No. 8832 has rounded middle lobe and longer slender petiole and smoother leaf." (*Swingle.*) (No. 110.)

8839.

From Naples. "A large tree in a garden on the hill between Arenella and Capodimonte. May be a caprifig." (*Swingle.*) (No. 111.)

8840.

From Naples. "A cultivated sort, growing near No. 8831, in garden on Posilipo hill, near Villanova." (*Swingle.*)

8841.

From Naples. "A cultivated sort, growing in garden near No. 8831, on Posilipo hill, near Villanova." (*Swingle.*) (No. 113.)

8842.

From Vico Equense, near Castellanare. "A medium-sized tree, growing in a cliff by the road between Vico Equense and Sejano. It may be a caprifig." (*Swingle.*) (No. 114.)

8829 to 8847—Continued.

8843.

From Naples. "A good-sized tree, evidently of a cultivated sort, on Posilipo hill. Probably a *brebas* tree, i. e., a sort which matures the spring generation corresponding to the profico generation of a caprifig." (*Swingle.*) (No. 115.)

8844.

From Miseno, near Pozzuoli. "*Profico bianco*, white caprifig. A small tree in the garden on the top of Mount Miseno. It had a few *manime* and some *profichi* which showed a large number of male flowers. Evidently a cultivated sort of value. Its botanical characters are as follows: *Leaves velvety hairy*, petioles thick and short; also velvety pubescent. Leaves medium sized, short and thick, decidedly 3-7-lobed. Sinuses rather open, usually less than one-half way to middle. Leaves (some at least) show numerous small yellowish dots on the upper surface. Apical lobe bluntly deltoid with nearly straight sides. Base strongly cordate. Lamina abruptly attached to midrib. Veins usually drying green. Lateral lobes bulge so sinus line cuts them. Profichi very small (possibly young?) 38 x 33 *oval*, with many male flowers. Skin marked with large, nearly white dots." (*Swingle.*) (No. 116.)

8845.

From Naples. "A large tree of a cultivated sort, growing in a garden on Posilipo hill. It had numerous *profichi* containing many male flowers. A promising caprifig. Its botanical characters are as follows: *Leaves large, irregular in outline, with very open sinuses*. Leaf large, irregular in outline, somewhat hairy; 3-5-lobed sinuses, rather shallow and very open. Lateral lobes very coarsely dentate. Middle lobe thick and bulging but slightly, with an acute straight-sided apex. Base U-shaped or slightly cordate. Lamina decurrent. Veins reddish on drying; palmate veins hairy. Petioles only slightly hairy, rather long and not very slender. Profichi very large, ovate, 62 x 40, with a good number of male flowers; pedicels of flowers purplish at base. Much resembles No. 8837, but differs in having large leaf, more decurrent lamina, and more hairy petioles and veins, and flower pedicels purplish at base. Most resembles No. 8834; differs in large irregular leaf, with more open sinuses and profichi not depressed at apex." (*Swingle.*) (No. 117.)

8846.

From Naples. "A large cultivated fig in a garden on Posilipo hill, bearing a few *brebas*." (*Swingle.*) (No. 118.)

8847.

From Lago Averno, near Pozzuoli. "A large tree near the road from Arco Filice to Pozzuoli. It was covered with *brebas* figs. A promising sort of early fig." (*Swingle.*) (No. 119.)

8848 to 8886.

From Nice, France. Presented by A. Robertson-Proschowsky. Received June 13, 1902.

A collection of seeds as follows:

8848. *AGERATUM MEXICANUM.*

8849. *AMORPHA FRUTICOSA.*

8850. *ANTHOLYZA AETHIOPICA.*

8851. *ARAUJIA SERICIFERA.*

8852. *ARISTOLOCHIA ELEGANS.*

8853. *BERBERIS NEPALENSIS.*

8848 to 8886—Continued.

8854. CARICA QUERCIFOLIA.

8855. CASSIA CORYMBOSA.

8856. CERATONIA SILIQUA.

"Sweet fruited." (*Proschowsky.*)

8857. CERCIS SILIQUASTRUM.

8858. CORDYLINE BANKSII.

"This may be some hybrid." (*Proschowsky.*)

8859. EUPATORIUM sp.

"It has abundant white flowers in midwinter." (*Proschowsky.*)

8860. EUPATORIUM ATORRUBENS.

"An evergreen bush with very beautiful foliage and flowers in midwinter." (*Proschowsky.*)

8861. EUPATORIUM ATROVIOLACEUM.

8862. FATSIA JAPONICA.

8863. FREYLINIA CESTROIDES.

8864. FRANSERIA ARTEMISIOIDES.

8865. GLAUCIUM FLAVUM.

8866. HEDERA HELIX VAR. AURANTIA .

8867. HIBISCUS sp.

8868. IPOMOEA FICIFOLIA.

8869. IRIS LAEVIGATA.

8870. MAYTENUUS BOARIA.

8871. MELALEUCA VIRIDIFLORA.

8872. OLEA EUROPAEA.

Nice. "Famous for oil. The fruit is very good for preserving in salt solution. The tree is of a very graceful weeping habit." (*Proschowsky.*)

8873. OLEARIA HAASTII.

8874. OREOPANAX PLATANIFOLIUM.

"A very ornamental evergreen." (*Proschowsky.*)

8875. OXALIS CORNICULATA VAR. ATROPURPUREA.

8876. SALVIA GESNERAEFLORA.

"A very showy winter-blooming shrub. It produces very few seeds." (*Proschowsky.*)

8877. SENECIO DELTOIDES.

8880. SOLANUM PYRACANTHUM.

8878. SENECIO PETASITES.

8881. SOLANUM SODOMAECUM.

8879. SENECIO GRANDIFOLIUS.

8848 to 8886—Continued.**8882.** SOLLYA HETEROPHYLLA.

“A twining evergreen shrub with very beautiful blue flowers.” (*Proschowsky.*)

8883. SOPHORA JAPONICA.**8884.** STERCVLIA PLATANIFOLIA.**8885.** TACSONIA MOLLISSIMA.

“A very beautiful climbing plant, with large rose-colored flowers and abundant fruits of a pleasant, refreshing flavor.” (*Proschowsky.*)

8886. TRIGLOCHIN MARITIMUM.**8887 to 8889.**

From Erfurt, Germany. Purchased from Haage & Schmidt. Received June 21, 1902.

Palm seeds as follows:

8887. RHOPALOSTYLIS SAPIDA.**8889.** HOWEA FORSTERIANA.**8888.** HOWEA BELMOREANA.**8890. ERIOBOTRYA JAPONICA.****Loquat.**

From Tokyo, Japan. Received through Messrs. Lathrop and Fairchild (No. 954, June 2, 1902), June 23, 1902.

Tanaka. “The largest fruited loquat in Japan. This variety originated as a seedling in the yard of Mr. Ioshio Tanaka, at 72 Kinskecho, Tokyo. Mr. Tanaka is a noted Japanese authority on economic botany, and as originator of this remarkably large loquat, his own name has appropriately been given to it. A single fruit has weighed more than 97 grams, while the largest reported in Algiers, Malta, or Spain, so far as I am aware, was only 85, and the largest I have seen was only 56 grams. This is certainly a larger sort than any of these noted African or Spanish varieties. The scions were taken from the original seedling tree in Professor Tanaka’s yard in Tokyo, and it is to be hoped can be used for budding. The fruit in formalin, which Professor Tanaka showed me, was egg-shaped, and the largest loquat I have ever seen. Quality is said to be very good. Professor Tanaka delivered an address on this loquat in 1897, at Nagasaki, in which he said the range of weight is between 40 and 80 grams only. The weight of 97 grams was exceptional.” (*Fairchild.*)

8891. PANICUM CRUS-GALLI.**Japanese millet.**

From Niuchwang, China. Presented by Hon. Henry B. Miller, United States Consul, through the State Department. Received June 23, 1902.

8892. TRITICUM VULGARE.**Wheat.**

From Moscow, Russia. Received through E. Immer & Son, June 27, 1902.

Romanoff Spring.

8893. NICOTIANA TABACUM.**Tobacco.**

From Sumatra. Received through Messrs. Lathrop and Fairchild (No. 955), July 7, 1902.

Deli. “From one of the best plantations in Deli, East Sumatra. Secured by Mr. Barbour Lathrop personally. See special letter of explanation to Dr. Galloway, June 10, 1902.” (*Fairchild.*)

8894. CITRUS BIGARADIA (?)**Bitter orange.**

From Shidzuoka, Japan. Received through Messrs. Lathrop and Fairchild (No. 956, June 16, 1902), July 8, 1902.

Natsu dai-dai. “A flat, broad, summer variety of the Japanese bitter orange, which is a remarkable citrous fruit and deserves the study of citrus growers. It is

only of fair quality, but ripens at a time when our pomelos are over, and when the craving for a sour breakfast fruit is perhaps strongest, i. e., in May and June. These scions came from a noted old citrus grower near Shidzuoka, and are a gift to the United States Government. For fuller notes on this fruit see No. 8903. Tanaka gives in his 'Useful Plants of Japan' *Citrus bigaradia* as the species name for *Dai-dai*, but does not identify the *Natsu dai-dai*." (*Fairchild*.)

8895. CITRUS BIGARADIA (?)

Bitter orange.

From Shidzuoka, Japan. Received through Messrs. Lathrop and Fairchild (No. 957, June 16, 1902), July 8, 1902.

Natsu dai-dai. "A globular formed, slightly different variety of summer bitter orange from No. 8894. Donated by a famous old citrus grower near Shidzuoka, where the government is going to start an experiment station for citrous and other fruits. For a fuller description on this fruit see Nos. 8894 and 8903." (*Fairchild*.)

8896. CITRUS JAPONICA.

Kumquat.

From Shidzuoka, Japan. Received through Messrs. Lathrop and Fairchild (No. 958), July 8, 1902.

Nimpo. "Scions of one of the best varieties of kumquat in Japan; with large, round fruits. These kumquats, which are small oranges, eaten skin and all, are much more common in China and Japan than in America, and are worthy of being much better known on our markets. Donated by a veteran citrus grower in Shidzuoka." (*Fairchild*.)

8897 to 8899. TRITICUM DURUM.

Wheat.

From Bombay, India. Received through Messrs. Lathrop and Fairchild (No. 945, April 2, 1902), July 14, 1902.

Three varieties of hard wheat from Ralli Brothers, in Bombay, suited for macaroni making. One sack of each forwarded by Latham & Co., of Bombay.

8897.

Khata. "This variety has been tested in Nag Pur, where it proved the most rust resistant of any kind experimented with. Nag Pur is one of the hottest regions in India, and any wheat which endures the heat of that region will be likely to do well in our desert regions of Arizona and California. This *Khata* is said by Ralli Brothers to be the best of all Indian hard wheats, and whenever they can buy it cheap enough and ship it to Genoa it brings as good a price as the hard Russian wheats. This deserves the serious attention of the hard-wheat experimenters, and may prove superior to the Algerian, Russian, or Spanish varieties for our conditions." (*Fairchild*.) (No. 945a.)

8898.

Khandra. "This is not so good from the standpoint of such big firms as Ralli Brothers, and it does not have the reputation of being as rust resistant as the *Khata*." (*Fairchild*.) (No. 945b.)

8899.

Pila gheen. "This is not so good from the standpoint of such big firms as Ralli Brothers, and it does not have the reputation of being as rust resistant as the *Khata*." (*Fairchild*.) (No. 945c.)

8900. GLYCINE HISPIDA.

Soy bean.

From Anjo, Japan. Received through Messrs. Lathrop and Fairchild (No. 963, June 29, 1902), July 24, 1902.

"Twenty-six numbered seeds of a giant soy bean presented to the Department by Mr. K. Obata, director of the Tokai branch agricultural experiment station at Anjo, Japan, on condition that should any of the seeds prove to have inherited the characteristics of its female parent he is to have returned to him a fair quantity of the beans which it produces. All the beans have been numbered, and it is desired especially that a record of each be kept for information. This most exceptional sport from

which these beans are taken measured $12\frac{1}{2}$ feet in length and had a stem 1 inch in diameter at the base. It yielded about one-fifth of a gallon of beans, while ordinary plants, I am assured by Mr. Obata, give from 50 to 60 seeds only. Its root system is well developed, but whether unusual it is impossible to say, as it was dug before Mr. Obata saw it. The history of this most remarkable sport is as follows: Mr. J. Miyazaki, a descendant of a Samurai and now a second-hand clothier in the village of Okasaki, found in his small back yard a soy bean which neither he nor his wife had planted purposely, but over which they quarreled, the wife wishing to pull it up because it grew to such unusual proportions and spread over the whole yard. Mr. Miyazaki, however, found in this abnormal plant something to interest him, and when the local district fair was held in Mukada in October he dug up the plant and exhibited it there, but he unfortunately and thoughtlessly ate up most of the beans. Mr. Obata, of the experiment station at Anjo, saw the plant at the fair, visited Mr. Miyazaki's place, and rescued the remaining handful of seed. He got samples of the soil where the plant grew and has sown about 20 seeds in this soil at the experiment station. I have seen and photographed this remarkable sport and think it worthy of the most careful attention." (*Fairchild.*)

8901 and 8901a. PYRUS COMMUNIS.**Pear.**

From Chios Island, Turkey in Asia. Presented by Mr. N. J. Pantelides, through Mr. D. G. Fairchild. Received July 29, 1902.

8901.

Chamogea.

8901a.

*Kurania kirakia.***8902. CITRUS NOBILIS.****Mandarin orange.**

From Fukui, Japan. Received through Messrs. Lathrop and Fairchild (No. 959, June 24, 1902), July 21, 1902.

Unshu. "A large-fruited, thick, loose-skinned mandarin orange, which is generally quite seedless but sometimes has one or two seeds. In quality it is not quite so sweet as the common but smaller *Kishu Mikan*, which is the common mandarin orange of Japan. This seedless variety is known all over Japan, but these scions come from the coldest region in which oranges are grown in Japan, where the temperature sometimes goes down to -10° C.—i. e., 14° above zero F.—and where for fifty days or so a foot of snow lies on the ground. In this region, which is a very restricted one, called Sano, near Fukui, ice forms on the rice fields to the thickness of a quarter of an inch. However, the trees are covered by large bamboo mats during December, January, and February, and even with this covering the minimum of last year, 14° above zero, did them material injury. This sort has gradually driven the ordinary seed-bearing mandarin out of the market and is now, since ten years or more ago, the most popular mandarin in Japan." (*Fairchild.*)

8903. CITRUS DECUMANA (?)**Pomelo. (?)**

From Fukui, Japan. Received through Messrs. Lathrop and Fairchild (No. 960, June 24, 1902), July 21, 1902.

Natsu daidai. "Large summer orange. This fruit deserves the attention of all pomelo growers, as it is a variety to be had on the Japanese market *as late as the end of June*. I saw it as early as the close of April, so that the season is two months at least. It is not as fine and juicy as our best pomelo, but is nevertheless at this season eaten with relish by everyone, both European and Japanese. It is served with sugar, as pomelos are served in America, and would pass among all but connoisseurs as a tolerably good pomelo. Further than this, it ranks as one of the hardiest citrus fruits in Japan. These scions came from a tree that was exposed last winter, with a bamboo mat shelter, to a temperature of $+14^{\circ}$ F., and although it lost some of its leaves it was not killed by the low temperature. A foot of snow covered the ground about this plant for several weeks during the months of January and February." (*Fairchild.*) (See No. 8894.)

8904. CITRUS NOBILIS.**Mandarin orange.**

From Fukui, Japan. Received through Messrs. Lathrop and Fairchild (No. 961, June 24, 1902), July 21, 1902.

Koji. "A small-fruited variety with seeds. It is noted for its hardness, being cultivated in a region where the thermometer drops to $+14^{\circ}$ F. and where the plants

are surrounded by snow as late as February. It is not an especially fine variety, but is worthy of trial in the variety gardens. See Nos. 8902 and 8903 for further descriptions of climate where it is grown." (*Fairchild.*)

8905. CITRUS NOBILIS.**Mandarin orange.**

From Fukui, Japan. Received through Messrs. Lathrop and Fairchild (No. 962, June 24, 1902), July 21, 1902.

Kōji. "This is similar to No. 8904, but is said to bear larger, finer fruits. It was not the season for any of these fruits, so I can not say as to their excellence except from reports." (*Fairchild.*)

8906 to 8909.

From Nice, France. Presented by Mr. A. Robertson-Proschowsky. Received July 31, 1902.

Seeds as follows:

8906. ARISTOTELLA MACUL.

8907. TACSONIA MOLLISSIMA.

"A variety with flowers of a darker color than the type." (*Proschowsky.*)

8908. TACSONIA MOLLISSIMA.

8909. OLEA EUROPAEA.

Nice. (See No. 8872.)

8910. CROTALARIA JUNCEA.**Sunn hemp.**

From Bombay, India. Received through Dr. S. A. Knapp, July 26, 1902.

8911 and 8912. ORYZA SATIVA.**Rice.**

From Bombay, India. Received through Dr. S. A. Knapp, July 26, 1902.

8913. PRUNUS ARMENIACA.**Apricot.**

From Coahuila, Saltillo, Mexico. Received through Miss Lelia Roberts, July 20, 1902.

8914. CERATONIA SILIQUA.**Carob.**

From Marseille, France. Received through Hon. Robert P. Skinner, United States Consul-General, August 9, 1902.

8915. VOANDZEIA SUBTERRANEA.**Woandsu (African goober).**

From Dar-es-Salam, German East Africa. Presented by Mr. D. Holtz. Received August 22, 1902.

8916 to 8975.

From Buenos Ayres, Argentina. Presented by Señor Carlos Thays, director of parks, through Mr. Frank W. Bicknell. Received August 20, 1902.

8916. OPUNTIA DECCMANA.

8922. PSIDIUM GUAJAVA.

8917. SAMBUCUS AUSTRALIS.

8923. ENTEROLOBIUM sp.

8918. COCOS YATAY.

8924. DESMODIUM UNCINATUM.

8919. SOLANUM POCOTE.

8925. TERMINALIA TRIFLORA (?).

8920. CECROPIA PALMATA.

8926. SESBANIA SANCTIPAULEN-
SIS.

8921. MAYTENUS BOARIA.

8927. QUILLAJA SAPONARIA.

8916 to 8975—Continued.

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| 8928. XANTHOXYLON sp. | 8953. ILEX PARAGUAYENSIS. |
| 8929. PIPTADENIA CEBIL. | 8954. BOCCONIA FRUTESCENS. |
| 8930. LIPPIA TURBINATA. | 8955. LANTANA CAMARA. |
| 8931. PARKINSONIA ACULEATA. | 8956. GRABOWSKIA GLAUCA. |
| 8932. TIPUANA SPECIOSA. | 8957. EUGENIA PUNGENS. |
| 8933. COCOS AUSTRALIS. | 8958. HETEROPTERIS UMBEL-
LATA. |
| 8934. GLEDITSIA AMORPHOIDES. | 8959. CESTRUM PARQUI. |
| 8935. CAESALPINIA GILLIESII. | 8960. CARICA QUERCIFOLIA. |
| 8936. BIXA ORELLANA. | 8961. OPUNTIA FICUS-INDICA. |
| 8937. EUGENIA sp.
Anacahuita. | 8962. CLEMATIS HILARII. |
| 8938. EUGENIA MATO. | 8963. EUGENIA MICHELII. |
| 8939. LITHRAEA AROEIRINHA. | 8964. COPERNICIA CERIFERA. |
| 8940. ENTEROLOBIUM TIMBOÛVA. | 8965. HIBISCUS ARGENTINUS. |
| 8941. DALBERGIA NIGRA. | 8966. PSIDIUM GUAJAYA var.
PYRIFERUM. |
| 8942. SAPINDUS TRIFOLIATUS. | 8967. CHORISIA CRISPIFLORA. |
| 8943. SCHINUS MOLLE. | 8968. MORRENIA ODORATA. |
| 8944. PSIDIUM CATTLEIANUM. | 8969. EUGENIA EDULIS. |
| 8945. MIMOSA SENSITIVA ARBO-
REA. | 8970. SCUTIA BUXIFOLIA. |
| 8946. TRICUSPIDARIA DEPEND-
ENS. | 8971. BAUHINIA CANDICANS. |
| 8947. CESTRUM PSEUDO-QUINA. | 8972. CELTIS TALA. |
| 8948. ACACIA FARNESIANA. | 8973. CITHAREXYLUM BARBI-
NERVE. |
| 8949. COLLIGUA JABRASIENSIS. | 8974. ACACIA MONILIFORMIS. |
| 8950. TECOMA STANS. | 8975. JACARANDA CHELONIA. |
| 8951. LUCUMA NERIIFOLIA. | |
| 8952. LIPPIA LYCIOIDES. | |

8976. GARCINIA MANGOSTANA.

Mangosteen.

From Saigon, Cochin China. Received through Messrs. Lathrop and Fairchild from Mr. M. E. Haffner, director of agriculture of Cochin China, September 3, 1902.

8977 to 9013.

From Aburi, Gold Coast, Africa. Presented by the curator of the Botanic Gardens. Received September 5, 1902.

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| 8977. ABRUS PRECATORIUS. | 8979. ADENANTHERA PAVONINA. |
| 8978. ACHRAS SAPOTA. | 8980. ANONA MURICATA. |

8977 to 9013—Continued.

8981. ANONA SQUAMOSA.	8999. MICHELIA CHAMPACA.
8982. ARACHIS HYPOGAEA.	9000. PALISOTA BARTERI.
8983. ARTOCARPUS INTEGRIFOLIA.	9001. PERSEA GRATISSIMA.
8984. BAUHINIA PICTA.	9002. PIMENTA ACRIS.
8985. BUTYROSPERMUM PARKII.	9003. PITHECOLOBIUM SAMAN.
8986. CAJANUS INDICUS.	9004. POINCIANA REGIA.
8987. CALOTROPIS GIGANTEA.	9005. RAPHIA VINIFERA.
8988. CASSIA ALATA.	9006. SIDEROXYLON DULCIFICUM.
8989. CHRYSOPHYLLUM CAINITO.	9007. SPATHODEA CAMPANULATA.
8990. COFFEA LIBERICA.	9008. SPONDIAS DULCIS.
8991. CRESCENTIA CUJETE.	9009. SPONDIAS LUTEA.
8992. ELAEIS GUINEENSIS.	9010. THEOBROMA CACAO.
8993. FUNTUMIA ELASTICA.	Cacao.
8994. GARCINIA HANBURYI.	9011. THEVETIA NEREIFOLIA.
8995. HONCKENYA FICIFOLIA.	Trumpet flower.
8996. HURA CREPITANS.	9012. THUNBERGIA ERECTA.
8997. LABRAMIA BOJERI.	9013. VOANDZEIA SUBTERRANEA.
8998. LEUCAENA GLAUCA.	

9014. PYRUS MALUS.

Apple.

From Saltillo, Mexico. Received through Mr. G. Onderdonk, special agent of the Office of Seed and Plant Introduction, September 9, 1902.

Peron.

9015 and 9016. FRUNUS ARMENIACA.

Apricot.

From Saltillo, Mexico. Received through Mr. G. Onderdonk, special agent, September 9, 1902.

9015.

Perry.

9016.

From a large tree at Chepultepec farm.

9017 to 9019. CITRUS DECUMANA.

Pomelo.

From Bangkok, Siam. Secured by Dr. G. B. McFarland, and imported by Rev. G. R. Callender, at the request of Messrs. Lathrop and Fairchild. Received September 11, 1902.

"A seedless variety, or possibly three different varieties of pomelo, from the garden of Prince Mom Chow Rachawongse, of the lineage of the former Second King. The seedless pomelos, sold on the Hongkong market, which are supposed to be produced by trees of this variety, are the best pomelos in the Orient. The "seedless Bangkok" was the sort requested by us. The circumstances connected with the introduction of these pomelo plants, many months after Messrs. Lathrop and Fairchild visited Siam, were such that it is not possible to say definitely whether one single variety of the "Bangkok seedless" was represented by the three plants brought in, or whether the Prince sent one plant each of three kinds." (*Fairchild.*)

- 9020. CUCUMIS MELO. Muskmelon.**
 From Valencia, Spain. Presented by Hon. R. M. Bartleman, United States Consul. Received September 20, 1902.
Bronze. One of the finest Spanish varieties.
- 9021. TRIGONELLA FOENUM-GRÆCUM. Fenugreek.**
 From New York. Received through J. M. Thorburn & Co., September 29, 1902.
 This seed was grown in southern Germany.
- 9022. CUCUMIS MELO. Muskmelon.**
 From Valencia, Spain. Presented by Hon. R. M. Bartleman, United States Consul. Received October 2, 1902.
Bronze. (These seeds may be of the same variety as No. 9020, but as they are much lighter in color they have been given a separate number.)
- 9023. PSIDIUM GUAJAVA. Guava.**
 From Merritt, Fla. Presented by Mr. L. H. Gurney. Received October 6, 1902.
- 9024. ANONA SQUAMOSA. Custard apple.**
 From Mussoorie, united provinces of Agra and Oudh, India. Presented by Rev. H. Marston Andrews. Received October 6, 1902.
Sharifa or custard apple seed, grown in Dehra Dun, on the south side of a wall. The trees grow to a height of from 15 to 25 feet.
- 9025. OENOTHERA SINUATA.**
 From Santa Rosa, Cal. Presented by Mr. Luther Burbank, through Mr. D. G. Fairchild. Received September 30, 1902.
 "Mr. Burbank thinks this a valuable ornamental." (*Fairchild.*)
- 9026. TRIFOLIUM RESUPINATUM. Strawberry clover.**
 From North Australia. Presented by Mr. Luther Burbank, of Santa Rosa, Cal., through Mr. D. G. Fairchild. Received September 30, 1902.
 "Found in culture at Mr. Burbank's experimental gardens." (*Fairchild.*)
- 9027. PYRETHRUM TCHIHATCHEWII.**
 From Santa Rosa, Cal. Presented by Mr. Luther Burbank, through Mr. D. G. Fairchild. Received September 30, 1902.
 "Said to be from Asia Minor. Should be sown in pots and transplanted. Forms a pretty mat of foliage like a lawn, and could be used for lawn purposes." (*Fairchild.*)
- 9028. MUSA TEXTILIS. Manila hemp.**
 From Manila, P. I. Presented by Mr. John W. Gilmore, of the Insular Bureau of Agriculture, through Mr. L. H. Dewey, Assistant Botanist of the Department of Agriculture. Received October 10, 1902.
- 9029. PRUNUS CERASUS. Cherry.**
 From Vladimir, Russia. Received through Mr. E. A. Bessey (No. 101, July 22, 1902), October 9, 1902.
Vladimir. "Sun-dried cherries from the garden of Feodor Gontcheroff. These cherries, which will not be picked until about July 31, are from a garden typical as to the method of cultivation (or rather lack of cultivation). The trees are propagated by shoots from the roots regardless of any order. The trees are never pruned nor is the ground ever cultivated. The young shoots are allowed to grow up with the older trees. The result is a dense thicket or jungle, almost impenetrable, of trees

from 8 to 12 feet high. In spite of this lack of care the trees bear rather freely. The cherries are usually fully ripe by the 20th of July, but this year being cold only part were ripe. The cherries are black, about five-eighths to three-fourths inch in diameter, with blood-red flesh and juice. They are sweet and juicy, but still retain a pleasant, acid flavor. The general idea that this variety is propagated, as a rule, from seeds is erroneous, that method being used only rarely. However, the variety is said to come fairly true to seed." (*Bessey.*)

9030. PRUNUS CERASUS.**Cherry.**

From Dobrovka, near Vladimir, Russia. Received through Mr. E. A. Bessey (No. 103, July 22, 1902), October 9, 1902.

"From the garden of Vladimir cherries of Makar Kulikoff and Gregori Rezanoff. This tree differs from the others in being exceedingly prolific, the cherries nearly hiding the leaves. The tree is much more vigorous and less inclined to branch at the ground. The leaves are larger and darker green and more coarsely dentate. The leaves are shiny above while those of the neighboring Vladimir cherry trees are dull. The cherries are borne in clusters, those of the Vladimir being usually single or in pairs. They ripen ten days later than the Vladimir, i. e., normally about July 31, and are nearly black when ripe. The flesh is only slightly colored. The cherries are juicy and said to be sweeter than those of the true Vladimir variety. No trees were obtainable. Seeds (in the sun-dried cherries) were obtained in the hope that something valuable may be obtained. This is believed to be a seedling of the true Vladimir." (*Bessey.*)

9031 to 9039.

A miscellaneous collection of exotic plants growing in the Department grounds and greenhouses, which were turned over to the Office of Seed and Plant Introduction for distribution, October, 1902. The origin of most of them is unknown.

9031. JACARANDA CHELONIA.

From Argentina. Seed received May, 1901.

9032. TECTONA GRANDIS.**Teak.****9033. GRABOWSKIA GLAUCA.**

From Argentina. May be a good hedge plant.

9034. SOPHORA JAPONICA.**Pagoda tree.****9035. RUBUS sp.**

From Mexico. Presented by Dr. J. N. Rose (No. 194), assistant curator, U. S. National Museum. "The leaves have a metallic luster, making it a fine ornamental." (*Rose.*)

9036. STERCVLIA PLATANIFOLIA.**9037. NYCTSIA FLORIBUNDA.****9038. ALBIZZIA LEBBEK.****9039. INDIGOFERA ANIL.**

From Porto Rico. Received October, 1901.

9040. CITRUS AUSTRALICA.

From Botanic Garden, Pisa, Italy. Received through Mr. W. T. Swingle (No. 120), October 16, 1902.

"A small tree, 12 feet high, with abundant foliage; trunk 4 feet high, 6 inches in diameter at base. Tree grows alongside *C. trifoliata* and, like it, seems to stand the cold at Pisa, which sometimes reaches 10° F. in winter and kills pistaches. Fruit is like a lime in Australia, and the species may prove very useful in breeding a hardy lime or lemon, or for a stock." (*Swingle.*)

9041. PHYLLOSTACHYS CASTILLONIS.**Bamboo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 983, July 28, 1902), November, 1902.

Kimmei-chiku. "Plants of the 'golden' or 'striped' bamboo of Japan. This species has the most decorative culms of any of the Japanese bamboos, being of a golden yellow color striped with green. When young these stems are brilliant in their freshness and a clump of them is a most beautiful sight. This bamboo is said to have been introduced into Japan from Korea. It is by no means a common sort, even in Japan. Owing to the fact that the green stripes fade after the culms are cut, its decorative value is confined to the living stems, especially those one year old. The plant grows to a height of 15 to 16 feet, even occasionally to 39 feet, and the culms attain 10 inches in circumference. If planted in a sheltered place on rich soil which is kept well mulched it will produce in a few years a handsome clump of the golden stems. The leaves are slightly variegated. It is exceedingly variable in the variegations, both of leaf and stem, the green stripes sometimes being scarcely visible. Sprouts appear in June in Japan and are said to be edible, though I have never heard of this variety being grown for food. It is essentially an ornamental plant." (*Fairchild*.)

9042. PHYLLOSTACHYS NIGRA.**Bamboo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 984, July 28, 1902), November, 1902.

Kuro-chiku, *Kurodaké*, or *Gomadaké*. "Plants of the Japanese black bamboo. This species is characterized by its dark brown to purple-black culms, which make it one of the handsomest species in Japan. It does not grow much over 20 feet in height, even under the best conditions of soil and climate. The shoots do not turn black until the second year, the first season being green with dark, freckle-like spots. The black bamboo formed at one time a considerable source of revenue to Japan, being largely exported to Europe and America, but of recent years the demand for it has fallen off. The growers say it is because the exporters have shipped immature culms. It is still extensively used for walking sticks, umbrella handles, etc. It grows largest on rich alluvial soil, needs plenty of phosphoric acid and potash, and the ground should be heavily mulched so that it will not dry out." (*Fairchild*.)

9043. PHYLLOSTACHYS HENONIS, var. MADARADAKE.**Bamboo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 985, July 28, 1902), November, 1902.

Madaradake or *Unnon-chiku*. "Plants of the mottled bamboo from Hakone, province of Omi, arranged for through the assistance of Professor Hirase, a well-known Japanese botanist. This variety is characterized by having distinct blotches (possibly of fungus origin) on its culms. These blotches are of a dark-brown color, sometimes with concentric rings of a darker hue. The mottled culms are especially prized for fancy furniture making, as the mottling is permanent. The plant resembles *Phyllostachys henonis* in growth, and under favorable conditions attains a height of over 15 feet. The blotches on this bamboo do not make their appearance until the third or fourth year, and are more pronounced in the shady parts of the grove. If exposed to bright sunshine it is said the blotches fail to appear. This variety should be given especial attention, not planted in very small clumps, and grown on rich, well-drained soil in locations well sheltered from the wind. It is probably not so hardy as some other sorts and until well established should be protected with a heavy mulch of straw in the winter. The soil should not be allowed to dry out, but should be kept moist by an inch of good mulch during the summer as well." (*Fairchild*.)

9044. PHYLLOSTACHYS BAMBUSOIDES.**Bamboo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 986, July 29, 1902), November, 1902.

Yadake. "The arrow bamboo, from whose culms the Japanese archers of feudal times had their shafts prepared. The culms are especially suited to this purpose, for they are straight, extremely hard, and of about the proper diameter. The arrows of present-day archers in Japan are also made of this bamboo. The sort was first introduced into England in 1894, Mitford says, and is consequently a comparatively new kind. In Japan it is not so common as many other types, being seen rarely in

cultivated ground. It is pronounced hardy in England by Mitford, and a valuable acquisition. In habit it is caespitose, and its clumps are tall and closely set with the culms. Its broad leaves give it a very decorative appearance, individual leaves being as much as 11 inches long by $1\frac{3}{4}$ inches broad. It is sometimes used as a hedge plant in Japan, and its wood finds uses in the manufacture of tea sieves, baskets, etc. In general appearance it is quite unlike the ordinary bamboos, most of the leaves being borne only on the upper portion of the culms." (*Fairchild.*)

9045. PHYLLOSTACHYS MITIS.

Bamboo.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 987, July 29, 1902), November, 1902.

Moso-chiku or *Mouso-chiku*. "Plants of the edible bamboo of Japan. This variety, which Japanese historians say was introduced into Japan from China a century and a half ago, is not the species best suited for timber purposes, although the largest in size of any of the hardy sorts in Japan. Its culms are sold, it is true, and used in the manufacture of dippers, pots, vases, water troughs, etc., but the wood is softer and more brittle than that of the *Madake*, No. 9046. As a vegetable it is cultivated in small forests near the principal cities, and is given great care. Its young, tender shoots, like giant asparagus shoots, form one of the favorite spring vegetables of all classes in Japan. European and American residents in Japan are, many of them, fond of this vegetable, some even being passionately so. Its cultivation for the purpose of shoot production, therefore, is alone worthy the consideration of truck growers in the extreme South. A market can probably be created for the shoots as soon as a large enough supply can be insured to make the effort worth while. On the other hand, the value of the culms for use in fence making, basket making, and the production of a host of farm and garden conveniences, makes it worth a place in the back yard of every farmer in those regions suited to its growth. It is one of the hardy sorts, and so far as beauty is concerned it is, according to Mitford, 'the noblest of all the bamboos generally cultivated in England.' The severe winter of 1895 in England cut the culms down to the ground, but during that season the thermometer dropped below zero Fahrenheit. Even after this severe freeze the roots remained alive. It is not to be expected that this form will attain so large dimensions in the colder, drier climate of America, but the size of the culms of bamboos depends so much upon the richness of the soil and the methods of culture that, with proper nourishment, there is no reason why large-sized culms, over 2 inches in diameter, should not be produced in America. I have measured a shoot in Japan which was 1 foot $7\frac{3}{4}$ inches in circumference, and there are records of culms nearly 3 feet in circumference. These large culms were over 40 feet in height. A forest of these large bamboos forms one of the most beautiful sights in the world. In planting for its edible shoots about 120 plants are set out to the acre, but if for forest purposes at least 200 plants should be used. The balls of earth and roots should be more carefully set than those of deciduous trees, as the rhizomes, if injured, stop growing, and the spreading of the plant is checked. The fibrous roots are very brittle after planting and a heavy mulch of straw and loose earth should be kept on the field, so that the surface soil will not dry out. A sheltered situation is essential to the growth of this species, and rich, alluvial soil is what it likes best. Standing water beneath the soil kills it, and much gravel prevents its rapidly spreading. A sufficient number should be planted in a clump to enable the young plants, after a few years, to effectually shade the ground, otherwise, no tall, straight culms will be produced. Judicious thinning out of the small shoots, while still young, tends to make the plant produce larger culms." (*Fairchild.*)

9046. PHYLLOSTACHYS QUILLOI.

Bamboo.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 988, July 29, 1902), November, 1902.

Madake. "This is the great timber-producing bamboo of Japan. It is grown in large plantations or forests near the large cities of Japan, and its culture is said to be among the most profitable of any plant culture in the country. There are extensive wild forests south of Kobe, but the finest culms come from the cultivated forests; these culms are more regular in size and of better shape. The wood of this species is said to be superior in elasticity and durability to either that of the *Moso*, No. 9045, or *Hachiku*, No. 9047. Its extensive uses are too numerous to mention, for they would form a list as long as that of an enumeration of the uses of the white pine in America. The cultivation of this bamboo is not a difficult one, and forests of it should be started in all regions having a suitable climate. The species is one of the

hardest of the large-sized kinds in Japan and thrives in England, proving hardier than *Moso*, No. 9045. It never attains the same dimensions as this species, but often, however, grows to a height of 30 to 40 feet, and culms having a diameter of $2\frac{1}{2}$ to 3 inches are not unusual. Even 4-inch culms are described by the books. The size of these culms depends largely upon the method of culture and how carefully the forests are thinned out and manured. About 300 plants should be set to an acre, in such a way that their spreading rhizomes will not interfere with each other at the start. The soil should be worked over to a depth of 18 inches several months before planting, and if of a heavy clay, should be lightened by working in straw and litter from the barnyard. After planting, the ground should be heavily mulched to prevent the top soil from drying out, and every means should be taken to insure that the ground is soon shaded by the growing shoots. The soil about the bases of the culms should be kept in semiobscurity. This object is only obtained by moderately thick planting and judicious thinning. Small clumps are not so likely to produce large stems as quickly as large patches, for the reason that the soil is more exposed to the drying effect of the sun. Only rich, alluvial, well-drained soil is likely to prove suitable for a bamboo forest of this species. The thickness of the pipes of this sort of bamboo is greater than that of any of the other common kinds, and this characteristic makes the culms more rigid and more serviceable for many purposes. It is of great importance that a young forest of bamboos be protected from the wind, for the young, tender shoots are easily injured. Wind-breaks of conifers are used in Japan even where the winds are anything but severe. A sheltered valley, or the base of a mountain slope, is sometimes chosen as offering such a sheltered situation. In setting young plants out great care should be taken not to injure the buds on the rhizomes or to break off the fibrous roots by packing down the soil too roughly about them. This species is likely to prove the most valuable of any of the Japanese hardy bamboos." (*Fairchild.*)

9047. PHYLLOSTACHYS HENONIS.

Bamboo.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 989, July 29, 1902), November, 1902.

Hachiku. "The second most important timber bamboo of Japan. Its method of culture is exactly similar to that of the *Madake*, No. 9046, and often it is cultivated side by side with this species. The brittleness of its joints, I am told, prevents its being used for many purposes, such as barrel hoops, for which the *Madake* is better adapted. On the other hand, the fine bamboo ribs of Japanese paper lanterns are generally made from this species. The height of this species is little inferior to that of the *Madake*, but it may be easily distinguished from it by the absence of dark spots on the sheath in young shoots. The sheaths are a solid light-straw color. The pseudophyll has a wavy outline. As an ornamental, this species is singled out by Mitford as the most beautiful of all the Japanese bamboos. In hardness in Japan it ranks about the same as *Phyllostachys quilioi*. Mitford says it is one of the hardest species in England, retaining its green color through the winter, the leaves not being injured by the cold. It should be given good soil and protection for the first few winters, or until thoroughly established." (*Fairchild.*)

9048. PHYLLOSTACHYS MARLIACEA.

Bamboo.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 990, August, 1902), November, 1902.

Shibo-chiku or *Shiwa-chiku.* "Plants of the wrinkled bamboo, perfectly hardy in England, characterized by having the base of the culm fluted or covered with longitudinal grooves and ridges. The stems of this species are especially prized for use in the woodwork of the special tea-ceremony rooms of old Japanese houses. An uncommon form in England and very decorative. Hard to get in quantity, even in Japan. It should be given the same treatment as that given to *Phyllostachys quilioi*." (*Fairchild.*)

9049. BAMBUSA QUADRANGULARIS.

Bamboo.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 991, August, 1902), November, 1902.

Shiho-chiku or *Shikaku-daké.* "Plants of the square bamboo. This is not considered as hardy as the previously mentioned species, *Phyllostachys quilioi*, and it will be advisable to give it especial care upon arrival. The plants should be potted and kept

in a cool house over winter; not planted out at once. The culms of this species are square only when large. The small culms are round like any other kind. It produces its young shoots in Japan as early as February or March, I am told, and this feature may make it difficult to acclimate. Mitford says its rootstock is very vigorous, and, from clumps which I have seen near Yokohama, I judge it to be capable of producing small forests of culms 20 to 30 feet high. It is a beautiful form and its stems are much used for all classes of ornamental woodwork. It is not, however, very largely cultivated in Japan." (*Fairchild.*)

9050. ARUNDINARIA SIMONI.

Bamboo.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 992, August, 1902), November, 1902.

Narihira-daké. "One of the hardiest and tallest of the Japanese bamboos, perfectly hardy in England, where it is very commonly grown. It is mainly an ornamental and should be planted in small clumps. Its peculiar attraction lies in the large, persistent, or semipersistent sheaths, which do not fall off until the shoots are mature. It spreads rapidly, but for several years the young shoots are likely to be small. In Kew, Mitford says, this species has grown to a height of 18 feet, and I have seen specimens in Japan 20 feet high. It is a very showy form and one which is worthy a place in any collection of bamboos. It is not a forest type, and should be planted in clumps of three or four plants. So far as I know, little use is made of this species in Japan. It should be planted in sheltered locations, in fertile, mellow soil, and given especial care for the first two or three winters." (*Fairchild.*)

9051. PHYLLOSTACHYS RUSCIFOLIA.

Bamboo.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 994, August, 1902), November, 1902.

Bungozasa. "A small species of bamboo, not over 2 feet high. The plants sent are designed for trial along the banks of irrigation canals in California and elsewhere. The species is said to be an excellent sand binder and capable of forming a thick mat of pretty green foliage and an indestructible mass of interwoven roots and rhizomes. Plant 6 feet apart each way on the slopes of the canal bank and give attention until well established. This may prove of considerable value for making the banks of canals permanent. It will probably withstand considerable drought, and it forms a very pretty mat of foliage on slopes or under the shade of conifers in parks. It is not an uncommon species in England, and is also slightly known in America." (*Fairchild.*)

9052. PHYLLOSTACHYS AUREA.

Bamboo.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild. (No. 995, August, 1902), November, 1902.

Hotei-chiku or *Horai-chiku.* "The so-called 'golden' bamboo; a misnomer, as the culms are no more deep yellow in color than those of other sorts. It is distinguished by the short internodes at the base of the culm. It is an ornamental and the species most used for canes and fishing rods. It should be planted in clumps of not less than 15 plants for ornamental effect or for propagation. It is hardier than *Phyllostachys mitis* and probably one of the hardiest species in Japan. The sprouts are said to be of a better flavor than those of the real edible species, though this fact is not commonly known. In England this species grows to a height of 14 feet 6 inches, Mitford says. It is a much smaller species than *P. mitis*, *P. quilioi*, or *P. henonis*, but worthy of a place in every bamboo collection." (*Fairchild.*)

9053. BAMBUSA VEITCHII.

Bamboo.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 997, August, 1902), November, 1902.

Kuma-zasa. "A bamboo eminently suited for planting under conifers on lawns to form a dense mass of foliage. The edges of the leaves in this species die in winter and turn light yellow, giving them a striking landscape effect. Worth trying on embankments of canals in California. Not less than 50 plants should be planted in a place, say, 2 feet apart each way. For the slopes of embankments or roadways it produces remarkably pretty effects. It is used here in Japan very extensively for this pur-

pose, and is also said to be a very good sand binder, but will probably not stand drought or salt water. It spreads very rapidly, but if it threatens to become troublesome by spreading, a ditch 2 feet wide by 2 feet deep, kept open by occasional redigging, will prevent its getting beyond control. A species whose value is in its decorative and sand-binding character. It is said to be quite hardy in England." (Fairchild.)

9054.**Bamboo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 998, August, 1902), November, 1902.

Shakutan. "A broad-leaved species of bamboo which resembles in habit *Bambusa veitchii*, only the stems are much taller and the leaves are larger. It is suited for planting on embankments and under trees on a lawn to form a decorative mass of foliage. It is said to come from the Hokkaido and to be very hardy. It should be planted in lots of ten or more. In the Hokkaido the culms are used for pipe stems and a host of other objects where a small, hard, flinty pipe is desired. I can not find that this is commonly known in Europe under this name, though it comes near Mitford's description of *Bambusa palmata*, which he says is a striking ornamental species and evidently hardy; at least he says nothing to the contrary. It grows to a height of 5 feet." (Fairchild.)

9055. BAMBUSA VULGARIS.**Bamboo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 999, August, 1902), November, 1902.

Taisau-chiku (?). "A tender variety of bamboo for Florida. This species comes from the hottest part of Japan and is the only species of the shipment not hardy. Its wood is said to be useful, though inferior to that of the hardy species. This may prove a different variety from those already in Florida under this specific name. Should be planted in lots of at least five." (Fairchild.)

9056. BAMBUSA ALPHONSE KARRI.**Bamboo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1000, August 9, 1902), November, 1902.

Suwochiku, or *Suochiku*. "A species of striped bamboo which is considered by Mitford as tender in England. It is an exceedingly pretty species and worthy of trial in clumps in Florida and southern California, where it should grow to a height of 10 feet. When young the culms appear in autumn of a purplish color, traversed with green stripes. This should be distributed in lots of at least 10 plants." (Fairchild.)

9057. ARUNDINARIA HINDSII.**Bamboo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1001, August, 1902), November, 1902.

Kanzan-chikú. "A species of bamboo which is commonly grown in clumps near the houses of the peasants in Japan. It forms a very pretty clump from 12 to 17 feet high and, although Mitford says his specimens were cut down to the ground by a severe winter, they grew up again, showing the species is not really tender. Should be tried in Florida, Arizona, or southern California. So far as I know, no use is made of this species except that of broom making." (Fairchild.)

9058. ARUNDINARIA HINDSII var. GRAMINEA.**Bamboo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1010, August, 1902), November, 1902.

Taimin-chiku. "A very decorative, narrow-leaved species of bamboo which is used in Japan for hedges and ornamental clumps. It grows 10 to 12 feet high and forms a dense thicket of slender stems. The foliage is narrow and grasslike and resembles, though it is narrower, that of *Arundinaria hindsii*, No. 9057. It is a very common form and is used for making baskets used in pressing oil from various seeds. It is probably less hardy than other forms like *Phyllostachys quilioi*." (Fairchild.)

9059. SOLANUM TUBEROSUM.**Potato.**

From Callao, Peru. Secured by Mr. Joseph C. Cree, United States vice-consul, October, 1902.

Papas amarillas. One-half bushel of native yellow potatoes.

9060. MYRICA FAYA.

From Fayal, Azores Islands. Presented by Hon. Moyses Benarus, United States consular agent.

This shrub or small tree grows on the sandy shores of these and other subtropical islands.

9061 to 9082.

From Buenos Ayres, Argentina. Presented by Señor Carlos D. Girola, chief of the division of agriculture. Received September 15, 1902.

A collection of seeds, as follows:

9061. CAREX DARWINII.	9072. ARISTOTELIA MACQUI.
9062. CAREX DECIDUA.	9073. CHORISIA INSIGNIS.
9063. CAREX HAEMATORRHYNCA.	9074. COCOS AUSTRALIS.
9064. CAREX MACLOVIANA.	9075. COCOS YATAY.
9065. CAREX PSEUDOCYPERUS.	9076. ENTEROLOBIUM TIMBOUVA.
9066. JACARANDA CUSPIDIFOLIA.	9077. ENTEROLOBIUM TIMBOUVA.
9067. LIBOCEDRUS CHILENSIS.	9078. FEIJOA SELLOWIANA.
9068. SCHINUS DENTATUS.	9079. LARREA NITIDA.
9069. SCHINUS DEPENDENS VAR. PATAGONICA.	9080. MACHAERIUM FERTILE.
9070. SCHINUS MONTANA.	9081. PROSOPIS DENUDANS.
9071. TECOMA sp.	9082. PIPTADENIA MACROCARPA.

9083 to 9122.

From Nice, France. Presented by Mr. A. Robertson-Proschowsky. Received October 24, 1902.

A collection of seeds, as follows:

9083. ACACIA ARMATA.	9093. CORONILLA ATLANTICA.
9084. ACACIA CYANOPHYLLA.	9094. CUPHEA IGNEA.
9085. ACACIA FARNESIANA.	9095. CUPHEA SELENOIDES.
9086. ALBIZZIA MOLUCCANA.	9096. CUPRESSUS SEMPERVIRENS.
9087. ALBIZZIA ODORATISSIMA.	9097. CYPERUS PAPYRUS.
9088. ANCHUSA ITALICA.	9098. DIOTIS CANDIDISSIMA.
9089. ASYSTASIA BELLA.	9099. ERIOBOTRYA JAPONICA.
9090. CEANOTHUS AZUREUS.	“From large fruits of very good quality.” (<i>Proschowsky.</i>)
9091. COBAEA SCANDENS.	9100. ERYNGIUM AGAVEFOLIUM.
9092. COMMELINA COELESTIS.	

9083 to 9122—Continued.

- 9101.** EUPATORIUM ATRORUBENS.
"Very remarkable leaves and flowers." (*Proschowsky.*)
- 9102.** GENISTA MONOSPERMA.
"A very ornamental bush." (*Proschowsky.*)
- 9103.** IRIS GERMANICA.
Varieties.
- 9104.** IRIS SIBERICA.
Varieties.
- 9105.** KNIPHOFIA ALOIDES var. NOBILIS.
- 9106.** LANTANA RADULA.
- 9107.** LESPEDEZA BICOLOR.
- 9108.** LINARIA SAXATILIS (?).
- 9109.** MALVA SYLVESTRIS.
- 9110.** MARISCUS NATALENSIS.
- 9111.** MELALEUCA LEUCADENDRON.
- 9112.** NOTOCHAETE HAMOSA.
- 9113.** OPUNTIA GYMNOCARPA.
"A very large and ornamental cactus with delicious fruit." (*Proschowsky.*)
- 9114.** OSYRIS ALBA.
- 9115.** PELARGONIUM ZONALE.
Varieties.
- 9116.** PHORMIUM TENAX.
"Foliage variegated, very beautiful." (*Proschowsky.*)
- 9117.** PHYGELIUS CAPENSIS.
- 9118.** PODACHAENIUM PANICULATUM.
"Very ornamental." (*Proschowsky.*)
- 9119.** RIVINA HUMILIS.
- 9120.** SOLANUM ERYTHROCARPUM.
- 9121.** SOLANUM sp.
- 9122.** STERCULIA ACERIFOLIA.

9123 and 9124.

From Paris, France. Received through Vilmorin-Andrieux & Co., November 3, 1902.

- 9123.** OLEA LAURIFOLIA. **9124.** OLEA VERRUCOSA.

9125. TRITICUM VULGARE.**Wheat.**

From Kharkof, in the Starobelsk district, Russia. Received through Mr. E. A. Bessey (No. 108, July 25, 1902), November 4, 1902.

Kharkof. "Red, bearded, hard winter wheat from the Starobelsk district of the government of Kharkof. This is similar to the *Kharkof* wheat obtained last year, but from a region where the winters are much drier." (*Bessey.*)

9126. BALSAMORHIZA SAGITTATA.

From Bridges Peak, Mont. Received through Mr. V. K. Chesnut, of this Department, November 5, 1902.

9127 and 9128.

From Santiago, Chile. Presented by Señor Federico Albert, chief of the section of zoological and botanical investigations, department of industries and public works. Received November 12, 1902.

- 9127.** LITHRAEA AROERINHA.

- 9128.** PERSEA LINGUE.

9129. TRITICUM VULGARE.**Wheat.**

From Padi, Saratov government, Russia. Received through Mr. E. A. Bessey (No. 109, July 25, 1902), November 15, 1902.

Winter wheat. "A softish, light-colored wheat, with smooth heads. Said to have been originally grown from the Hungarian Banat, but is somewhat darker colored and harder." (*Bessey.*)

9130. TRITICUM DURUM.**Wheat.**

From Naples, Italy. Received through Messrs. Lathrop and Fairchild (No. 1076). Sample received by mail November 28, 1902; 300 kilos received December 10, 1902.

Saragolla. "Wheat grown in the province of Apulia, along the Adriatic coast of southern Italy. This wheat is esteemed by the producers of the famous Gragnano macaroni as the best in the world for the production of a delicate, fine-flavored product. It has not the strength of the Taganrog varieties, which, owing to the small quantity of native wheat securable, are imported into Italy for semola-making purposes. It has, however, a better flavor, I am told, and the yield of semola from it is greater per weight of grain than from any of the imported hard wheats. It, therefore, sells from 1.25 to 1.75 lire per quintal (100 kilos) higher than imported wheats, which have to pay an import duty as well. Macaroni made from this variety is said to be grown, is one of the driest in Italy—only 18 inches of rainfall in the year—and the soil is said to be stiff but impregnated with lime—i. e., calcareous. This variety deserves the attention of American macaroni-wheat growers. As it comes from a region where the winters are mild, it will probably not prove hardy as a winter wheat north of the thirty-fifth parallel of latitude. The summer temperature of Apulia is high, but not commonly over 100° F. The heavy rains occur in autumn, spring, and winter." (*Fairchild.*)

9131. TRITICUM VULGARE.**Wheat.**

From Dzhizak, a town about 100 miles northwest of Samarcand, on the railroad. Obtained through the Samarcand representatives of Mr. H. W. Dürrschmidt by Mr. E. A. Bessey (No. 118, August 30, 1902). Received December 1, 1902.

Chul bidai (or *bugdai*), meaning *steppe wheat*. "This grain is grown on the Steppes without irrigation. The grains are hard, but it is not *T. durum* (according to Mr. Schifron). This variety yields two harvests a year, for it can be sown as either a winter or spring wheat. If the former, the harvest comes in July; if the latter, the harvest comes in September. If sown in the spring, it is sown just as soon as the snow melts. The spring-sown is the most certain to yield a good crop, for the fall-sown must depend upon the rather uncertain snows. This seed, however, is from the fall-sown seed, being obtained in July. It is selected from over 1,000 poods offered for sale and is remarkably clean and free from foreign seeds for this region." (*Bessey.*)

9132. CITRUS NOBILIS × CITRUS BIGARADIA.**Tangerine.**

From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist. Received December 3, 1902.

Clementine.

9133. HORDEUM DISTICHUM NUTANS.**Barley.**

From Fort Atkinson, Wis. Received through Ex-Governor W. D. Hoard, December 5, 1902.

Hanna. Grown from No. 5793.

9134. MUSA TEXTILIS.**Manila hemp.**

From Manila, P. I. Presented by Mr. W. S. Lyon, of the Insular Bureau of Agriculture, to Mr. L. H. Dewey, Assistant Botanist, United States Department of Agriculture. Received December 15, 1902.

9135 to 9146. OPUNTIA sp.**Tuna.**

From Mexico. Received through Dr. Edward Palmer (Nos. 1 to 12), December 19, 1902.

A collection of seeds as follows:

9135.

Amarillos. "One of the finest of the Mansa forms of tuna and well suited to the use of travelers, being large and containing sufficient water to quench the thirst. Outside it is amber-yellow in color; inside it is decidedly amber or with orange patches. Very productive fruit of this form will be found in the market up to December. The flesh is firm, with the flavor of boiled carrots with a large admixture of sugar." (*Palmer*.) (No. 1.)

9136.

Cardona. "Nine pears of this variety sold in the San Luis Potosi market for 1 cent. It is a small, rich, sweet fruit. The flesh is blotched with maroon and red. The commonest and most useful of all the tunas, yielding a fair supply in December. This fruit is much used in making a summer drink known as 'colonche,' which is largely in use. *Queso de tuna*, tuna cheese, is a round cake made from *Tuna cardo*. The fruit is divested of its jacket and then rubbed through an earthenware strainer and the resulting mass is cooked six hours, then worked (like candy) until all the heat is expelled, and then put into round frames to harden. This is a commercial article all over Mexico. The tuna *Cardona* contains sugar enough to preserve it." (*Palmer*.) (No. 2.)

9137.

Durasnillo Blanco (little white peach tuna). "Sold in the market of San Luis Potosi, 25 for 1 cent. This tuna is eaten entire, not having its rind removed. The seeds are compacted in a wad to resemble a peach stone. It is but a second class fruit. Inside it resembles a white freestone peach, firm, acid-sweet, with water-colored pulp. Its rind is canary-colored outside. I think this tuna would make a good pickle." (*Palmer*.) (No. 3.)

9138.

Durasnillo Colorado, or little red peach tuna. "Sold 25 for 1 cent in the market of San Luis Potosi. The fruit is eaten entire. Fine acid-sweet, much relished by some. Has the flavor of some late freestone peaches. It is rose-colored on the outside and a rose-pink inside (with a fleecy white spot near the base and also at the apex of the fruit). The seeds are compacted inside in a mass to resemble a peach stone. I think this would make a good pickle." (*Palmer*.) (No. 4.)

9139.

Cuejas. "Sold 30 for 1 cent in the market at San Luis Potosi. A remarkably juicy fruit, with a delightful acid taste, which might make it suitable for wine and a fine jelly. The fruit is first dark mauve, then rich maroon, a color fine for wine and jelly. It is considered but a second-class fruit; nevertheless all that come to the market are consumed." (*Palmer*.) (No. 5.)

9140.

Cameosa. "A Mansa form, sold in the market of San Luis Potosi 9 for 1 cent. A fine rich fruit with a watermelon flavor, and very juicy, making it fine for a breakfast fruit. Inside it has white patches intermixed with its mealy, tempting pulp, which is rich reddish crimson in color. The exterior is a pink crimson. This much prized fruit is abundant until the end of October." (*Palmer*.) (No. 6.)

9141.

Mansa Colorado. "Sold in the market of San Luis Potosi 4 for 1 cent. Old fruit is a dark mauve on the outside and bright maroon inside. A juicy, agreeable fruit which might make a good wine. At the base is a white patch, and at the apex under the skin is a circle of rose color. Many consider this equal in quality to any tuna. Disappears from market at the end of October." (*Palmer*.) (No. 7.)

9135 to 9146—Continued.

9142.

Blanca mansa. "Sold in the market of San Luis Potosi in piles of 7 for 1 cent. The fruit is greenish-white outside and a lighter white (with an icy look) inside. An agreeable juicy flavor renders it fine for early meals. It has rather a thin skin, and is one of the choicest tunas. Out of season at end of October." (*Palmer*.) (No. 8.)

9143.

Toconostle. "Fruit resembling a peach, with seed compacted in the center to represent the stone. The outside is a soft green when the fruit is young and of a salmon color when it is older. The flesh is solid and has an acid taste. Marmalade is made of it by removing the rind and seed core, boiling in water to remove the sourness, and cooking in sugar in the usual manner for marmalade. The fruit is also eaten chopped up and fried. Good pickles are said to be made of it. It is also cut into pieces and put into soups or boiled with vegetables and meats, and can be preserved in the ordinary way. It is also candied to represent white Smyrna figs, being first boiled in water (after the seeds have been removed from the apex) and then in sugar the usual way for candied fruit." (*Palmer*.) (No. 9.)

9144.

Chavaña. "Sold 10 for 1 cent in the market of San Luis Potosi. The fruit is a dark-mauve color outside and lighter colored inside. The rind is rather thick. The fleshy parts represent lines of white circles, which contain the seeds, and between which are lines of light mauve pulp. The core is decidedly white. The flesh has a rich, sweet, juicy taste like no other tuna; may be nearest to a rich, juicy apple. This is a wild variety. Can be used for preserves and marmalade. It seems to be next to *Cardona* in the amount of sugar it contains." (*Palmer*.) (No. 10.)

9145.

Castilla Colorado. "In the market of San Luis Potosi 10 of these large, magnificent fruits can be bought for 1 cent. Purple-mauve on the outside, rich crimson inside, but the two ends of the fruit are inclined to be carmine at first, but in the fully mature fruit of a rich claret hue. The juice might pass for claret wine. One of the largest, showiest, and richest flavored, and perhaps equal in flavor to the richest pear. It is one of the rarest tunas, and is soon out of the market." (*Palmer*.) (No. 11.)

9146.

Blanca Castalina. "Four sold in the market of San Luis Potosi for 1 cent. Yellow-white on the outside, but of an icy whiteness inside. Flesh solid, not as moist as some of the *Mansas*, and with a very agreeable watermelon taste. It is large, and has a rather thin skin. There seems to be considerable sugar in the fruit. Abundant in the market until the end of October, when it begins to disappear." (*Palmer*.) (No. 12.)

9147 to 9160. PHASEOLUS sp.

Bean.

From San Luis Potosi, Mexico. Received through Dr. Edward Palmer, December 19, 1902.

A collection of selected "frijoles" as follows:

9147.

Amarillo. "A third-class bean, said to be of good flavor. For trial in New Mexico, Arizona, and southern California." (*Palmer*.)

9148.

Ballo. "A first-class bean, the leader in quality, and greatly admired, particularly by the rich. It is a good producer, fair sized, and light in color, which latter quality should warrant its trial in the United States. It should be tried in New Mexico, Arizona, and southern California." (*Palmer*.)

9147 to 9160—Continued.

9149.

Berendo. "A second-class bean; not without merit, however, as it has a large number of purchasers. When the beans are old they are much darker than when new. Plant just before a rain. For trial in New Mexico, Arizona, and southern California." (*Palmer*.)

9150.

Blanco bolador. "A third-class bean, but may improve with cultivation. Only two lots were seen on the markets. It is generally eaten when no better bean can be had. After being boiled it is sometimes fried in lard. It resembles our lima bean. It should be tried in New Mexico, Arizona, and southern California." (*Palmer*.)

9151.

Borado. "Rated as a second-class bean, though it is good when fried. It has many purchasers. The variations shown in the piles in the market prove that it crosses freely. For trial in New Mexico, Arizona, and southern California." (*Palmer*.)

9152.

Blanco. "A third-class bean which does not seem to be a favorite. It closely resembles the white bean of the United States, and I refused to eat it if any colored beans were on hand. Grows with a small amount of water. For trial in New Mexico, Arizona, and southern California." (*Palmer*.)

9153.

Ballo almo halla (*Cacaguete*, peanut bean). "This bean resembles the kernel of a peanut. It is a first-class bean, relished by many for its flavor, and as it is of a light color may be a good one to cultivate. Try in New Mexico, Arizona, and southern California." (*Palmer*.)

9154.

Color de Rosa. "A second-class bean, and yet there are many who prefer it. It seems to cross freely, judging from the 'half castes' in the piles of beans on the market. Should be tried in New Mexico, Arizona, and southern California." (*Palmer*.)

9155.

Garbansillo. "A first-class bean preferred by many, as it has a rich flavor. It is white, and on that account might claim recognition by those who like no other color, however high the quality. It grows freely on the table-lands of Mexico, and therefore might grow upon our plains and surpass our white bean in quality and productiveness. Should succeed in Utah." (*Palmer*.)

9156.

Grullito. "A first-class bean in every respect, and has only the *Ballo* as a rival according to most people. It is said to yield bountifully. It should be tried in New Mexico, Arizona, and southern California." (*Palmer*.)

9157.

Gruyo. "A second-class bean which seems to be a good producer. For trial in New Mexico, Arizona, and southern California." (*Palmer*.)

9158.

Guevo de Vieja. "A second-class bean, not abundant in the market. For trial in New Mexico, Arizona, and southern California." (*Palmer*.)

9159.

Negro. "Rated as a third-class bean. It is grown only in the tropics, where no other bean thrives well. There it is appreciated. This sample came from Veracruz and was the purest in the market, either as regards adulteration or crossing. As a personal choice for permanent food, I should select this bean, as it has a satisfying quality to it. For trial in southern part of Florida." (*Palmer*.)

9147 to 9160—Continued.**9160.**

Siguino. "A second-class bean, used a great deal. For trial in New Mexico, Arizona, and southern California." (*Palmer.*)

9161. PYRUS LONGIPES.

From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist. Received December 23, 1902.

9162. EDGEWORTHIA GARDNERI.**Paper plant.**

From Shizuoka, Japan. Received through Messrs. Lathrop and Fairchild (No. 1008, August, 1902), January 6, 1903.

Mitsumata. "The paper plant, from which some of the finest Japanese paper is made. This fine paper is imported in large and increasing quantities into America, where it is used for legal paper, stocks and bonds, deeds, diplomas, etc. This plant requires especial attention, and a bulletin on its culture has appeared—B. P. I. Bulletin No. 42. In Japan the seeds are kept in bags of palm sheath fiber in a shallow hole in the floor of a house or shed, which is covered with boards to keep it dark. In planting in the spring, sow in rows in rich garden soil, and when several inches high transplant to nursery rows, and cultivate until large enough to plant out in permanent locations. It may, however, be planted out when only 8 to 9 inches high. The plant is semihardy, but is often given protection, even in Japan. A frost of 6 or more degrees will not kill it, as it is a deciduous plant. It seems to adapt itself to a variety of soils, and I believe it can be grown in arid regions by irrigation; at least it is worthy of trial in them. The paper pulp yielded by the bark is four times as valuable as ordinary wood pulp in Japan, and makes a quality of paper which for many uses is immeasurably superior to our wood pulp or even rag papers. This whole question of producing a bast paper in America is one worthy the serious consideration of our cultivators in the South. In Japan the cultivation of this species is increasing rapidly, I am told, and the consumption by foreigners of these fine *Mitsumata* papers is larger every year. The attempt to find out where the plant will grow should be made by the distribution of small potted plants rather than of seeds, and one of the main objects of this first importation of seeds is to discover how far north the plant will prove hardy. The bush grows about 6 feet high, is decorative, and is sometimes planted for its pretty yellow flowers." (*Fairchild.*)

9163. EDGEWORTHIA GARDNERI.**Paper plant.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1011, August, 1902), January 6, 1903, and February 28, 1903.

(See No. 9162 for description.)

9164. MYRICA NAGI.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1009, August, 1902), January 6, 1903.

Yama momo. "Plants of the best variety of this fruit species. (See No. 9314.) The best kind, i. e., that producing the largest fruit, has serrated leaves, I am informed. Entire leaved forms produce smaller, scarcely edible fruits. This is a very slow-growing tree, which will not produce fruit for six or seven years. Possibly a few fruits will be produced in four years from these trees." (*Fairchild.*)

9165. WICKSTROEMIA CANESCENS.**Paper plant.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1012, August, 1902), January 6, 1903.

Gampi. "A species of tree from which the noted *Gampi* paper is made. This plant has never been cultivated in Japan, but grows wild in the mountains of the provinces of Yamato, Ise, Mino, etc. The demand for the bark is so great that the plant is being killed out. The paper made from its bark is the toughest, finest, silkiest paper in the world, and is used for the manufacture of letter press-copying books, etc. In America many of these Japanese letter books are in use, and the export of this *Gampi*

paper is an important one for Japan. The plant will probably do best in the mountains of the South, and the young plants should be distributed to such persons as can give them a trial by setting them out, a few in a place, to ascertain how hardy the species is. The plant is easily propagated by root cuttings, and this method should be used to secure a small forest of it. The species runs readily by means of shoots from the root, and trees 2 inches in diameter were not unusual before the big demand set up for this delicate *Gampi* paper. Now it is difficult, it is said, to find trees of more than a few feet in height. If this species can be brought into forest cultivation it will add to the market a paper pulp of the greatest value." (*Fairchild.*)

9166. ARALIA CORDATA.**Udo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1013, August, 1902), February 28, 1903.

Kan Udo. "Seed of a new salad plant called *Udo*. This is described in B. P. I. Bulletin No. 42. It is a delicate, new salad which should find a most acceptable place on the tables of well-to-do Americans, for it comes into season in October and November. It is as crisp as celery, and has a refreshing flavor quite its own." (*Fairchild.*)

9167. ARALIA CORDATA.**Udo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1014, August, 1902), January 6, 1903.

Kan Udo. "Roots of the same variety of *Udo* as No. 9166. For description see B. P. I. Bulletin No. 42. This variety should be given a different treatment from that given to No. 9168, *Moyashi Udo.*" (*Fairchild.*)

9168. ARALIA CORDATA.**Udo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1016, August, 1902), January 6, 1903.

Moyashi Udo. "Young roots of the forcing *Udo*, a new salad plant of great promise. These roots should be kept packed in straw, where they will not dry out nor mold, in a cool storage place until next spring, when they should be planted out in rows 2 by 3 feet apart, and cultivated all summer as potatoes are cultivated. In the autumn, after the leaves die, the old roots are dug and packed closely together in the bottom of a trench 2 feet deep, and covered with leaf-mold and rich loam to force them into growth. The blanched shoots, 2-3 feet long and as big as a man's thumb, are as tender as celery, and make a delicious salad if shaved and served with a French dressing. This forcing variety is likely to be useful throughout the South. See B. P. I. Bulletin No. 42." (*Fairchild.*)

9169. ARALIA CORDATA.**Udo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1016a, August, 1902), January 6, 1903.

Moyashi Udo. "Old roots, which should be planted out next spring in rows 2 by 3 feet apart, cultivated all the season, and next winter forced by burying in a trench, as has been described for No. 9168. These old roots will produce good-sized shoots the first winter's forcing, while young roots will produce only a few small ones." (*Fairchild.*)

9170 to 9199. PRUNUS PSEUDO-CERASUS VAR. HORTENSIS.**Flowering cherries.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1017, August, 1902), January 6, 1903.

"A collection of the different varieties of flowering cherries from a noted grower in Tokyo—Mr. Takagi. There are hundreds of slightly different sorts of this flowering cherry, which is, as is well known, the favorite flower of the Japanese. It is inconceivable that Europeans and Americans have not followed the example of this race of flower lovers and planted long avenues or whole hillsides with this superbly beautiful plant. As an avenue tree in summer, the cherry would not be a success except when mingled with some other sort, but its beauty during the spring months

warrants its being planted in big masses in our large parks instead of as single, isolated trees. The beauty of the cherry trees of Japan lies in the fact that there are miles of them or acres of them in bloom at once. Great care should be taken to keep the names of the varieties straight, to enable other plants to be ordered if desired later. These flowering cherries can be grafted on our wild cherry or on any good cherry stock. Single, double, and weeping sorts are included in this shipment. A list follows." (*Fairchild.*)

9170.	<i>Nara Sakura.</i>	9185.	<i>Horinshi.</i>
9171.	<i>Oshiogun.</i>	9186.	<i>Amayadori.</i>
9172.	<i>Chioshiu hisakura.</i>	9187.	<i>Yedosakura.</i>
9173.	<i>Oyama fugin.</i>	9188.	<i>Ouchisakura.</i>
9174.	<i>Yokih.</i>	9189.	<i>Shiogama.</i>
9175.	<i>Kuramayama.</i>	9190.	<i>Higurashi.</i>
9176.	<i>Ito Kukuri.</i>	9191.	<i>Bauriko.</i>
9177.	<i>Surugadai nioi.</i>	9192.	<i>Rui arashi.</i>
9178.	<i>Ogasa yama.</i>	9193.	<i>Tamamari.</i>
9179.	<i>Gozanoma.</i>	9194.	<i>Ukon.</i>
9180.	<i>Ichio.</i>	9195.	<i>Kangosan.</i>
9181.	<i>Daijen.</i>	9196.	<i>Murasaki sakura.</i>
9182.	<i>Botun sakura</i>	9197.	<i>Gayakehono.</i>
9183.	<i>Ochiochin.</i>	9198.	<i>Shirofugin.</i>
9184.	<i>Omanogawa.</i>	9199.	<i>Sikigan.</i>

9200. PRUNUS MUME.

Japanese plum.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1018, August, 1902), January 6, 1903.

Rinshiu. "The favorite variety used for stocks by the Japanese nurserymen. This is worthy of trial as a vigorous, resistant stock upon which to bud both European and American varieties of plum. It should be tried by nurserymen interested in the

question of the influence of the stock on the scion. The fruit of the Japanese apricot is used principally for pickling purposes. The trees are unusually vigorous growers, heavy bearers, and are considered the best commercial plum trees of the *Ume* class in the nursery region of Ikeda, Japan." (*Fairchild.*)

9201. PRUNUS TOMENTOSA.

Japanese cherry.

From Tokyo, Japan. Received through Messrs. Lathrop and Fairchild (No. 1015, August, 1902), February 28, 1903.

"A decorative cherry with fruits the size of a large pea and sessile, or nearly so, on the long, slender branches. The fruits are edible, but not of good quality. For breeders and as an ornamental species. The fruits have a considerable amount of pulp on them and are much more delicate than those of the American choke cherry." (*Fairchild.*)

9202 to 9210. PRUNUS TRIFLORA.

Japanese plum.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1019, August, 1902), January 6, 1903.

"Fruiting plums of the *Hatankyo* class. Great confusion exists in the nomenclature of these Japanese plums. The *Hatankyo* class is often confused with the *Botankyo*. The early ripening sorts are sometimes called *Hatankyo*; the late ripening kinds *Botankyo*. They are the largest of the true plums of Japan, and have a smooth skin like the European species. Said to be shy bearers and not as profitable for commercial purposes as the *Sumomo* class of small-sized, thin-skinned, soft-fleshed fruit. These *Hatankyos* or *Hatankios* are somewhat like the *Burbank* and *Wickson* in type. They are hard fleshed, and make the best stewed plums I have ever eaten. A list of the varieties follows." (*Fairchild.*) (See also Nos. 9222 and 9223.)

9202.

Okutsno.

9207.

Ohatankyo.

9203.

Furugiya.

9208.

Ringotane.

9204.

Nakatesumomo.

9209.

Hakubotan.

9205.

Hachioji.

9210.

Benibotan.

9206.

Suikamomo.

9211 to 9216. PRUNUS MUME.

Japanese plum.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1020, August, 1902), January 6, 1903.

"One-year-old plants of the *Ume* class of Japanese plums. These are quite different from European and American plum varieties, having a short but distinct pubescence. The fruit is exceedingly sour and is not designed for table use, except in the form of pickles. These pickles are the sourest things I have ever tasted, and are consumed in large quantities in Japan, being pickled with the leaves of a labiate, *Perilla arguta*, which give the plums a reddish color and aromatic taste. They are not much relished by Europeans, because of their intensely sour flavor. This class of plums is well known in America among breeders, but a collection of the different varieties will doubtless be acceptable for purposes of comparison. It is more like the apricot plum than anything else." (*Fairchild.*)

9217 to 9220. AMYGDALUS PERSICA.

Japanese peach.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1021, August, 1902), January 6, 1903.

"A collection of one-year-old plants of Japanese peach varieties. There are a number of distinct varieties of these Japanese peaches, and some are fairly sweet and

many are unusually juicy. It is not possible for me to say how recently these sorts may have been introduced into Japan from China. A list of the varieties follows." (Fairchild.)

9217.

Hanbei.

9219.

Kintoki.

9218.

Nasehi maru.

9220.

*Mizumito.***9221. AMYGDALUS PERSICA.****Nectarine.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1022, August, 1902), January 6, 1903.

Chosen or Korean nectarine. "A freestone variety, with smooth, almost greasy skin, which is sold everywhere in the markets in July in Japan. It is a juicy, white-fleshed sort, bitter near the stone, but with a decided and agreeable peach flavor." (Fairchild.)

9222 and 9223. PRUNUS TRIFLORA.**Japanese plum.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1019, August, 1902), January 6, 1903.

(These two varieties were incorrectly labeled "L. & F., No. 1017," and packed with that lot.) (See Nos. 9202 to 9210.)

9222.

Kowase.

9223.

*Yomē momo.***9224. ARALIA CORDATA.****Udo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1016, August, 1902), January 6, 1903.

Moyashi udo. A new salad plant of great promise. (See No. 9168.)

9225. VICIA GEMELLA.

From Yokohama, Japan. Secured by Messrs. Lathrop and Fairchild (not numbered) through the Yokohama Nursery Company. Received February 28, 1903.

9226. LAGENARIA sp.**Gourd.**

From Yokohama, Japan. Presented by the Yokohama Nursery Company. Packed with seeds secured by Messrs. Lathrop and Fairchild. Received February 28, 1903.

Kanpio gourd.

9227. PUERARIA THUNBERGIANA.**Kudzu.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1023, August, 1902), February 28, 1903.

Kudzu. "This broad-leaved, perennial, leguminous climber is well known in America, being often seen in private gardens where it is used as an arbor plant or to produce tropical effects by allowing it to grow over the tops of bushes or low-growing trees. For this purpose alone it is a valuable plant. In Japan the fleshy roots are used for starch making and the foliage is cut and fed to cattle for fodder. Whole hillsides are sometimes covered with this plant in Japan, where it grows wild, and in these regions its foliage is utilized for fodder purposes and a fine quality of starch is made from its roots. It should be tested as a fodder-producing plant in waste places. The seed should be sown in a seed bed and the young plants set out in rich soil. I am told it does not withstand much drought." (Fairchild.)

9228. PUERARIA THUNBERGIANA.**Kudzu.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1024, August, 1902), January 6, 1903.

"*Kudzu* roots for trial as a fodder plant. These roots should be planted in a single plat about 5 feet apart each way and the vines allowed to grow over the ground in all directions. It is possible that by repeatedly cutting the shoots back before they are too tough a continuous supply of fodder may be secured. The plant is a leguminous one and may be of service for breeders." (*Fairchild.*)

9229. MEDICAGO DENTICULATA.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1025, August, 1902), January 6, 1903.

Uma goyashi. "A biennial wild-fodder *Medicago* with yellow flowers, which grows 2 feet in height. Its stems are said to be highly relished by horses, which eat them greedily in the spring. So far as I have observed the plant is not cultivated." (*Fairchild.*)

9230. LESPEDEZA BUERGERI.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1026, August, 1902), February 28, 1903.

No Hagi. "The species of *Hagi* in Japan are especially prized for ornamental purposes and their summer and autumn flowers are used extensively for decoration. This species, the *No Hagi*, is said to be a good fodder plant, but how it is used I have been unable to discover. It is a low, bushy, hardy perennial." (*Fairchild.*)

9231. JUGLANS REGIA.**Walnut.**

From Shanghai, China. Received through Messrs. Lathrop and Fairchild (No. 953, May 10, 1902), January 6, 1903.

"A variety of walnut bought on the market in Shanghai. This variety is said to be eaten all the year round by the Chinese. I could not find from which province it came." (*Fairchild.*)

9232. JUGLANS REGIA.**Walnut.**

From Hongkong, China. Received through Messrs. Lathrop and Fairchild, January 6, 1903.

These few nuts are from a lot secured by Mr. H. Suzuki, of the Yokohama Nursery Company, Yokohama, Japan, and may be slightly different from No. 9231.

9233. PRUNUS TRIFLORA.**Japanese plum.**

From Ikeda, Japan. Received through Messrs. Lathrop and Fairchild (No. 968), January 6, 1903.

Hatankyo. "A special sort of this common variety of plum. This fruit has a decided red blush upon it and is not of that translucent yellow which is said to characterize the sort in other parts of Japan. In flavor it leaves a good deal to be desired." (*Fairchild.*)

9234. THERMOPSIS FABACEA.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1030), from the Yokohama Nursery Company. Received February 28, 1903.

Sendai Hagi. "Seed of this yellow flowered variety, 1 foot high, perennial, said to be very showy." (*Fairchild.*)

9235. PRUNUS TRIFLORA?**Japanese plum.**

From Ikeda, Japan. Received through Messrs. Lathrop and Fairchild (No. 969), January 6, 1903.

Guanji. "A small fruited sort, 1 inch in diameter, bought in the orchard. Though differing little from No. 9236, it seems well to keep them apart. This is a vinous

flavored variety, flattened in shape, with thin, sour skin, rich flavored flesh, and altogether the most delicate plum I have eaten in Japan, though not to be compared with a good variety of *Prunus domestica*. It is said to be the best paying plum in Ikeda, the plum-growing center of Japan." (*Fairchild*.)

9236. PRUNUS TRIFLORA?**Japanese plum.**

From Ikeda, Japan. Received through Messrs. Lathrop and Fairchild (No. 970, July 5, 1902), January 6, 1903.

Guanji. "Seeds bought on the market. This is essentially the same as No. 9235, though the fruit is somewhat larger and not quite so sweet. It is evidently one of the principal market plums, for one sees it everywhere, whether under this or some other name." (*Fairchild*.)

9237. VICIA HIRSUTA.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1033, August, 1902), February 28, 1903.

Suzumeno yendo. "A leguminous plant worthy of investigation as a possible fodder plant or for breeding experiments, as it is said to be occasionally used in Japan for fodder. I was unable to see this species growing." (*Fairchild*.)

9238. DESMODIUM PODOCARPUM var. JAPONICUM.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1034, August, 1902), February 28, 1903.

Nusubito Hagi. "A species of Leguminosæ of possible use in breeding experiments with leguminous fodder plants. I did not see the plant growing." (*Fairchild*.)

9239 to 9243. PYRUS SINENSIS.**Japanese pear.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1035, August, 1902), January 6, 1903.

"This collection will include, according to contract, some sorts which keep until July and even longer, and some very large-fruited kinds, which originated in the north of Japan. I have eaten many varieties of pear in Japan and, while none are as good as our pears, they are, nevertheless, refreshing fruits. I believe they should be advertised as a fruit for poor people, since the trees are heavy bearers and the fruit will keep well. In Japan nearly all the trees seen were trained upon overhead trellises, and it seems to be the popular idea that they will not bear well unless so trained. The selection of these varieties has been left to Mr. H. Suzuki, of the Yokohama Nursery Company, whose friend at Kawasaki is a specialist in Japan pears. A list follows." (*Fairchild*.)

9239.

Waseaka.

9242.

Tai haka.

9240.

Ofurugawa.

9243.

Chiojuro.

9241. (Label missing.)

9244 to 9247. ERIOBOTRYA JAPONICA.**Loquat.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1036, August, 1902), January 6, 1903.

Japanese loquats, called *Bivas* in Japan, as follows:

9244.

Tanaka. (See No. 8890.)

9246.

Variiegated.

9245.

Long fruit.

9247.

Maruni.

9248 to 9267. NELUMBIUM SPECIOSUM.

Lotus.

From Tokyo, Japan. Received through Messrs. Lathrop and Fairchild (No. 1039, August, 1902), January 6, 1903.

“A collection of pot lotuses for cultivation under water in large shallow pots of 2 feet in diameter and a foot deep. These plants are from a noted lotus grower in Tokyo, who claims to have hundreds of varieties and whose lotus show in late August is said to be unusually fine. The rhizomes of these pot lotuses are kept in a cool place over winter and in spring set out in 6 to 8 inches of rich mud at the bottom of the pots, which are kept filled to within an inch of the brim with water. The second year these rhizomes should bloom and produce a beautiful show of flowers. Judging from water-color sketches, which I saw in the Tokyo Botanic Gardens, the variety of form and color among these lotuses must be something quite unusual. All shades of pink, yellow, and green, and many variegated forms were represented. The pots should never be allowed to dry out, but the mud must be kept continually covered with water. The varieties are as follows.” (*Fairchild.*)

9248.

Inazuma.

9249.

Shiro Shakuyaku.

9250.

Beni botan.

9251.

Sakuralen.

9252.

Kayo.

9253.

Tokalen.

9254.

Kinshi.

9255.

Nishikilen.

9256.

Mangitsu.

9257.

Itten kobai.

9258.

Tenjiku len.

9259.

Hakubotan.

9260.

Usuyo.

9261.

Shokan.

9262.

Giosan.

9263.

Nankin kuchibin.

9264.

Ashimaru.

9265.

Miyiyo.

9266.

Beni Tinshi.

9267.

Tamausagi.

9268. CITRUS BIGARADIA?

Bitter orange.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1040, August, 1902), January 6, 1903.

Natsu Mikan or *Natsu Shiro*. “An especially fine variety of the bitter orange. This is a remarkable fruit and worthy the serious attention of citrus growers. It is not of such fine flavor as our pomelo, but still is sufficiently palatable to serve the same purpose, and it matures at a different time of the year. *This fruit is common on the market from April until the middle of August* in Japan and, although in August it is a poor fruit, it still serves very well as a morning appetizer. This is the commonest, often the only citrus fruit to be seen on the Japanese markets in July, and I judge the number of tons consumed every year is very large. The tree is said to be a vigorous-growing one and a good bearer. This variety is also one of the hardiest citrus sorts in Japan, withstanding a temperature of + 12° F. on the west

coast of the main island. An important point in the culture of this variety is to leave the fruit hanging as long a time as possible on the trees, not picking it green and allowing it to ripen." (*Fairchild.*)

9269. CITRUS DECUMANA.**Pomelo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1041, August, 1902), January 6, 1903.

Asa hikan. "I understand this is a summer-ripening pomelo." (*Fairchild.*)

9270. PRUNUS TRIFLORA.**Japanese plum.**

From Ikeda, Japan. Received through Messrs. Lathrop and Fairchild (No. 971, July 5, 1902), January 6, 1903.

Obeni. "A flattened variety, looking much like a large *Guanji* (see No. 9236), though lacking its flavor. The skin and flesh are intensely sour even when nearly ripe. Never sweet enough to be good eating. These fruits were bought on the market." (*Fairchild.*)

9271. CITRUS NOBILIS.**Mandarin orange.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1043, August, 1902), January 6, 1903.

Unshu or *Unshiu Mikan.* "This is the best Japanese mandarin orange. It is said to be quite seedless and very juicy. I do not believe it is the equal of our best mandarin oranges, but its seedless character makes it valuable. It is grown extensively all over middle Japan, especially in the Province of Kii. It is already known in America." (*Fairchild.*)

9272. CITRUS DECUMANA.**Pomelo.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1044, August, 1902), January 6, 1903.

Aya buntan. "A red-fleshed variety of pomelo which is eaten with great relish by the Japanese. It is doubtless inferior in flavor to our best pomelos, but its red flesh is a character of value." (*Fairchild.*)

9273. PRUNUS TRIFLORA.**Japanese plum.**

From Ikeda, Japan. Received through Messrs. Lathrop and Fairchild (No. 972, July 5, 1902), January 6, 1903.

Obeni. "These fruits came direct from orchard trees which are noted for producing especially fine fruits. They were certainly much larger and finer than those bought on the market, and I believe this is a different strain from No. 9270." (*Fairchild.*)

9274 and 9275. CITRUS JAPONICA.**Kumquat.**

Received through Messrs. Lathrop and Fairchild (Nos. 1046 and 1047, August, 1902), January 6, 1903.

Nagami-kinkan. "Two varieties of these kumquats were ordered, but the Yokohama Nursery Company sent only the one sort marked *Nagami-kinkan*, which is said to be an elliptical or obovate fruited kind." (*Fairchild.*)

9276. MYRICA FAYA.

From Madeira. Presented by Mr. J. B. Blandy, of Funchal. Received February 21, 1903.

9277. CELTIS SINENSIS.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1049, August, 1902), February 28, 1903.

"One of the prettiest shade trees in Japan, suitable for avenues or private gardens, parks, etc. It resembles *C. australis* which is so commonly used in Algiers and southern Spain, but does not attain the large size of this species, so far as I have observed. It should be tried in the Southwest as a shade tree." (*Fairchild.*)

9278. CORYLUS ROSTRATA.**Hazelnut.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1050, August, 1902), February 28, 1903.

Hashibami. "Seeds of this wild species of hazelnut which may prove valuable for breeding purposes. The nut is not highly prized in Japan, and is nowhere given the attention that the hazelnut gets along the Black Sea or in Istria." (*Fairchild.*)

9279. PRUNUS TRIFLORA.**Japanese plum.**

From Kobe, Japan. Received through Messrs. Lathrop and Fairchild (No. 973), January 6, 1903.

Obeni. "Seed, originally from Ikeda, that was bought on the market in Kobe. It is very much like No. 9270. It is evidently one of the favorite market plums of this region. It resembles the American wild-goose plum. The trees are reported to be regular and heavy bearers." (*Fairchild.*)

9280. JUGLANS CORDIFORMIS.**Walnut.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1052, August, 1902), January 6, 1903.

Himegurumi. "A long, pointed walnut which is a narrower and slenderer type than that called in Japan *Otafuku*. Probably both seed variations of the same species." (*Fairchild.*)

9281. PRUNUS TRIFLORA.**Japanese plum.**

From Kobe, Japan. Received through Messrs. Lathrop and Fairchild (No. 974, July 7, 1902), January 6, 1903.

Sumomo of Awaji Island. "A delicate variety, like our wild-goose plums in quality. A thin-skinned, juicy, sour-fleshed, bright-red, translucent variety, with small stone, and a slightly bitter taste near the stone." (*Fairchild.*)

9282. PERILLA OCYMOIDES.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1054, August, 1902), February 28, 1902.

"Seed of a labiate which is grown extensively in Japan for oil-producing purposes. The oil expressed from the seed is considered the best known for the manufacture of the remarkable oil and leather papers of Japan. It takes the place of linseed, which, I am informed, is not so good for this purpose. The plant can be grown very easily by irrigation or without it in regions where soil is cheap, and there is a possibility that it could be produced cheaply enough to make it a profitable article of export. It should be tried in the irrigated regions of the Southwest. I am informed that Australia imports the oil and the seed also from Japan. In Japan the seed is sown in a nursery bed in the middle of June, and the young plants are transplanted about the 1st of July into rows 2 to 3 feet apart and set 6 inches apart in the row. The ordinary methods of cultivation to keep down the weeds are all that are necessary. It is not grown here on irrigated land. The seed ripens in November. In America it could probably be planted earlier and harvested earlier. According to the owner of an oil mill in Yamada, 100 plants of *Perilla* yield 1 sho = 0.39 gallon of seed, 17 per cent of which by volume is oil. The price of this oil in Japan, as quoted by the oil mill owner, is 45 yen per koku (1 koku = 39.7 gallons; 1 yen = 50 cents). The seeds are likely to fall out of the dry calyx if left until overripe, and I am told the yield is therefore best in wet seasons. The crop is a variable one, and the price therefore quite variable. Land is so valuable in Japan that this crop does not rank as a good paying one, but if grown on cheap land, in Washington State, for example, it might be produced so cheaply as to pay very well. It is worth a trial at least in the wet regions of Washington." (*Fairchild.*)

9283. RICINUS COMMUNIS.**Castor oil bean.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1055, August, 1902), January 7, 1903.

"For breeding purposes. By request." (*Fairchild.*)

9284. AMYGDALUS PERSICA. Japanese nectarine.

From Kobe, Japan. Received through Messrs. Lathrop and Fairchild (No. 975, July 7, 1902), January 6, 1903.

Zumbai momo. "The only variety of nectarines said to be seen on the Kobe market." (Fairchild.)

9285. AMYGDALUS PERSICA. Japanese peach.

From Kobe, Japan. Received through Messrs. Lathrop and Fairchild (No. 976, July 7, 1902), January 6, 1903.

Taruya. "A typical honey peach, an old variety on the Kobe market. Least valuable and least abundant here." (Fairchild.)

9286. TRICHOSANTHES CUCUMEROIDES.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1058, August, 1902), February 28, 1903.

"Seed of a wild perennial vine of the cucurbit family, which has large, dark-green leaves of unusually beautiful velvet texture. I have never seen such beautiful foliage except on some tropical aroids. This vine I have only seen growing in the shade or semishade of Cryptomeria trees, but I am assured it will grow well in the bright sunlight. If this is true it promises to be an interesting addition to our arbor plants, and deserves to be given the widest possible distribution. Its flowers are said to be very pretty, while its fruit, about the size of a duck's egg, is showy and useful, in Japan at least, where it takes the place of soap. The roots are used for starch production. The seed should be planted in the same way that cucumber seeds are planted. The roots will probably prove hardy all over the United States, but during the first winter some of them should be dug up and kept in a cold house." (Fairchild.)

9287. TRICHOSANTHES CUCUMEROIDES.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1059, August, 1902), February 28, 1902.

"Roots of No. 9286 for immediate trial. They should be planted out next spring after being kept like dahlia roots through the winter." (Fairchild.)

9288. TRICHOSANTHES JAPONICA.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1060, August, 1902), February 28, 1903.

"Seed of a species of cucurbit, related to Nos. 9286 and 9287, but with broader, larger leaves, which have not such a velvety texture. It is said to have fruit twice the size of the latter. These fruits are eaten after preserving in soy or salt. Starch is made from the roots. For trial as an arbor plant." (Fairchild.)

9289. SOLANUM sp. (?) "Kiswaheli" tomato.

From Tanga, German East Africa. Received through Messrs. Lathrop and Fairchild (No. 1085, January 18, 1903), March 3, 1903.

Ngogwe or *Njanja.* "A native tomato grown by the Kiswahelis of the Tanga region. The fruit is 1½ inches in diameter, egg-shaped, brilliant light red, thick skinned, and with rough protuberances at its apex. The flesh is scanty and with little flavor, placenta tough, and with many seeds. The negroes say it is a perennial plant, grown everywhere, about 4 feet high." (Fairchild.)

9290. TAMARIX CHINENSIS.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1062, August, 1902), January 6, 1903.

"A species of *Tamarix* which has finer and more delicate foliage than *T. gallica*. It should be tried in Florida and California along the seashore drives in comparison with the ordinary species." (Fairchild.)

9291. XANTHOXYLON PIPERITUM. Japanese pepper.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1063, August, 1902), February 28, 1903.

"A small shrub, the leaves of which are very agreeably aromatic and are used most effectively by Japanese housewives and by Europeans in Japan as a garniture. It would form a very acceptable variation from the conventional parsley. The small round fruits, flower buds, and leaves are boiled with meat dishes to give them a flavor, and the fruits are always served after eels as a digestive." (*Fairchild.*)

9292. TROCHODENDRON ARALIOIDES. Birdlime tree.

From Yokohama, Japan. Received through The Yokohama Nursery Company, February 28, 1903.

(This seed was apparently substituted by the Nursery Company for L. and F. No. 1064, *Ilex integra.*) (See 9293.)

9293. TROCHODENDRON ARALIOIDES. Birdlime tree.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1065, August, 1902), January 6, 1903.

"A species of tree the bark of which is macerated and made into birdlime in Japan. This tree produces the best birdlime in the country, it is said, and there is an export of the article to Europe." (*Fairchild.*)

9294. FAGOPYRUM ESCULENTUM. Buckwheat.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1066, August, 1902), January 6, 1903.

Sando Soba. From Nagano. "This Nagano buckwheat is famous in Japan, where all sorts of cakes, macaroni, and tarts are made from its flour. The question of the uses of buckwheat in Japan would form a very interesting and profitable study, for there are a hundred ways, I imagine, in which the buckwheat is employed, whereas we know of only a few." (*Fairchild.*)

9295. FAGOPYRUM ESCULENTUM. Buckwheat.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1067, August, 1902), January 6, 1903.

"A species of *Fagopyrum* which is said to be inferior to *F. esculentum*, but is cultivated and may be of interest for breeding purposes." (*Fairchild.*)

9296. JUNIPERUS CHINENSIS var. PROCUMBENS.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1068, August, 1902), January 6, 1903.

"A beautiful procumbent juniper which is used most effectively as a substitute for lawns on sloping embankments. It covers them with a mass of luxuriant foliage which is strikingly effective. In the Tokyo Botanic Gardens there is a very attractive lawn made in this way. The plants should be set about 3 feet apart each way and allowed to run freely in all directions until they completely cover the ground with a thick mat 12 to 18 inches deep. It will probably prove hardy about Washington." (*Fairchild.*)

9297 and 9298. SOLANUM MELONGENA. Eggplant.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1069, August, 1902), January 6, 1903.

9297.

Naga nasu. "Considered the best variety in Japan, where eggplants are very largely eaten. They are even used for candying purposes. A candied eggplant is very delicate indeed, tasting something like a fig." (*Fairchild.*)

9298.

Maru nasu. "A round, black variety of eggplant, sold everywhere in the markets of Japan." (*Fairchild.*)

9299. ZOYSIA PUNGENS.**Japanese lawn grass.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1071, August, 1902), January 6, 1903.

Birodoshiba. "A very fine-leaved lawn grass which forms a most beautiful velvet-like turf. The plant is said to have originated in southern Japan, to be sensitive to frost, but to be one of the prettiest lawn grasses in the country. It should be tested in California and Florida, where good lawn grasses are desired." (*Fairchild.*)

9300. ZOYSIA PUNGENS.**Japanese lawn grass.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1072, August, 1902), January 6, 1903.

"A coarser leaved species of lawn grass than No. 9299, but otherwise of similar habit. These potted plants should be split up into a large number of small pieces and set out as is usually done with lawn grasses not grown from seed. It is said to be harder than No. 9299." (*Fairchild.*)

9301. ALLIUM FISTULOSUM.**Forcing onion.**

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1073, August, 1902), January 6, 1903.

"The seed is sown in spring and the young onions are dug in July and inclined in long deep trenches, where they are gradually covered with earth almost to their tops. This covering of earth bleaches them and makes a length of about 14 inches of leaf edible. Sometimes the seed is sown in autumn and the transplanting to trenches done in the spring." (*Fairchild.*)

9302. AMYGDALUS PERSICA.**Peach.**

From Kobe, Japan. Received through Messrs. Lathrop and Fairchild (No. 977, July 7, 1902), January 6, 1903.

Samomo. "This is the earliest ripening peach on the Kobe market. It is not very sweet but is of attractive color. It is an old sort in Kobe." (*Fairchild.*)

9303. MEDICAGO SATIVA.**Alfalfa.**

From Limache, Peru. Presented by Mr. Adolfo Eastman Cox. Received October 20, 1903.

Seed of the native Peruvian alfalfa. Secured in Peru by Béeche, Duval & Co., and shipped through their house in New York.

"This variety has the following advantages over the Chilean: The stems are hollow and more succulent; the growth commences earlier in spring and continues later in the autumn, materially increasing the yield per acre, and it grows taller. On the other hand care has to be taken in feeding stock on it as it is apt to produce hoven (heaves)." (*Cox.*)

9304. AMYGDALUS PERSICA.**Peach.**

From Kobe, Japan. Received through Messrs. Lathrop and Fairchild (No. 978, July 7, 1902), January 6, 1903.

Tinsin Suimitsuto. "One of the favorite sorts on the Kobe market, although too light in color to be very attractive. It is of large size and has been, it is said, recently introduced into southern Japan. According to nurserymen in Saitama Prefecture this can not be what they call the *Tinsin Suimitsuto* for that has red flesh, even before wholly ripe." (*Fairchild.*)

9305. AMYGDALUS PERSICA.**Peach.**

From Kobe, Japan. Received through Messrs. Lathrop and Fairchild (No. 979, July 7, 1902), January 6, 1903.

Suimitsuto. "One of the earliest sorts and one of the sweetest of the peaches in the Kobe market. It differs in shape from the *Honey* type, being more like the *Persian.* It comes from the province of Sanuki, Japan." (*Fairchild.*)

9306. PRUNUS TRIFLORA.

Plum.

From Kobe, Japan. Received through Messrs. Lathrop and Fairchild (No. 980, July 7, 1902), January 6, 1903.

Botankyo. "A light-colored variety of Hatankyo. A large-fruited plum, with very juicy flesh and thin skin." (*Fairchild.*) (See Nos. 9202-9210.)

9307. VICIA FABA.

Broad bean.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1031, August, 1902), January 6, 1903.

Otafuku. "Said to be remarkable for its size and good quality. The young beans of this variety are said to be especially delicious." (*Fairchild.*)

9308 to 9312. VICIA FABA.

Broad bean.

From Yokohama, Japan. Received through Messrs. Lathrop and Fairchild (No. 1032, August, 1902), January 6, 1903.

"Five sorts of the Japanese broad bean or *Sora mame*, as follows:

9308.

Chiu otafuku.

9311.

Yatanbusa.

9309.

Isun mame.

9312.

Tsunashimam ame.

9310.

Kotsubu.

"The broad bean plays an important rôle in Japan, being grown extensively in ground which is later used for paddy rice. It is particularly abundant on the coast of the Japan Sea and in the colder parts of Japan. Almost exclusively used for human food." (*Fairchild.*)

9313. PRUNUS TRIFLORA

Plum.

From Kobe, Japan. Received through Messrs. Lathrop and Fairchild (No. 981, July 7, 1902), January 6, 1903.

Hatankyo. "This is like the variety *Satsuma* in America and may be the same, though I am not familiar enough with the American type to say. The flesh is a blood or claret red color, very juicy, and not very sweet." (*Fairchild.*) (See No. 9202.)

9314. MYRICA NAGI.

From Kobe, Japan. Received through Messrs. Lathrop and Fairchild (No. 982, July 7, 1902), January 6, 1903.

Yama momo. "This fruit is said to be cultivated in the province of Kii. The beautiful fruits look something like raspberries, but resemble most in shape small fruits of *Arbutus unedo*, the strawberry tree of Italy. Their flesh is deep wine red, mildly acid, and refreshing. A very decorative fruit for fruit dishes, but not of great value for other purposes. Mr. Tanaka says it grows wild in the warm regions of Japan and forms a tree 20 feet high. The bark furnishes a tanning material." (*Fairchild.*)

9315. PANICUM TRYPPERON.

Guinea grass.

From Sabana Grande, Porto Rico. Presented by Mr. Frank D. Gardner, special agent in charge of the Porto Rico Experiment Station. Received January 10, February 3, and February 9, 1903.

One of the best fodder grasses of the Tropics.

9316. MYRICA FAYA.

From St. Michael, Azores. Presented by Mr. F. S. Chaves. Received January 12, 1903.

9317. OPUNTIA FICUS-INDICA.**Prickly pear.**

From Taormina, Sicily. Received through Messrs. Lathrop and Fairchild (No. 1079, November 24, 1902), January 17, 1903.

"A prickly pear which bears fruit containing comparatively few seeds. The variety is a white-fleshed one of medium size. The thallus is very spiny indeed, and the fruit is covered with small spines. This sort is considered more delicious than the ordinary kinds, and having but few seeds is in this respect entitled to the consideration of growers. A comparatively small number of plants of this variety are grown about Taormina, because the fruit is not a good market one, neither is it a very heavy cropper, but as the starting point for a seedless-fruited cactus it should appeal to any breeder of this very important and much neglected group of useful plants." (*Fairchild.*)

9318. ALLIUM CEPA.**Onion.**

From Valencia, Spain. Received through Hon. R. M. Bartleman, United States Consul, January 26, 1903.

"This large, mild-flavored onion is a native of Denia and the whole Valencia region. Attempts to grow these onions in other parts of Europe have not been successful, as they generally lose their mild flavor after the first season. The size of the onion is regulated by the farmers to suit the taste of the foreign buyers. Those shipped to the United States are the largest grown, and those intended for British markets the smallest. The seed is planted in beds from the middle of January until the first week in February, and transplanted when sufficiently developed. When large onions are desired, the plants are placed about 10 inches apart and plied with fertilizers and large quantities of water. When smaller ones are desired the plants are placed close together." (*Bartleman.*)

C. C. Morse & Co., of Santa Clara, Cal., state that this onion is without doubt the progenitor of Maule's "Prize Taker."

9319. PRUNUS ARMENIACA.**Apricot.**

From San Luis Potosi, Mexico. Received through Mr. G. Onderdonk, of Nursery, Tex., special agent of this Department, October, 1902.

9320. AMYGDALUS PERSICA.**Peach.**

From San Luis Potosi, Mexico. Received through Mr. G. Onderdonk, of Nursery, Tex., special agent of this Department, October, 1902.

9321. AMYGDALUS PERSICA.**Peach.**

From Saltillo, Mexico. Received through Mr. G. Onderdonk, of Nursery, Tex., special agent of this Department, October, 1902.

9322. MEDICAGO SATIVA.**Alfalfa.**

From Tuggurt, Algeria. Received through Mr. Thomas H. Kearney, December 8, 1902.

An alkali-resistant variety. Crop of 1902.

9323. MEDICAGO SATIVA.**Alfalfa.**

From Tuggurt, Algeria. Received through Mr. Thomas H. Kearney, December 8, 1902.

An alkali-resistant variety. Crop of 1901.

9324. TRITICUM DURUM.**Wheat.**

From Relizane, Algeria. Received through Mr. Thomas H. Kearney, December 8, 1902.

Marouani. An alkali-resistant variety.

9325. PISTACIA ATLANTICA.**Afsie or Betoom.**

From Duperré, Algeria. Received through Mr. W. T. Swingle (No. 122) from Dr. L. Trabut, Government Botanist of Algeria. Collected by Mr. Frank Joly. Received January 10, 1903.

"A large tree, reaching 40 to 50 feet in height and $4\frac{1}{2}$ feet in diameter. The leaves produce a gall 'Afs-el-betoom,' which is an article of considerable commercial importance in Tripoli and Tunis. It is the only tree of any size growing in the northern Sahara, where it occupies the 'dayas' or depressions in the plateaus. Of much promise as a drought and alkali resistant stock for the pistache. A deciduous tree, not so resistant to cold as the Chicudia." (*Swingle.*)

9326 to 9341. ORYZA SATIVA.**Rice.**

From Lake Charles, La. Received through Dr. S. A. Knapp, January 19, 1903.

9326.

Shinriki. Grown from No. 8300. From Hyogo district, Japan. Doctor Knapp considers this the best early Japan rice.

9327.

Shiratama. Grown from No. 8301. From Fukuoka district, Japan. A very good early variety.

9328.

Komachi. Grown from No. 8302. From Kumamoto district, Japan. This is a medium late variety of no great value.

9329.

Omase. Grown from No. 8303. From Kumamoto district, Japan. One of the best medium varieties.

9330.

Miyako. Grown from No. 8304. From Yamaguchi district, Japan. A medium early variety that may be of value.

9331.

An unnamed variety. Grown from No. 8305. From Chiugoku district, Japan. This is not so early as No. 9326, but has many good qualities.

9332.

An unnamed variety. Grown from No. 8306. From Chikuzen district, Japan. One of the best medium varieties. Practically the same as *Kiushu.*

9333.

Fusakichi. Grown from No. 8508. From Bizen district, Japan. A medium early variety of remarkable quality. The seeds are exceptionally large, and on suitable land, with plenty of water, this will probably be one of the very best varieties.

9334.

Mansaku bozu. Grown from No. 8509. From Fukuoka district, Japan. This is one of the best medium varieties.

9335.

An unnamed variety. Grown from No. 8310. From Ise district, Japan. This is a medium variety and may become valuable.

9336.

An unnamed variety. Grown from No. 8511. From Buzen district, Japan. This is a medium variety and may prove valuable.

9326 to 9341—Continued.

9337.

An unnamed variety. Grown from No. 8512. From Iyo district, Japan. This is a medium late variety of extra vigor and fairly good yield.

9338.

An unnamed variety. Grown from No. 8513. From Higo district, Japan. This is one of the best late varieties.

9339.

An unnamed variety. Grown from No. 8514. From Bizen district, Japan. This is a late variety that may prove valuable.

9340.

An unnamed variety. Grown from No. 8515. From Banshu district, Japan. This is the best late variety.

9341.

Honduras rice. One of the standard varieties, grown for comparison.

9342. ORYZA SATIYA.

Rice.

From Kin-hua, China. Secured by Dr. S. P. Barchet, of the United States consulate, Shanghai, China, at the request of Dr. S. A. Knapp. Received January 22, 1903.

A late variety sown in May.

9343. ORYZA SATIVA.

Rice.

From Ki-ni, Kin-hua, China. Secured by Dr. S. P. Barchet, of the United States consulate, Shanghai, China, at the request of Dr. S. A. Knapp. Received January 22, 1903.

Glutinous rice. Sown in May.

9344. GLYCINE HISPIDA.

Soy bean.

From Chiu-hua, China. Secured by Dr. S. P. Barchet, of the United States consulate, Shanghai, China, at the request of Dr. S. A. Knapp. Received January 22, 1903.

Chiu-hua. "In case of future reference to the bean, if you call this the *Chiu-hua* bean I shall know what is meant, in the absence of a botanical name, as I have not seen this bean anywhere else. It is sown broadcast in paddy fields before the rice is harvested. The moist ground favors the sprouting, and the standing grain shields the sprouting plant from the sun. By the time the rice is harvested the beans have taken firm roots and require no further care. Horses and cattle are very fond of them green or in the ripe state. The bean also makes a good food for man. This bean I think well worth a trial in the Southern States." (*Barchet.*)

9345. AMYGDALUS COMMUNIS.

Almond.

From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist. Received January 26, 1903.

Cuttings of the wild almond of the mountains of Algeria, said to be excellent for stock.

9346. PRUNUS DOMESTICA.

Plum.

From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist. Received January 26, 1903.

Reine Claude Rouge. Cuttings of this plum. Marked by Doctor Trabut "Glorion Vincent."

9347. LINUM USITATISSIMUM.**Flax.**

From Rotterdam, Holland. Received through F. Dutilh & Co., January 29, 1903.

Dutch Riga-Child. Extra picked. From crop of 1902.

9348 to 9351. AMYGDALUS COMMUNIS.**Almond**

From Alicante, Spain. Received through Mr. D. G. Fairchild (Nos. 740, 741, 745, 755a, July 19 and 20, 1901), January 30, 1903.

A collection of young almond trees budded on myrobalan stocks by Mr. Georges Boucher, Paris, France, with buds secured by Mr. Fairchild in Spain.

9348.*Mollar.* (No. 740.)**9350.***Castillet.* (No. 745.)**9349.***Planeta.* (No. 741.)**9351.***Pastaneta.* (No. 755a.)

(See Nos. 7985 to 7989 and 9458 to 9462.)

9352. OPUNTIA FICUS-INDICA.**Prickly pear.**

From Malta. Received through Messrs. Lathrop and Fairchild (No. 1082, December 27, 1902), January 31, 1903.

"Fruits from the plants of this variety contain less than 12 seeds, according to Dr. Giovanni Borg, of Malta, who kindly presents them to the Department. These seeds are very small and not at all objectionable. The fruit inside and out is yellowish orange in color, of good flavor, Doctor Borg says, and of the size of a goose egg. The thallus is nearly spineless. It is a rare plant even in Malta. These fruits came from plants growing in a garden in Siggiewi." (*Fairchild.*)

9353. OPUNTIA FICUS-INDICA.**Prickly pear.**

From Malta. Received through Messrs. Lathrop and Fairchild (No. 1083, December 27, 1902), January 31, 1903.

"This variety resembles No. 9352 closely, but the fruits are much smaller, being only the size of a hen's egg. Seedless or at least with very few seeds. The thallus is nearly spineless. The minute bristles on the fruit, according to Dr. Giovanni Borg, can be removed by washing the fruits in a basin of water with a whisk broom. The water loosens up the small cushions of bristles and they are easily brushed away into the water. This variety is not as promising as No. 9352, but is worthy a place in the breeder's collection. The fact of its seedlessness and spinelessness makes it a valuable variety of *Opuntia* for any economic studies on the subject. From Professor Pisani's villa at Maurisi, near Zeitun, Malta." (*Fairchild.*)

9354. FICUS CARICA.**Fig.**

From Malta. Received through Messrs. Lathrop and Fairchild (No. 1084, December 28, 1902), January 31, 1903.

St. Anthony. "Dr. Giovanni Borg, director of the botanic garden, says this is one of the most delicious figs he has ever eaten. It ripens one crop of figs in June and a second in September or October. The regular late crop is red in color. No caprification is deemed necessary for this sort, which Doctor Borg thinks could be used for drying purposes. It is an uncommon variety." (*Fairchild.*)

9355. ARACHIS HYPOGAEA.**Peanut.**

From Tanegashima, Japan. Presented by Mr. H. E. Amoore. Received February 2, 1903.

29861—No. 66—05—18

9356 and 9357. ZEA MAYS.**Corn.**

From Forestburg, S. Dak. Presented by Mr. H. C. Warner. Grown from S. P. I. No. 13, which was found to be a mixture of types.

9356.*Malakoff* sugar corn. White type.**9357.**

Amber type.

9358. TRITICUM VULGARE.**Wheat.**

From the estate of Mr. Bezouglov, near Byeloglinskaya, Don Territory, Russia. Obtained by Mr. E. A. Bessey (No. 110, August 4, 1902), through the Theodore N. Solodov Milling Company, Rostov-on-Don, Russia. Received February 3, 1903.

Belogline. "A hard, red, winter wheat from the crop of 1902. This has just been harvested and thrashed at this date and is of very good quality, far exceeding that of last year." (*Bessey.*)

9359. MEDICAGO SATIVA.**Alfalfa.**

From Erivan, Caucasia. Obtained by Mr. E. A. Bessey (No. 236, October 7, 1902), through Mr. N. P. Taratinoff, of Tiflis. Received February 3, 1903.

"Alfalfa from Erivan Province, the hottest and driest province in summer and coldest in winter (reaching -22° F.). It should prove valuable in cold regions." (*Bessey.*)

9360 to 9402.

From Tiflis, Russian Caucasus. Presented by Mr. A. Rolloff, director of the botanic garden, through Mr. E. A. Bessey. Received February 3, 1902.

9360. PYRUS COMMUNIS.**Pear.***Sini.* (No. 209.)**9361. PYRUS COMMUNIS.****Pear.***Nana-armud.* (No. 210.)**9362. PRUNUS DOMESTICA.****Plum.***Vazirali.* (No. 211.)**9363. PRUNUS DOMESTICA.****Plum.***Tchantchuri.* (No. 212.)**9364. PRUNUS ARMENIACA.****Apricot.***Agdzhanabad.* (No. 213.)**9365. PRUNUS ARMENIACA.****Apricot.***Achrevedi.* (No. 214.)**9366. PRUNUS ARMENIACA.****Apricot.***Badam-arik.* (No. 215.)**9367. PRUNUS ARMENIACA.****Apricot.***Norrast.* (No. 216.)**9368. PRUNUS ARMENIACA.****Apricot.***Tabarzei.* (No. 217.)**9369. PRUNUS ARMENIACA.****Apricot.***Bairam-ali.* From Turkestan. (No. 218.)

9360 to 9402—Continued.

9370. PRUNUS ARMENIACA. Apricot.
Red Yusup-Khan. From Turkestan. (No. 219.)
9371. PRUNUS ARMENIACA. Apricot.
White Yusup-Khan. From Turkestan. (No. 220.)
9372. AMYGDALUS PERSICA. Peach.
Zafrani. (No. 221.)
9373. AMYGDALUS PERSICA. Peach.
Nazli. (No. 222.)
9374. AMYGDALUS PERSICA. Peach.
Norrast-huli. (No. 223.)
9375. AMYGDALUS PERSICA. Peach.
Salami. (No. 224.)
9376. AMYGDALUS PERSICA. Peach.
Narindzhi. (No. 225.)
9377. AMYGDALUS PERSICA. Peach.
Sachravi. (No. 226.)
9378. AMYGDALUS PERSICA. Peach.
Arabuli. (No. 227.)
9379. AMYGDALUS PERSICA. Peach.
Tibatvica. (No. 228.)
9380. AMYGDALUS PERSICA. Peach.
Gandzhuri. (No. 229.)
9381. FICUS CARICA. Fig.
Tschapla. (No. 230.)
9382. ELAEAGNUS ANGUSTIFOLIA.
Matna-pshat. (No. 231.)
9383. ELAEAGNUS ANGUSTIFOLIA.
Unab-pshat. (No. 232.)
9384. MORUS ALBA.
Gandzha. (No. 233.)
9385. PUNICA GRANATUM.
Krmzi-kabuck. (No. 234.)
9386. PUNICA GRANATUM.
Shirin-nar. (No. 235.)
9387. Mixture of seeds of PYRUS SALICIFOLIA and P. ELAEAGRIFOLIA. (Nos. 203 and 204.)
9388. PYRUS COMMUNIS. Pear.
Wild pear. (No. 202.)

9360 to 9402—Continued.

9389. *AMYGDALUS PERSICA*. Peach.
Wild peach.
9390. *PRUNUS ARMENIACA*. Apricot.
Wild apricot. (No. 205.)

Seeds of cultivated varieties of peaches as follows:

9391. *AMYGDALUS PERSICA*. Peach.
Narindschi. (No. 206.)
9392. *Guli*. (No. 208.)
9393. *Zufrani*. (No. 207.)
9394. *Norrast*.
9395. *Spitak*.
9396. *Lodz*.

Seeds of cultivated sorts of apricots, as follows:

9397. *PRUNUS ARMENIACA*. Apricot.
Schalogi.
9398. *Agdschanabad*.
9399. *Chosroj-schuck*.
9400. *Badam-arik*.
9401. *Gevondi*.
9402. *Gegdschanabad*.

9403. *STRYPHODENDRON BARBATIMAO*.

From São Paulo, Brazil. Presented by Dr. Alberto Löfgren, director of the Botanic Garden. Received February 2, 1903.

"The bark of this tree contains considerable tannin." (Löfgren.)

9404 and 9405. *PHASEOLUS* sp. Bean.

From São Paulo, Brazil. Presented by Dr. H. M. Lane. Received February 4, 1903.

9404. *Frijão mulato*. Brown bean.
9405. *Frijão preto*. Black bean.

9406. *ARACHIS HYPOGAEA*. Peanut.

From São Paulo, Brazil. Presented by Dr. H. M. Lane. Received February 4, 1903.

Ordinary variety.

9407 to 9418. GLYCINE HISPIDA.**Soy bean.**

A collection of soy beans grown by Mr. W. R. Beattie on the experimental grounds on the Potomac Flats, from introduced seed.

9407.

Grown in 1902 from S. P. I. No. 4912.

9408.

Grown in 1902 from S. P. I. No. 4913.

9409.

Grown in 1902 from S. P. I. No. 4914.

9410.

Grown in 1901 and 1902 from S. P. I. No. 6312.

9411.

Grown in 1901 and 1902 from S. P. I. No. 6333.

9412.

Grown in 1901 and 1902 from S. P. I. No. 6334.

9413.

Grown in 1901 and 1902 from S. P. I. No. 6336.

9414.

Grown in 1901 and 1902 from S. P. I. No. 6386.

9415.

Grown in 1901 and 1902 from S. P. I. No. 6396.

9416.

Grown in 1901 and 1902 from S. P. I. No. 6397.

9417.

Grown in 1901 and 1902 from S. P. I. No. 6414.

9418.

Grown in 1901 and 1902 from S. P. I. No. 6416.

9419. PHASEOLUS MUNGO-RADIATUS (?)**Gram.**

Grown on Potomac Flats in 1902 by Mr. W. R. Beattie from S. P. I. No. 6417.

9420. AMYGDALUS PERSICA.**Peach.**

From Pomona, N. C. Presented by Mr. J. Van Lindley. Received February 6, 1903.

Natural peach seed from the seedling peach orchards, for growing as stocks in comparison with Mexican seed.

9421. LINUM USITATISSIMUM.**Flax.**

From Perwez, Belgium. Received through Emile Mathy, February 8, 1903.

First choice.

9422. AVENA SATIVA.**Oat.**

From Moscow, Russia. Received through Mr. E. A. Bessey, from Immer & Sons (No. 104, July 22, 1902), February 10, 1903.

Swedish Select. "This excellent variety has proven exceptionally good for the dry Steppe region. This is a selection made in Sweden of the Ligowo oat and bred up by Immer & Sons. It originally came from Ladoga, near St. Petersburg. This year's crop." (*Bessey.*)

9423 to 9425. PANICUM MILIACEUM.**Proso.**

From Moscow, Russia. Received through Mr. E. A. Bessey, from Immer & Sons. (Nos. 105 to 107, July 22, 1902.)

9423.

Red Orenburg. Crop of 1902. Received February 10, 1903. (No. 105.)

9424.

Red Vorónezh. Crop of 1902. Received May 22, 1903. (No. 106.)

9425.

Black Vorónezh. Crop of 1902. Received May 22, 1903. (No. 107.)

9426. PISTACIA LENTISCUS.**Mastic.**

From the rocky cliffs along the seashore, between Leghorn and Castiglioncello, Italy. Collected by Mr. W. T. Swingle (No. 123, January 14, 1903). Received February 17, 1903.

"The lentisk or mastic tree is found chiefly in the immediate vicinity of the sea in the Mediterranean region wherever the winters are not too severe (it is decidedly less hardy than the terebinth). Its northern limit is about the January isotherm of 42.8° to 46.4° F. It is a small evergreen tree (other species of *Pistacia* are deciduous) or more often a shrub, branching profusely from the ground. When growing in tree form it sometimes reaches a height of 20 to 25 feet, and a diameter of 8 inches to one foot. It prefers silicious soils and avoids those decidedly calcareous in nature, being just the opposite of the terebinth, so the two are very rarely seen growing together in a wild state. The leaves are rich in tannin (11.5 per cent), and are collected and sold in Tunis as a substitute for sumac for tanning. The seeds are much liked by pigs, goats, and wild boars in Tunis, and are an important source of food in dry years when the fruit is apt to be unusually abundant, while other forage is scarce. In Chios a grafted variety yields *mastic*, a soft resin much prized in the Orient for chewing gum and for flavoring liquors. This is a promising stock on which to graft the pistache, especially on silicious or slightly acid soils near the sea. It is said not to be so long lived as the terebinth, and the pistache, when grafted on the lentisk, is said to live only forty years, whereas it lives one or two centuries on the terebinth. It is probably a dwarf stock and pistaches grafted on it should be set out at smaller distances apart than on other stocks. On sandy soil with moderate bottom heat, there should be no difficulty in starting the cuttings." (*Swingle.*)

9427 to 9436.

From Nice, France. Presented by Mr. A. Robertson-Proschowsky. Received January 12, 1903.

A collection of seeds as follows:

9427. ARISTOLOCHIA ELEGANS.**9433. PHLOMIS FRUTICOSA.****9428. CESTRUM ELEGANS.****9434. SUTHERLANDIA FRUTESCENS.****9429. CISTUS ALBIDUS.****9435. PITTOSPORUM UNDULATUM.****9430. CLEOME ARBorea (?)****9436. TACSONIA MANICATA.****9431. DOLICHOS LABLAB.****9432. ECHINOCACTUS SCHUMANIANUS.**

9437. CITRUS AURANTIUM.**Orange.**

From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist. Received February 16, 1903.

Seeds of the *Condja* (?) orange. Fruit very large and sweet, four hundred grams or more, resembling the *Jaffna*. One or two seeds of each fruit. It reproduces true to seed.

9438 to 9444. PHASEOLUS sp.**Bean.**

From Mexico. Received through Dr. Edward Palmer, February 21, 1903. A collection of different varieties of beans, as follows:

9438.

Garbansillo. From Saltillo. "First-class bean and seems a little different from the one at San Luis Potosi of the same name (No. 9155). When the bean from San Luis Potosi is brought to Saltillo for sale it is objected to because it is said to take more fuel for cooking, and fuel is an object. This is probably due to the fact that the water at San Luis Potosi is hard, while that at Saltillo is soft. This bean is very prolific in this section of the table-lands and is the choice of all who can afford to purchase it. Bought from Jesus Santos Grande, Saltillo, Mexico." (*Palmer*.)

9439.

Vayo-gordo. From Saltillo. "A first-class bean and a great favorite with the rich. It is said to be very productive in this section, and as it is not very dark in color it might claim recognition in the United States." (*Palmer*.)

9440.

Frijol para la sopa. From San Luis Potosi. "Not of very good quality, but much used for soups. Apparently a poor quality of *Blanco bolador*." (*Palmer*.)

9441.

Canelo Gordo. From Saltillo. "A first-class bean which can be had in large quantities at the markets." (*Palmer*.)

9442.

Canelo Chico. From Saltillo. "A first-class bean; plentiful in the markets. It is used extensively." (*Palmer*.)

9443.

Guadalupano. From Saltillo. "A bean not much seen on the markets, somewhat resembling the *Borrado*. It is a second-class bean." (*Palmer*.)

9444.

Bolador de Color. From Saltillo. "A third-class bean, and only eaten when others can not be obtained, and then only after boiling and frying in lard." (*Palmer*.)

9445. SOLANUM sp.**Pepper.**

From San Luis Potosi, Mexico. Received through Dr. Edward Palmer, February 21, 1903.

Chili guipin. "Sold in the markets of San Luis Potosi and commonly eaten by the well-to-do. A very hot pepper. Eaten before and with soups." (*Palmer*.)

9446. PISTACIA LENTISCUS.**Mastic.**

From rocky cliff near seashore, opposite Castello Sonnino, between Leghorn and Castiglione, Italy. Received through Mr. W. T. Swingle (No. 124), February 20, 1903.

9447. ANACARDIUM OCCIDENTALE.**Cashew.**

From Beira, East Africa. Presented by Mr. Arthur W. H. Glenny, United States consular agent at Beira, through Messrs. Lathrop and Fairchild (No. 1092, January 28, 1903), March, 1903.

"Seed of the West Indian cashew, which came from trees growing in Rhodesia that seem unusually hardy and grow at an altitude of several thousand feet, where occasional frosts are said to occur. Worthy of trial in Florida and Porto Rico." (*Fairchild.*)

9448. PHYSALIS sp.

From Saltillo, Mexico. Received through Dr. Edward Palmer, February 21, 1903.

"A large, dark plum-colored variety, used in soups and stews. Also fried with beefsteak and sometimes used in dressings for fowls. Fruits secured in November, 1902, were sound February 6, 1903, when the seeds were removed." (*Palmer.*)

9449. ZEA MAYS.**Corn.**

From Ravenna, Ohio. Presented by the Ford Seed Company. Received February 24, 1903.

Malakhoff sugar. Grown from S. P. I. No. 13.

9450. MEDICAGO SATIVA.**Alfalfa.**

From Askhabad, Trans-Caspian Territory, Turkestan. Received through Mr. E. A. Bessey (No. 113, August 23, 1902), from Sadik-Bek Agabekov, acting governor of the district of Askhabad. February 28, 1903.

"The sort of alfalfa grown by the natives (*Tekins*) from time immemorial. Apparently well adapted to a very hot climate of low humidity and mild winters. This variety will probably not be suited for northern climates, but will thrive, when irrigated, in the very hottest, driest regions, as Askhabad is almost the hottest point in Turkestan." (*Bessey.*)

9451. MEDICAGO SATIVA.**Alfalfa.**

From Sairam, near Chimkent, Russia. Received through Mr. E. A. Bessey, from Mr. H. W. Dürrschmidt, of Tashkent (No. 150, September 29, 1902), February 28, 1903.

"The alfalfa of this region (and also around Karabulák, 24 miles northwest of Sairam) is considered to be about the best in Turkestan. It is grown in considerable quantities throughout the whole region. This is probably the coldest region in Turkestan where alfalfa is grown in such large quantities. This ought to be good for cool regions." (*Bessey.*)

9452. MEDICAGO SATIVA.**Alfalfa.**

From Karabulák, 25 miles north of Chimkent, Russia. Received through Mr. E. A. Bessey, from Mr. H. W. Dürrschmidt, of Tashkent (No. 151, September 29, 1902), February 28, 1903.

"The same methods of culture as in Sairam, only in slightly larger fields. As in Sairam, it is grown with the aid of irrigation. Sent for trial in cool regions." (*Bessey.*)

9453. MEDICAGO SATIVA.**Alfalfa.**

From Bokhara, Turkestan. Received through Mr. E. A. Bessey, from Mr. H. W. Dürrschmidt, of Tashkent (No. 152, September 29, 1902), February 28, 1903.

"Bokhara is a region containing much alkali land; the soil has a white crust when dry. Large fields of various crops are destroyed by alkali. This seed is not especially resistant to cold. It is sent for trial in alkali regions." (*Bessey.*)

9454. MEDICAGO SATIVA.**Alfalfa.**

From Khiva, Turkestan. Received through Mr. E. A. Bessey, from Mr. H. W. Dürschmidt, of Tashkent (No. 153a, November 6, 1902, numbered in sack 153), February 28, 1903.

"Khiva is one of the driest regions in Turkestan, the average rainfall being less than 3 inches a year. It is correspondingly hot in summer, but rather cold in winter; much colder than Bokhara, Askhabad, or Karshi. Alfalfa is grown only by irrigation. It is fertilized abundantly, at least with fresh soil if not with animal manure." (*Bessey.*)

9455. MEDICAGO SATIVA.**Alfalfa.**

From Karshi, Turkestan. Received through Mr. E. A. Bessey, from Mr. H. W. Dürschmidt, of Tashkent (No. 154a, November 6, 1902, numbered in sacks 154), February 28, 1903.

"Karshi lies about 80 miles southwest of Samarcand and about as far southeast of Bokhara. It is in the edge of the mountains and much cooler than Bokhara." (*Bessey.*)

9456. QUERCUS SUBER.**Cork oak.**

From Paris, France. Received through Vilmorin-Andrieux & Co., March 5, 1903.

9457. LINUM USITATISSIMUM.**Flax.**

From Riga, Russia. Received through the United States consul, from A. Sellmar, March 6, 1903.

Best Riga.

9458 to 9462. AMYGDALUS COMMUNIS.**Almond.**

Received through Mr. J. W. Kerr, Denton, Md. Grown by Mr. Kerr from buds furnished by this Department. Received March 7, 1903.

9458.

Castillet. Grown from S. P. I. No. 7133.

9459.

Fabrica. Grown from S. P. I. No. 7135.

9460.

Jordan. Grown from S. P. I. Nos. 7398 and 7401, mixed.

9461.

Mollar. Grown from S. P. I. No. 7061.

9462.

Planeta. Grown from S. P. I. No. 7062.

See Nos. 7985 to 7989 and 9348 to 9351. Budded on peach stocks.

9463 and 9464. PRUNUS ARMENIACA.**Apricot.**

Received through Mr. J. W. Kerr, Denton, Md. Grown by Mr. Kerr from buds furnished by this Department. Received March 7, 1903.

9463.

Patriarca. Grown from S. P. I. 7136.

9464.

Grown from S. P. I. No. 6844.

- 9465. ROSA sp. Rose.**
 From Cannes, France. Received through Mr. J. B. Cognet, United States consular agent, March 9, 1903.
 The true perfume rose.
- 9466. ANONA CHERIMOLIA.**
 Plants grown in Department greenhouse from seed presented by Capt. J. J. Haden, Coconut Grove, Fla., April 16, 1902. Plants numbered March 11, 1903.
- 9467. ERIOBOTRYA JAPONICA. Loquat.**
 Seedling plants grown in Department greenhouse from seeds of large loquat tree in orange house. Plants numbered March 11, 1903.
- 9468. ERIODENDRON ANFRACUOSUM. Kapok.**
 From Marseille, France. Presented by the United States Consulate. Received February 14, 1903. Turned over to the Office of Seed and Plant Introduction by Mr. L. H. Dewey, Assistant Botanist.
- 9469 and 9470. PYRUS MALUS. Apple.**
 From Naples, Italy. Presented by Prof. L. Savastano through Messrs. Lathrop and Fairchild (Nos. 1077 and 1078). Received March 14, 1903.
- 9469.**
Annurco. "The leading market apple of the region about Naples. It is a showy red apple, with yellow streaks, and has an unusually high flavor for a variety grown so far south. It should be tested in the Southern States. Obtained through the kindness of Professor Savastano, of the agricultural school at Portici." (*Fairchild.*)
- 9470.**
Limoncelli. "A lemon-yellow fruited variety; one of the best market varieties of southern Italy. It has a hard, crisp, slightly tough flesh, subacid and highly flavored. It is not as good as No. 9469, but I believe is a better keeper. Obtained through the kindness of Professor Savastano, of the agricultural school at Portici." (*Fairchild.*)
- 9471. PYRUS MALUS. Apple.**
 From Portici (Naples), Italy. Presented by Prof. L. Savastano through Messrs. Lathrop and Fairchild. Received March 14, 1903.
Melo gelato. "Grows well in the warm region about Naples. In cold countries the yield is poor. It does best in calcareous soil." (*Fairchild.*)
- 9472. Palm.**
 From Black River, Honduras. Presented by Mr. Frank Dean through Dr. H. J. Webber of this Department. Received March 16, 1903.
 Two ounces of seed of a small, pinnate-leaved palm 6 feet high. Foliage dark green. Fine for conservatories.
- 9473. ATTALEA COHUNE (?). Palm.**
 From Black River, Honduras. Presented by Mr. Frank Dean through Dr. H. J. Webber of this Department. Received March 16, 1903.
Coquito. A large pinnate-leaved palm.

9474. PISTACIA MUTICA (?)

From Smyrna, Turkey in Asia. Purchased from Mr. B. J. Agadjanian, at the request of Mr. W. T. Swingle (No. 121). Received March 21, 1903.

"The celebrated turpentine tree of Chios, from which a kind of turpentine is extracted by making incisions in the bark. It grows to a large size, reaching a diameter of 5 feet 2½ inches and a height of 40 to 60 feet. The seeds yield an oil used for culinary purposes and in making toilet soaps. This tree is of great promise for use as a stock on which to graft the pistache, especially for semiarid regions in the Southwest, where this tree would be able to grow without irrigation. Worthy of trial as a shade and timber tree in warm dry regions. It is deciduous." (*Swingle.*)

9475. CAPSICUM ANNUM.**Red pepper.**

From Pasadena, Cal. Presented by Capt. C. W. Livermore. Received March 21, 1903.

Paprica.

9476. MYRICA FAYA.

From St. Michaels, Azores Islands. Presented by Hon. George H. Pickerell, United States consul. Received March 21, 1903.

9477. PISTACIA VERA.**Pistache.**

From Catania, Italy. Presented by Hon. Alexander Heingartner, United States consul, at the request of Mr. W. T. Swingle. Received March 16, 1903.

Sicilian. "From grafted pistache trees at Bronte, on the slopes of Mount Etna. The only sort likely to succeed in America for commercial purposes. Not large, with a bright-green kernel." (*Swingle.*)

9478 and 9479. TRITICUM DURUM.**Wheat.**

From Brookings, S. Dak. Received through Mr. James H. Shepard, March 14, 1903. Grown from seed originally imported from Russia.

9478.

Kubanka.

9479.

Velvet Don.

9480. CITRUS NOBILIS × CITRUS BIGARADIA.**Tangerine.**

From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist. Received March 19, 1903.

Clementine.

9481. CUCURBITA sp.**Squash.**

From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist. Received March 21, 1903.

Courge bedouine.

9482. TRICHILIA DREGEL.

From Delagoa Bay, Portuguese East Africa. Received through Messrs. Lathrop and Fairchild (No. 1094, February 1, 1903), March 13 and 21, 1903.

Freda. "A handsome shade tree which is being used for avenue planting and which deserves trial as a shade tree in tropical gardens and also in Florida. It grows in almost pure sand, but requires water. Its seeds may be objectionable when they fall, as they are abundant and covered with a red arillus." (*Fairchild.*)

9483.

From Johannesburg, Transvaal. Received through Messrs. Lathrop and Fairchild (No. 1108, February 18, 1903), March 24, 1903.

"An undetermined species of the sunflower family which, according to Mr. R. W. Odham, superintendent of the Municipal Garden at Johannesburg, bears very pretty pale-yellow flowers and is worthy of being brought into cultivation. These seeds were collected by him on the high veld for the purpose of planting in his garden. They should be sown immediately upon arrival." (*Fairchild.*)

9484. GERBERA JAMESONI. Barberton or Transvaal daisy.

From Johannesburg, Transvaal. Received through Messrs. Lathrop and Fairchild (No. 1106, February 18, 1903), March 24, 1903.

"This showy perennial is half hardy and can be grown in the open in California and the Southwest but will probably succeed as a potted plant, if set out in the summer time, even as far north as Chicago. Its flowers, which are daisy-like in shape and very large, are of a beautiful scarlet color. They are not borne in great abundance but are nevertheless very showy. The foliage, resembling slightly that of the dandelion in shape, is a deep, dark green, and the flower scapes, which rise out of a dense mass of it, are long and slender. The flower is a brilliant, attractive thing and well worthy of attention. The seeds are very short lived and should be planted at once in rich, sandy potting soil. Should germinate in ten to twelve days. The plants require plenty of water and sunshine." (*Fairchild.*)

9485. ANANAS SATIVUS. Pineapple.

From Durban, Natal. Received through Messrs. Lathrop and Fairchild (No. 1109, February 19, 1903), March 30, 1903.

Natal. "Sets taken from the tops of two most delicious pineapples of the common cultivated variety of Natal. More sets would be sent were it not for a disease which is prevalent among the Natal pines and which we fear to introduce into America. This disease is said to be fungous in character and to be caused by a species of *Mucor* which gets into the fruit through places attacked by a red mite. These two plants should be watched closely and the sets carefully examined before planting, for although they came from perfectly sound fruit they may harbor this *Mucor*. The Natal pineapple is a small sort of most unusual uniformity of flavor and texture and surpasses in sweetness, crispness, and freedom from fiber or seeds any other pineapple which we have ever eaten. Its small, convenient size and tenderness of flesh suit it better than any variety we have ever seen for general table use, and its excellent shipping qualities must recommend it to American growers. It has scarcely any core, and from the standpoint of the consumer it is a great pineapple. It is said to thrive with very little attention in Natal." (*Fairchild.*)

9486. MANGIFERA INDICA. Mango.

From Beira, Portuguese East Africa. Received through Messrs. Lathrop and Fairchild (No. 1091, January 28, 1903), April 2, 1903.

Lathrop. "The single fruit from which one of these two seeds came, and from which the following description is made, was the only one obtainable during our short stop in Beira. It was $15\frac{3}{16}$ inches in largest circumference and of a peculiar, characteristic shape; being in outline (seen from the stem end) very broadly elliptical (14 inches in circumference at base) while, seen in profile, it was heart shaped with a decided oblique tendency. It resembled in shape a Sour Sop and was nearly as large as a medium-sized specimen of this species of Anona. The skin was, when ripe, a light golden yellow and of a peculiar texture, not common to other varieties of mangoes that I have seen. It was not quite smooth but suggested the roughness of a pomelo skin. It was about one-eighth inch thick and quite tough, and on the inside it was lined with a number of long, strong fibers which did not penetrate into the flesh but adhered closely to the skin. The flesh, from this skin quite down to the short fibers attached to the seed, was entirely devoid of stringiness of any kind and had the texture of a firm custard and was of a deep golden color. In aroma it lacked very little of being as pronounced and agreeable as that of the best *Alphonse* variety of Bombay and its flesh had the indescribably rich flavor which characterizes the best varieties of this tropical fruit. The seed was small ($3\frac{3}{4}$ by $2\frac{3}{4}$ by $1\frac{1}{4}$) in

proportion to the size of the fruit and the fibers attached to it are mostly about one-fourth inch long. A small bundle of fibers at one edge is 1 inch in length. This is one of the great mangoes of the world and would command fancy prices in America at any time of the year. It is fitting to name this after Mr. Barbour Lathrop, who first called it to the attention of the American public and who first introduced it into Florida. See No. 9669." (*Fairchild.*)

9487. RAPHANUS SATIVUS. Radish.

From Erfurt, Germany. Received through F. C. Heinemann, April 4, 1903.
Erfurt Crimson Giant. Heinemann's tender forcing radish.

9488. CITRUS HYBRIDA.
From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist. Received April 11, 1903.

"Seed of a hybrid said to be of very good quality. Fruit nearly round, clear, yellow, sweet, and very juicy. Late." (*Trabut.*)

9489. CITRUS AURANTIUM × CITRUS BERGAMIA.
From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist. Received April 11, 1903.

Seeds of a hybrid called by Doctor Trabut *Limorange*. A hybrid of the orange and mellarose. Said to be very good. Skin white. See No. 9554 for bud wood of same.

9490. PISTACIA VERA. Pistache.

From Baku, Trans-Caspian Province, Russia. Received through Mr. E. A. Bessey (October 9, 1902), April 13, 1903.

"The price of these nuts at retail in the market is 60 kopecks per pound; wholesale, 40 kopecks per pound." (*Bessey.*)

9491. PISTACIA VERA. Pistache.

From Tunis. Received through Mr. Walter T. Swingle (No. 125), February 21, 1903.

9492 to 9500.

From Japan. Presented by T. Tamura, of the agricultural experiment station at Okitsumachi, Shizuoka, Japan, through Messrs. Lathrop and Fairchild. Received April 16, 1903.

A collection of bud wood of Japanese fruits, as follows:

- 9492. PYRUS COMMUNIS. Pear.**
- 9493. CITRUS JAPONICA. Kumquat.**
Marukinkan.
- 9494. CITRUS JAPONICA. Kumquat.**
Nagakinkan.
- 9495. CITRUS NOBILIS. Mandarin orange.**
Aisomikan.
- 9496. CITRUS NOBILIS. Mandarin orange.**
Kawahata Mikan.
- 9497. CITRUS sp.**

Oshima Kunenbo or *Seedless Kunenbo*. "Grown on the island of Oshima, province of Osumi, prefecture Kagoshima. Fruit medium, flattened, but much larger than the common Kunenbo and very coarse. Rind thick, deep, brilliant reddish-orange color. Very fragrant. Pulp sweet, juicy, and delicious. Very good for table use and of good keeping quality." (*Tamura.*)

9492 to 9500—Continued.

9498. CITRUS AURANTIUM.

Orange.

T. Tamura's summer orange. Originated by T. Tamura in the district of Shingai, province of Gosa, prefecture Kochi. "Fruit conical, weighing from 1½ to 2 pounds. Skin pale white and somewhat rough. Color bright yellow in the first year, changing to dull yellow the second. Fruit remains on the tree during July and August the second season. Pulp very sweet and juicy, melting and rich in fragrance, and is very palatable, although small in quantity. Contains 20 to 25 large seeds." (*Tamura.*)

9499. CITRUS NOBILIS.

Mandarin orange.

Tamura Unshiu, or seedless mandarin orange, originated by T. Tamura, in the district of Shingai, province of Tosa. "Fruit roundish, oblate, rind thin, somewhat rough, of a bright reddish color. Pulp sweet, subacid, juicy, and seedless. This orange will not keep as well as the true sweet orange, but is one of the best for table use. The quality is very fine." (*Tamura.*)

9500. CITRUS DECUMANA.

Pomelo.

Kawaguchi's Buntan, or seedless pomelo. Produced only in the district of Higashimorokata, in the province of Hiuga, Prefecture Miyazaki. "Fruit medium to large, very oblate, rind thin, smooth, and pale yellow. Pulp sweet, subacid, juicy, of a dull-purplish or light-reddish color, and seedless. Quality good. Excellent for table use and a good keeper." (*Tamura.*) (No. 967, July 5, 1902.)

9501 to 9503. MESEMBRYANTHEMUM sp.

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (Nos. 1140 to 1142, March 11, 1903), April 17, 1903.

A collection of plants presented by Mr. Eustace Pillans, of Rosebank, near Cape Town. The species were undetermined by Mr. Pillans.

9501.

"A strikingly ornamental variety with vivid orange flowers. From Mr. Eustace Pillan's garden at Rosebank." (*Fairchild.*)

9502.

"A variety with striking magenta-colored flowers. A very strong grower. Especially adapted for borders. Flowers in the early South African spring." (*Fairchild.*)

9503.

"A tricolored sort, orange, maroon, and red. Said to be very rare. It has a most striking dewlike sheen on plant and flowers. Is a strong grower." (*Fairchild.*)

9504 to 9553. MANGIFERA INDICA.

Mango.

From Saharanpur, united provinces of Agra and Oudh, India. Received through Mr. W. Gollan, director of the Saharanpur Botanic Garden, April 17, 1903.

A collection of small grafted mango plants as follows, one plant of each variety:

9504.

Arbuthnot.

9507.

Bombay, green. (Dead on arrival.)

9505.

Bhabaurca.

9508.

Bombay, yellow.

9506.

Brindabani. (Dead on arrival.)

9509.

Gapalbhog. (Dead on arrival.)

9504 to 9553—Continued.

- | | | | |
|-------|---|-------|-----------------------------------|
| 9510. | <i>Khapariah.</i> | 9529. | <i>Kochmahua.</i> |
| 9511. | <i>Langra.</i> | 9530. | <i>Kakaria.</i> |
| 9512. | <i>Malda.</i> | 9531. | <i>Kala.</i> |
| 9513. | <i>Salibunda.</i> (Dead on arrival.) | 9532. | <i>Krishnabhog.</i> |
| 9514. | <i>Stalkart.</i> | 9533. | <i>Khajja.</i> |
| 9515. | <i>Strawberry.</i> | 9534. | <i>Samar Chisht.</i> |
| 9516. | <i>Sufaida.</i> | 9535. | <i>Salamar.</i> |
| 9517. | <i>Alfonso.</i> | 9536. | <i>Kistapal.</i> |
| 9518. | <i>Bhurdas.</i> | 9537. | <i>Lamba Bhadra.</i> |
| 9519. | <i>Bulbulchasm.</i> | 9538. | <i>Langra Hardoi.</i> |
| 9520. | <i>Calcuttia amin.</i> (Dead on arrival.) | 9539. | <i>Langra, large.</i> |
| 9521. | <i>Chickna.</i> | 9540. | <i>Maebias.</i> |
| 9522. | <i>Dary's Favorite.</i> | 9541. | <i>Maradabadi amin.</i> |
| 9523. | <i>Faizan.</i> | 9542. | <i>Nijibabadi.</i> |
| 9524. | <i>Fajri, long.</i> | 9543. | <i>Nayale.</i> |
| 9525. | <i>Fajri, round.</i> | 9544. | <i>Nucha.</i> |
| 9526. | <i>Faqirmala.</i> | 9545. | <i>Pyasee.</i> |
| 9527. | <i>Gola.</i> | 9546. | <i>Ramani.</i> (Dead on arrival.) |
| 9528. | <i>Hatijhul.</i> | 9547. | <i>Sanduria.</i> |

9504 to 9553—Continued.

9548.	9551.
<i>Sharbati, brown.</i>	<i>Sunahra.</i>
9549.	9552.
<i>Sharbati, black.</i>	<i>Surkha.</i>
9550.	9553.
<i>Singapur.</i>	<i>Tamancha.</i>

9554. CITRUS AURANTIUM × CITRUS BERGAMIA.

From Mustapha, Algiers, Algeria. Presented by Dr. L. Trabut, Government Botanist. Received April 18, 1903.

Scions of a white orange, a hybrid of the mellarose and orange, said by Dr. Trabut to be of excellent quality. A description of this is published in the "Revue Hort.," of Paris; exact reference not given.

9555 to 9558. BOUGAINVILLEA spp.

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (Nos. 1144 to 1147, March 11, 1903), April 20, 1903.

"Four different varieties of this superb creeper have been collected by Mr. Ardern and planted on his place called the 'Hill,' at Claremont. These differ in their habit of flowering, color of bracts, and vigor, and although probably not new to America, the set is sent for comparison with sorts already known in the gardens of California." (Fairchild.)

9555. BOUGAINVILLEA LATERESIA (?).

Has brick-red bracts and is a vigorous grower. No. 1144.

9556. BOUGAINVILLEA SPECTABILIS.

Has very dark purple bracts. A wonderfully vigorous grower, said to excel the others in its masses of bloom, which are borne for a short period only. No. 1145.

9557. BOUGAINVILLEA GLABRA.

Has very pale, purple bracts, much more so than the two other purple varieties.

9558. BOUGAINVILLEA SANDERIANA.

"A purple-flowered kind, remarkable for its free-flowering habit. It remains in flower much of the year, and although it is not so beautiful as *B. spectabilis* when the latter is in flower, it is preferable because of its constant blooming habit." (Fairchild.)

9559. OLEA VERRUCOSA (?).

Wild olive.

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1148, March 11, 1903), April 20, 1903.

"The native wild olive of South Africa. These cuttings were taken from a tree growing in Mr. Ardern's garden at Claremont. It may be useful for breeding or as a stock in California." (Fairchild.)

9560 to 9568. VITIS VINIFERA.

Grape.

From Khodjent, Russian Central Asia. Received through Mr. E. A. Bessey, from Mr. Valneff, April 20, 1903.

A collection of grape cuttings, as follows:

9560.	9561.
<i>Khusaine.</i>	<i>Sheker-Angur.</i>

9560 to 9568—Continued.

9562.

Kadu-Khusaine.

9566.

Tagobi.

9563.

Davai.

9567.

Khusaine Surkh.

9564.

Chelaki.

9568.

Bobaki.

9565.

Shuvargani.

9569. *GARCINIA* sp. (?).

From Delagoa Bay, East Africa. Received through Messrs. Lathrop and Fairchild (No. 1191, February, 1903), March 21, 1903.

“Seed of a large shade tree growing everywhere about and in the town of Delagoa Bay. The tree is a pretty shade tree, vigorous grower, and an enormous fruit producer. I have seldom seen any wild fruit tree which was so loaded down as the trees of this species are with their small egg-shaped green fruits. I was not able to determine the species of this tree, but according to the surmise of Mr. J. Medley Wood, of the Botanic Gardens of Durban, it is a *Garcinia*, and for that reason, as well as for its value as a shade tree, this is worth introducing into the tropical and subtropical gardens of America. It may be possible to cross this with the mangosteen, although the difference between the species seems very great. From the sour pulp of the fruit the Kaffirs prepare a variety of fermented liquor which they keenly relish. They also eat the fruit pulp fresh.” (*Fairchild.*)

9570. *SOLANUM MURICATUM.*

Pepino.

From Las Palmas, Canary Islands. Received through Messrs. Lathrop and Fairchild (No. 1166, April 6, 1903), April 24, 1903.

Pera Melone. “A seedless fruit plant which is grown on the terraces of Grand Canary and the other islands of the group and on Madeira as well. The fruit tastes like a canteloupe, is the shape of an egg, and when ripe is yellow, striped with splashes of purple. The texture of the yellow flesh resembles that of a ripe pear. The hotel visitors are very fond of this fruit, and it brings a good price in the markets of the island. Here the plants are grown by irrigation and bear in nine months after being planted as cuttings. Artificial fertilizers are used in their culture and the soil is a volcanic one. The fruit may be picked before it is ripe and ripened off the bush. Small shipments have been made to London, which arrived in good condition. This was introduced into California several years ago by Dr. Gustav Eisen and is now grown there.” (*Fairchild.*)

9571. *AVENA* sp.

Mapstone oats.

From Pietermaritzburg, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1104), April 14, 1903.

“A variety of oat which has been a very prolific yielder in numerous trials at Mapstone farm in Natal.” (*Fairchild.*)

9572 to 9574.

From Brookings, S. Dak. Presented by Prof. N. E. Hansen, horticulturist of the South Dakota Agricultural Experiment Station. Received April 17, 1903.

9572. *CITRULLUS VULGARIS.*

Watermelon.

Grown from S. P. I. No. 23. Named *South Dakota* by Professor Hansen.

9573. *ZEA MAYS.*

Corn.

Malakoff sugar corn. Grown from seed imported by Professor Hansen from Moscow, Russia, in 1902.

9574. *DAUCUS CAROTA.*

Carrot.

Kuldja carrot. Grown from S. P. I. No. 1254.

9575. MUSA SAPIENTUM.

From Las Palmas, Canary Islands. Received through Messrs. Lathrop and Fairchild (No. 1168, April 12, 1903), April 27 and May 6, 1903.

Datile. "Young buds from the base of some banana plants in Mr. Nelson's garden in Las Palmas, which the gardener says came from Cuba several years ago. The fruit of this 'date' banana is very small, not over an inch or so long, it is said, but of unusual sweetness, though inclined to be dry. This may be of use for breeding purposes. The plants are small in size and do not seem very vigorous." (*Fairchild*.)

9576. VITIS VINIFERA.**Grape.**

From Old Bokhara, Turkestan. Received through Mr. E. A. Bessey from Mr. Voronov, the representative of Mr. H. W. Dürschmidt (No. 114, August 27, 1902), April 29, 1903.

Kishmish. "A white (i. e., very light green) seedless grape, considered to be the best of the sorts grown near Bokhara. The berry is rather small, with a slight amount of bloom, short elliptical in outline, about one-half inch long and three-eighths inch wide, very thin skinned, with a moderately firm, juicy flesh and sweet taste, modified by the presence of sufficient acid to prevent its being insipid. The bunch is large, firm, and compact, and weighs one-half a pound to a pound. I fear that if once attacked by Anthracnose, *Plasmopara*, or Black Rot, the berries are so closely packed that the whole bunch would be destroyed, as without great care in spraying it would be impossible to properly reach the inner berries of the bunch. This variety was also seen in Ashkabad, where it is said to be of Persian origin. It is rather rare here." (*Bessey*.)

9577. VITIS VINIFERA.**Grape.**

From Old Bokhara, Turkestan. Received through Mr. E. A. Bessey from Mr. Voronov, the representative of Mr. H. W. Dürschmidt (No. 115, August 27, 1902), April 29, 1903.

Khusaini (Khoosá-eenee). "A light-green grape, considered to be one of the best, but inferior in quality to *Kishmish*, No. 9576, and *Ok Uziüm*, No. 9578. One of the most abundant varieties on the market. Very productive. Berries light green, without bloom, often tinged with a very faint red color on the sunny side, elongated elliptical in outline, an inch to 1½ inches long by one-half to five-eighths inch in short diameter. Usually truncated at the base and shortly rounded at the apex. Often slightly larger near the base. Seeds usually only two, situated about one-third of the distance from the base to apex (rarely central). Skin thin and tender; flesh juicy and tender, but firm. Sweet and slightly acid—too little acid for some people's taste. Bunches large (three-fourths to 1 pound or more), loose, rather long; would be easy to spray." (*Bessey*.)

9578. VITIS VINIFERA.**Grape.**

From Old Bokhara, Turkestan. Received through Mr. E. A. Bessey from Mr. Voronov, the representative of Mr. H. W. Dürschmidt (No. 116, August 27, 1902), April 29, 1903.

Ok Uziüm (meaning *White grape*). "A white (i. e., light green) grape, very abundant on the markets of Old Bokhara. Considered by some to be of better quality than *Khusaini*, No. 9577, but I consider it inferior. Berries light green, with bloom, round, five-eighths to three-fourths inch in diameter, with usually three rather small seeds. Skin thin but tough, and with a slightly astringent taste, which makes it necessary to avoid chewing the skin much. Flesh firm but tender and juicy, sweet but with slight acid flavor, and superior in this respect to that of *Khusaini*, if care is taken not to chew the skin. Bunches large (1 to 1½ pounds), very compact, with a pronounced shoulder. Apparently would be difficult to spray properly, but not so difficult as *Kishmish*, No. 9576." (*Bessey*.)

9579. VITIS VINIFERA.**Grape.**

From Old Bokhara, Turkestan. Received through Mr. E. A. Bessey from Mr. Voronov, the representative of Mr. H. W. Dürschmidt (No. 117, August 27, 1902), April 29, 1903.

Shuborgónyi. "An almost black grape with a faint bloom. Quite rare in the markets. Considered inferior to *Kishmish*, No. 9576, and *Ok Uziüm*, No. 9578. Berries

elliptical, small to medium, usually one-half to five-eighths inch long by three-eighths inch thick, sometimes larger. Flesh actually almost colorless, but appearing dark on cutting open, because of the dark skin and colored layer immediately below it. Skin rather tender; only very slightly, or not at all, astringent. Flesh quite firm, juicy, and sweet. Seeds none or, if present, so tender that they are not noticeable on chewing, having no hard coat. Bunches rather small, not over one-half pound, with a pronounced shoulder, rather loose, and easy to spray. Except that it stains the fingers and mouth, I consider this variety superior to *Ok Uzium*, No. 9578, and *Kishmish*, No. 9576." (*Bessey.*)

9580. SALSOLA ARBUSCULA.

From Chardjui, Russian Central Asia. Received through Mr. E. A. Bessey from Mr. V. Paletzky, forester, of Chardjui (No. 194, October 3, 1902), May 1, 1903.

"This plant is one of the best sand binders in this region. It forms a large shrub, or even small tree, 15 to 20 feet high. It grows without irrigation in sand in a very hot region where no rain falls from April to November. In the winter it endures severe cold. This plant can be propagated either by seed (sown from January to March) or cuttings (also planted in early spring). In either case a stand of about 40 per cent is obtained. If grown along with *Aristida pennata* var. *Karelini*, No. 9582, it seeds itself in the tufts of the latter, and soon is able to take care of its own dissemination." (*Bessey.*)

9581. HALOXYLON AMMODENDRON.

From Chardjui, Russian Central Asia. Received through Mr. E. A. Bessey from Mr. V. Paletzky, forester, of Chardjui (No. 195, October 3, 1902), May 1, 1903.

"This plant often becomes a tree 20 to even 30 feet high, with a trunk 15 to 18 inches in diameter near the base. It requires a clay subsoil which holds some moisture. It is very hard to establish, but when once started is valuable as a sand binder. It will not endure salt." (*Bessey.*)

9582. ARISTIDA PENNATA VAR. KARELINI.

From Chardjui, Russian Central Asia. Received through Mr. E. A. Bessey from Mr. V. Paletzky, forester, of Chardjui (No. 196, October 3, 1902), May 1, 1903.

"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* (No. 9580) and *Calligonum* sp. (Nos. 9583 to 9594) 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." (*Bessey.*)

9583 to 9594. CALLIGONUM sp.

From Chardjui, Russian Central Asia. Received through Mr. E. A. Bessey from Mr. V. Paletzky, forester, of Chardjui (No. 197, October 3, 1902), May 1, 1903.

9583. CALLIGONUM ARBORESCENS and C. CAPUT-MEDUSAE.

"A mixture of these two species. These two are the best of the *Calligonum*s for sand-binding purposes. They form small trees. They are superior to *Salsola arbuscula* in that when planted from seeds or from cuttings 90 per cent grow, inferior in that they do not reseed themselves very well." (*Bessey.*) (No. 197, October 3, 1902.)

Additional species sent by Mr. Paletzky.

9584. CALLIGONUM ACANTHOPTERUM, BORSCH. VAR. SETOSA.

9583 to 9594--Continued.

9584a. *CALLIGONUM ACANTHOPTERUM*, Borscz. var. *SETOSA*.

9584b. *CALLIGONUM ACANTHOPTERUM*, Borscz. var. *SETOSA*.

(These three packages were kept separate because of a slight variation in the appearance of the seeds.)

9585. *CALLIGONUM ARBORESCENS*, sp. nov.

9586. *CALLIGONUM ARBORESCENS* × *C. ACANTHOPTERUM*.

9587. *CALLIGONUM CALLIPHYSA*.

9588. *CALLIGONUM CAPUT-MEDUSAE*.

9588a. *CALLIGONUM CAPUT-MEDUSAE* var. *RUBICUNDA*.

9589. *CALLIGONUM COMOSUM*.

9590. *CALLIGONUM DENSUM*.

9591. *CALLIGONUM ERIPODUM*.

9592. *CALLIGONUM MICROCARPUM*.

9593. *CALLIGONUM PALLASII*.

9594. *CALLIGONUM ROTULA*.

9595. *CITRUS AURANTIUM*.

Orange.

From Las Palmas, Canary Islands. Received through Messrs. Lathrop and Fairchild (No. 1171, April 14, 1903), May 1, 1903.

Telde. "Considered the finest variety in Grand Canary and superior to those grown in the central part of the island. These latter, it may be remarked, are considered by Mr. Lathrop and myself some of the finest flavored oranges which we have ever eaten, being characterized by a freedom from fiber, a crisp texture of flesh, and an indescribably vinous flavor. The variety is medium in size, thin skinned and seeded. The color of the flesh varies, but in the best specimens is a shade of dark orange. The juiciness is phenomenal, and though the fruit varies greatly in flavor and color it is uniformly good and sweet. Any collection should be glad to get this variety. Its origin is unknown as far as I can discover. The name is that of the village where the fruit is grown, some 8 miles from Las Palmas." (*Fairchild*.)

9596. *CITRUS AURANTIUM*.

Orange.

From Las Palmas, Canary Islands. Received through Messrs. Lathrop and Fairchild (No. 1172, April 14, 1903), May 1, 1903.

Canary seedless. "Scions from two trees which are growing on the estate of Don Juan Rodriguez, in the famous orange region along the *Barranco de la Higuera de Canaria*. These trees are reputed to produce only fruit that is absolutely seedless, and though they are very old trees they have never, so far as we could learn, produced fruits with more than the rudiments of seeds in them. No fruits were on the trees when these cuttings were taken, so the statement as to their seedlessness is that of the renter of the place, Sig. Rivero. If this orange is seedless, as claimed, and of a quality equal to the other varieties of the same locality, as is affirmed by the cultivator, the sort is well worth thorough investigation and comparison with the navel orange now grown in California. It is, I believe, a smaller sort, and may prove superior in flavor. The excellence of these oranges from this region, which is the most noted in the islands, is attested by Mr. Lathrop, who thinks them equal to the best." (*Fairchild*.)

9597. CITRUS AURANTIUM.**Orange.**

From Las Palmas, Canary Islands. Received through Messrs. Lathrop and Fairchild (No. 1172a, April 14, 1903), May 1, 1903.

Canary seedless. "Scions of a variety of seedless orange likely to prove the same as No. 9596, but taken from a much younger tree than the latter that grew a short distance away from the two old trees mentioned under No. 9596. We have taken the liberty of naming this and the previous variety the *Canary seedless.*" (Fairchild.)

9598. PLOCAMA PENDULA.

From Las Palmas, Grand Canary, Canary Islands. Received through Messrs. Lathrop and Fairchild (No. 1173, April 14, 1903), May 1, 1903.

"A species of low-growing shrub which occurs wild on the slopes of the arid hillside near the road from Las Palmas to Telde. It has a most beautiful weeping habit, giving the plants the appearance of tiny weeping willows. It is not over 2½ to 3 feet high. This would be very beautiful as a cover for dry hillsides overlooking the sea. It has already been brought into greenhouse culture. I believe it will withstand severe drought." (Fairchild.)

9599. MANGIFERA INDICA.**Mango.**

From the Philippine Islands. Received through Prof. W. S. Lyon, in charge of seed and plant introduction, Insular Bureau of Agriculture, Manila, May 4, 1903.

"One seed of mango No. 2. The fruit from which this seed was taken weighed 16 ounces. When still wet and fresh the seed weighed only 1 ounce, making more than 93 per cent of the flesh available, exclusive of a very thin and light rind." (Lyon.)

9600. PHOENIX DACTYLIFERA.**Date.**

From Marseille, France. Received through Champagne Bros., Ltd, May 4, 1903, 264 pounds dried Deglet Noor dates, purchased at the request of Mr. W. T. Swingle. (No. 130.)

"Dry Deglet Noor dates from the Sahara suitable for planting. Planting is best done after the ground gets warm in April or May on alkali-free soil with abundant irrigation. This superb variety can be propagated with certainty only by means of offshoots, but as these are now very difficult to obtain, it is desirable to grow seedlings in the hope of securing some that will prove equal to the parent sort in quality. About half the seedlings are generally males and one in ten can be counted on to yield good dates. It is not unreasonable to expect that some of the seedlings may be as good as the Deglet Noor, and ripen earlier, which will permit of their culture in the Salt River Valley, Arizona." (Swingle.)

9601. IRIS sp.

From Monte, Grand Canary, Canary Islands. Received through Messrs. Lathrop and Fairchild (No. 1174, April 17, 1903), May 4, 1903.

"A very beautiful white iris of unusual size (5 inches in diameter), which is fragrant. This grows wild in certain barrancos of Grand Canary, and Mr. Alaricus Delmar, of Monte, called it to our attention. He sent plants to English florists who declared it was new, but the plants failed to live. Its great size and the purity of its white color and its delicate perfume, like that of a lily, make it a desirable introduction, although specifically it may not be new to America." (Fairchild.)

9602. HEDERA HELIX var. CANARIENSIS.**Ivy.**

From Monte, Grand Canary, Canary Islands. Received through Messrs. Lathrop and Fairchild (No. 1175, April 17, 1903), May 4, 1903.

"An exceedingly vigorous, very large-leaved variety of ivy, which grows wild in the Canary Islands. The leaves are sometimes 6 to 8 inches across. It may not retain this character of large leaves, but it is worthy of trial or for breeding purposes." (Fairchild.)

9603. DRACUNCULUS CANARIENSIS.

From Monte, Grand Canary, Canary Islands. Received through Messrs. Lathrop and Fairchild (No. 1176, April 17, 1903), May 4, 1903.

"A giant aroid with spathes sometimes 14 to 16 inches long. Yellowish or greenish in color. Leaves deeply lobed and ornamental. Grows 6 to 8 feet in height in moist places in the mountains of Grand Canary. Might prove useful for breeders of the calla lily because of its large size. This was called to our attention by Mr. A. Delmard, of Monte." (*Fairchild.*)

9604. PORTULACARIA AFRA.**Spek-boom.**

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1130, March 8, 1903), May 6, 1903.

Spek-boom. "This bush, which grows sometimes 12 to 15 feet high, forms one of the most valuable fodder elements of the northeastern Karroo, in Cape Colony. It is a succulent-leaved species, greedily eaten by horned stock, and well worth thorough trial in the frostless, dry lands of our southwestern States. The cuttings should be placed in the hands of the gardeners of a few interested ranch owners and at the experiment stations in the States where the plant is likely to prove of value, with the understanding that they are to be grown and multiplied and small patches of mother plants started from which cuttings can be taken. The cuttings and young plants must be protected from gophers, rats, mice, or prairie dogs until several years old. At least the mother plantations should be so protected. This is not a desert plant, but simply a species which has the power to withstand a long, dry season, and because of the avidity with which live stock eat its leaves and stems it is worth acclimatizing in the frostless regions of America. It thrives best on rocky slopes and needs protection from the wind by wind-breaks. These cuttings were made from a tree growing in the grounds of the South African Museum, in Cape Town, which tree was planted many years ago by Professor MacOwan. They are a gift to the American ranchman from this veteran Cape botanist who has done so much to call attention to the good qualities of the *Spek-boom*. The climate of the region in which the tree lives is illustrated by these figures: Absolute maximum temperature for ten years (1881-1890), 108° F., absolute minimum, 21° F. Rainfall average for ten years, 18.76 inches per annum, occurring in the warm season." (*Fairchild.*)

9605. PORTULACARIA AFRA.

From Oatlands, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1155, March 16, 1903), May 6, 1903.

Spek-boom. "These cuttings came from the typical Karroo, where the plant is highly prized for fodder purposes. It may prove slightly different from those taken from a tree in Cape Town, No. 9604. These cuttings were collected by Mr. Nash, of the Cape department of agriculture, and secured through Mr. Davison, chief sheep inspector of the department." (*Fairchild.*) (For description see No. 9604.)

9606. ANANAS SATIVUS.**Pineapple.**

From Lower Albany, Trapps Valley, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1154, March 16, 1903), May 6, 1903.

Natal. "This is evidently the same variety of pineapple as No. 9485. Fresh pineapples from this region which we tested were not as fine flavored as those we ate in Natal, but the fact that they had been picked green should be taken into consideration. Should it grow as well in Florida as it does here it would prove a great success. Secured through the kindness of Mr. Eustace Pillans, agricultural assistant of Cape department of agriculture, from C. J. Ansley, Trapps Valley, Cape Colony." (*Fairchild.*)

9607. VITIS RUPESTRIS VAR. METALLICA.**Grape.**

From Cape Town, South Africa. Presented by the Cape department of agriculture through Messrs. Lathrop and Fairchild (No. 1137, March 10, 1903). Received May 6, 1903.

"A resistant American stock of South African origin, which has proved itself most admirably suited to the conditions at the Cape, and especially adapted to 'any loose

soil, loam, gravel, or sand, and also in dry, open heavy soils; it can, besides, stand a fair amount of moisture in loose soils. It forms an excellent graft-bearer for all varieties of European vines, except *Hanepoot*, and possibly also other members of the *Muscat* family.' (cf. J. P. de Waal, in the *Agricultural Journal*, Cape of Good Hope, December 19, 1901, p. 838.) This variety, I am informed by Mr. Eustace Pillans, is the best of all the resistant stocks yet tried at the Cape, as its ease of grafting, great vigor, suitability to different kinds of soil, and grafting affinity for all but varieties of the *Muscat* type, make it a general stock of great value. Even those who do not claim that it exceeds in vigor any other sort, admit that it is the easiest grafted of any of the American stocks. The stock originated at Groot Constantia Wine Farm in a lot of seedlings from seed sown in 1886. It is uncertain whether the seed came direct from America or from France. This is entirely distinct, according to Mr. J. Bioletti (formerly of Berkeley University, California, now at Elsenburg Agricultural School), from the *Metallica* of French vineyardists. Its name applies to the luster of its foliage. The seedling was picked out in 1894, and by quick propagation in 1901 yielded 687,000 cuttings, and in 1902, 864,000 cuttings were distributed. It has been tested side by side with many French stocks, such as *Aramon rupestris*, *Riparia Gloire de Montpellier*, etc., and takes its place as their equal in all points and their superior as regards ease of propagation and suitability to the varieties of soil mentioned. Mr. Pillans goes so far as to predict that it will drive all other stocks out of South Africa, except for *Muscat* sorts. He claims for it a remarkable yielding power, extreme vigor, and resistance to the phylloxera. Mr. Bioletti admits its excellent qualities and practical growers are enthusiastic over it. This is well worth the serious consideration of Californian vine growers. The originators of this remarkable seedling are Messrs. J. P. de Waal and Eustace Pillans, of the Cape of Good Hope department of agriculture, and its trial in California should be made at once. We are indebted to Mr. Pillans for the plants sent." (*Fairchild*.)

9608. CHLORIS VIRGATA.

Rhodes grass.

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1131, March 8, 1903), May 6, 1903.

"A species of pasture grass that, although scattered widely through the Tropics of both hemispheres (according to the books), has probably not before been brought into culture. Mr. Cecil Rhodes had the seed of this plant collected several years ago and sown in large patches on his place near Cape Town, called 'Groote Schur.' The grass has done well there, forming heavy sods of a good herbage, and the manager of Mr. Rhodes's farm has had the seed collected and distributed among the planters of the colony, by whom it is called 'Rhodes grass.' From what I saw of these patches on the slopes of a hillside, I do not believe this is a drought resistant form; at least it is not able to withstand very severe dry weather. It has the typical finger-like inflorescence of the genus and its strong, tough, creeping stems lie flat on the ground. When given sufficient moisture the grass is said to produce a mass of forage over 2 feet high, but what it would do if subjected to severe drought has yet to be found out. I saw a single patch which had been sown with the seed and had failed to take, and it was evident that the drought-resisting powers of the plant are quite limited. However, a grass which has attracted the attention of so keen a cultivator as Mr. Rhodes and is meeting with favorable comment from many practical men here at the Cape deserves a thorough trial in America. As the species is a perennial it need only be tested in frostless or nearly frostless regions. Its fodder value will be much inferior to alfalfa, but it will thrive on soil with little lime in it. This seed was given Mr. Lathrop for distribution in America by the steward of Mr. Rhodes's estate, and in case it succeeds, the Chartered South African Company, at Cape Town, should be notified of the success it attains." (*Fairchild*.)

9609. TRITICUM JUNCEUM.

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1136, March 9, 1903), May 6, 1903.

"A grass which is a native of North Africa and Europe, and is used as a sand binder here in Cape Colony. Mr. Hutchins, conservator of forests of the colony, to whom we are indebted for the seed, has found this species especially serviceable in experiments near the seashore. Von Müller remarks that it is one of the best grasses to keep rolling sand ridges together. Probably this has already been tried in America, but this South African seed may be of a different strain." (*Fairchild*.)

9610. *MUSA SAPIENTUM*.

Banana.

From Las Palmas, Grand Canary, Canary Islands. Received through Messrs. Lathrop and Fairchild (No. 1169, April 12, 1903), May 6, 1903.

Manzana or *Silver*. "Young shoots from the base of a few plants of the *Silver* banana of Madeira, which variety is thought by the residents of this island to be a very superior sort and to have originated in Madeira. The fruits which we tasted were good, but not remarkable. They had an acid flavor, were juicy, had light-colored flesh, and though very refreshing as a change from the ordinary type of banana, were not especially to be recommended." (*Fairchild*.)

9611. *STRYCHNOS SPINOSA* (?)

Kafir orange.

From Mozambique, East Africa. Received through Messrs. Lathrop and Fairchild (No. 1103, February 8, 1903), May 6, 1903.

"Seed (*poisonous*) of the Kafir orange, a native fruit of Portuguese East Africa. The tree is grown in Delagoa Bay only occasionally, and the Kafirs crack open the calabash-like fruit and eat the brown, plum-like flesh which surrounds the many flat angular seeds. These seeds are said to be very *poisonous*, but the flesh is quite refreshing. That of the specimen which we tasted was like a brandied peach into which cloves had been stuck. The spicy aroma of the fruit is perceptible before the hard shell has been broken open and forms one of its best characteristics. The fruits are cannon ball shaped and very heavy, and the green shell is so hard that it has to be broken with a heavy blow. It is in many ways a remarkable fruit, and although the data regarding it are meager it is well worth a place in Porto Rico, Florida, and Hawaiian gardens." (*Fairchild*.)

9612. *CARISSA ARDUINA*.

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1110, February 26, 1903), May 6, 1903.

"A beautiful, thorny, evergreen shrub, suited to frostless regions. It would be suited for hedge making and as an ornamental, for its white flowers and oblong, bright red fruits show off strikingly against its dark-green foliage. Like *Carissa grandiflora*, its fruits, resembling a large barberry fruit, are good to eat, having a sweet, fresh, but somewhat characterless taste. Standing alone this species produces a prettier shaped shrub than *C. grandiflora* and is well worth the attention of gardeners in California and Florida. These seeds are from fruit gathered in the municipal gardens in Cape Town. Breeders should be encouraged to try crossing these two species. There are other representatives of the genus in South Africa which might be used in breeding experiments. *C. acuminata*, A. D. C., is listed for Natal by J. Medley Wood in his 'Indigenous Plants of Natal;' von Mueller lists *C. brownii*, F. V. M., from East Australia, and *C. carandas* L., from India to China. All these species have edible fruits." (*Fairchild*.)

9613. *MEDICAGO ARBOREA*.

Tree lucern.

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1111, March 3, 1903), May 6, 1903.

"Seed of the *Tree lucern*, which is said to occur in southern Europe, especially in Greece. It is, according to von Mueller in his 'Extra Tropical Plants,' page 300, the 'Cytisus' of the ancient Greeks and Romans. The plant forms a shrub 7 to 8 feet high with thick, woody stems 3 inches in diameter, which sprawl more or less over the ground. These seeds are from a single specimen in the Municipal Gardens at Cape Town, and Professor MacOwan informs me that the plant has not attracted much attention here as a fodder plant, though it grows well. For plant breeders only who are at work on the genus *Medicago*." (*Fairchild*.)

9614. *SOLANUM* sp.

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1112, March 3, 1903), May 6, 1903.

"Seed of a tree *Solanum*, of decided ornamental value, which is growing in the Municipal Gardens at Cape Town and which has never been specifically determined.

Its origin also is not known, according to Professor MacOwan. It should be sent for trial to the frostless regions of America and distributed among the superintendents of parks and public gardens and private ornamental plant growers. Its upright stem, spiny, broad leaves, and horizontal branches make it effective." (*Fairchild.*)

9615. PORTULACARIA AFRA.

From Cape Town, South Africa. Presented by Prof. P. MacOwan, Government Botanist, through Messrs. Lathrop and Fairchild (No. 1113. Received March 3, 1903), May 6, 1903.

Spek-boom. "Seed of this interesting fodder plant. (See Nos. 9604, 9605)." (*Fairchild.*)

9616. HARPEPHYLLUM CAFFRUM.

Kafir plum.

From Cape Town, South Africa. Presented by Prof. P. MacOwan, Government Botanist, through Messrs. Lathrop and Fairchild (No. 1114, March 5, 1903). Received May 6, 1903.

"One of the prettiest evergreen shade trees to be seen in the gardens of Cape Town. Prof. P. MacOwan has planted a row of these trees in a very windy situation near the parliament buildings in Cape Town and they are admirably suited to such a trying situation, where they are whipped by continuous winds which blow from various directions. Professor Sim remarks that its timber resembles mahogany and is used for wagon making, being called *eschenhout* by the Dutch. The red, showy drupes are suitable for preserves, but in the Cape they are apparently not popular though they have a pleasant acid taste, but little pulp. The branches are sometimes planted as fence poles and these large 'cuttings' take root and form trees. [*Sim.*] Professor MacOwan recommends this heartily as a shade tree for windy situations, where its beautiful dark green foliage forms a dense shade. The tree will thrive in the frostless belt of California and Florida and is sure to be appreciated by owners of parks as an avenue plant. The seeds should be sown in a seed bed and plants transplanted to situations desired. It is not a desert plant, but will stand some drought. This tree is worthy a prominent place in the gardens and parks of California and Florida." (*Fairchild.*)

9617. SOLANUM ACULEASTRUM.

Natal thorn.

From Cape Town, South Africa. Presented by Prof. P. MacOwan, Government Botanist, through Messrs. Lathrop and Fairchild (No. 1115, March 8, 1903). Received May 6, 1903.

"An ornamental species with very large fruits, grows 6 feet high if grown singly or 4 to 4½ feet if in a hedge, for which latter purpose it is used by the farmers. Very acutely hook-thorned, rather disposed to use up too much space if left alone. The fruit is the size of a mandarin orange. It will not bear more than a short and slight frost. To be sent to Texas, Arizona, and California gardens." (*Fairchild.*)

9618. PASPALUM DIGITARIA.

From Cape Town, South Africa. Presented by Prof. P. MacOwan, Government Botanist, through Messrs. Lathrop and Fairchild (No. 1128, March 8, 1903). Received May 6, 1903.

"Seed of a grass, which, according to Prof. P. MacOwan, is promising for moist bottom land. It will not endure cold weather, but is suited to subtropical conditions." (*Fairchild.*)

9619. PENTZIA VIRGATA.

From Cape Town, South Africa. Presented by Prof. P. MacOwan, Government Botanist, through Messrs. Lathrop and Fairchild (No. 1129, March 9, 1903). Received May 6, 1903.

"Old seed of the fodder bush called the *Goed Karroo*. This is the best plant in the Karroo for sheep pasturage, for it furnishes good fodder, binds the sand, preventing gullyng, and withstands drought. (*Fairchild.*)

9620. EUCLEA RACEMOSA.

From Cape Town, South Africa. Presented by Prof. P. MacOwan, Government Botanist, through Messrs. Lathrop and Fairchild (No. 1132, March 9, 1903). Received May 6, 1903.

"A shrub with dense, dark-green foliage, of distinctly ornamental appearance, which is especially suited for plantings near the sea that are exposed to salt spray, with the purpose of lifting the wind from the surface of the soil and checking the shifting of the sands. In experiments of fixing sand dunes this plant may prove of decided value, not so much through the action of its roots as by the formation of a cover for the sand, which will lift the wind above its surface. Strongly recommended by Professor MacOwan in his recommendations to the Cape government on the rebushing of an overstocked island off the coast called Robbin Island. This seed should be planted in a seed bed and the young plants set out when of sufficient size to bear transplanting well." (*Fairchild.*)

9621. MYOPORUM INSULARE.

From Cape Town, South Africa. Presented by Prof. P. MacOwan, Government Botanist, through Messrs. Lathrop and Fairchild (No. 1133, March 8, 1903). Received May 6, 1903.

"An extra tropical Australian tree called in South Africa *Australian blueberry*, and used there as a hedge plant or as an ornamental tree. It is proof against sea breezes, can be propagated by cuttings, grows rapidly, and will thrive down to high-tide mark. It is one of the few trees which will grow in wet saline soil. The wood is close grained and good for cabinet making." (*Fairchild.*)

9622. COTYLEDON TERETIFOLIA.

From Cape Town, South Africa. Presented by Prof. P. MacOwan, Government Botanist, through Messrs. Lathrop and Fairchild (No. 1134, March 8, 1903). Received May 6, 1903.

"Seeds of a *Cotyledon* from Grahamstown, Great Kirch River. This is a hothouse plant." (*Fairchild.*)

9623. CEPHALANDRA QUINQUILOBA.

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1135, March 8, 1903), May 6, 1903.

"A cucurbitaceous plant of ornamental value, running over the ground and bearing pretty yellow flowers and red fruits. It should be tried in southern California as an arbor plant mixed with other more dense shade-giving species. Probably a tender species." (*Fairchild.*)

9624. EUCALYPTUS FICIFOLIA.

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1157, March 16, 1903), May 6, 1903.

"Seed from some trees growing on Cecil Rhodes's place, Groote Schur. I have never seen in any landscape more gorgeous dashes of color than those produced by these trees when in bloom. The colors vary from salmon or pale pink to deep scarlet. This tree is probably known in California, perhaps under another specific name." (*Fairchild.*)

9625. PITTOSPORUM PENDULUM.

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1158, March 16, 1903), May 6, 1903.

"Seed of a remarkably grotesque tree growing in the municipal gardens at Cape Town. It has long slender branches which hang like those of a weeping willow. Its trunks are weird and irregular in form and give to the tree a most singular appearance. This is worthy of trial in such parks as the Golden Gate Park, of San Francisco." (*Fairchild.*)

9626. CUCURBITA MELANOSPERMA.**Squash.**

From San Antonio, Malta. Received through Messrs. Lathrop and Fairchild (No. 1159, December 27, 1902), May 6, 1903.

"Dr. Giovanni Borg, director of the gardens at San Antonio, called our attention to this squash as the best one for soups and as a vegetable which he had ever tested on the island. The plant also grows luxuriantly in Madeira, where it is highly prized as a vegetable. Doctor Graham, of Funchal, remarked that it formed one of the principal foods of the native poor people. It should be given a good test by seedsmen." (*Fairchild.*)

9627. LUPINUS ALBUS (?).

From Tripoli or Tunis. Received through Messrs. Lathrop and Fairchild (No. 1160, December 1902), May 6, 1903.

"A few peculiar lupines picked up either in Tunis or Tripoli. They may be of interest to those experimenting with this plant as a green manure crop." (*Fairchild.*)

9628 to 9631.**Ornamentals.**

From Cape Town, South Africa. Received through Messrs. Lathrop and Fairchild (Nos. 1162 to 1165, March 16, 1903), May 6, 1903.

Seed of several ornamentals presented by Mr. H. J. Chalvin, superintendent of the municipal gardens at Cape Town, as follows:

9628. COTYLEDON SP.

Various species. Mixed seed.
(No. 1162.)

9630. GASTERIA CROUCHERI.

(No. 1164.)

9629. ASPARAGUS PLUMOSUS.

(No. 1163.)

9631. MORAEA PAVONIA.

(No. 1165.)

9632 and 9633.

From Port Elizabeth district, South Africa. Received through Messrs. Lathrop and Fairchild, May 6, 1903.

9632. EUPHORBIA CORONATA.

A few seeds.

9633. LEUCADENDRON ARGENTEUM.**Silver tree.**

"Planted in a pot closely and allowed to grow up thickly, the silver tree is said to form a very pretty pot plant. Difficult to transplant." (*Fairchild.*)

9634. ANANAS SATIVUS.**Pineapple.**

From Trapps Valley, South Africa. Received through Messrs. Lathrop and Fairchild (No. 1156, March 16, 1903), May 15, 1903.

Natal. "These are probably in no way different from No. 9606, and were intended to be shipped with them, but arrived too late. Secured through the kindness of Prof. C. P. Lounsbury, entomologist of the Cape department of agriculture, from a plantation near Trapps Valley.

9635 to 9660. GOSSYPIUM BARBADENSE.**Egyptian cotton.**

From Egypt. Received through Mr. Thomas H. Kearney, May 16, 1903.

9635.

Extra Fine Mit Afifi. Purchased from Robin Carver, Kafr-el-Zayat.

9636.

Ashmuni. Purchased from Carver Brothers & Co., Beni-Suef.

9635 to 9660—Continued.

9637 to 9660.

Purchased from Choremi Benachi & Co., Alexandria.

9637.

Mit Afifi. First picking, from Behera Province.

9638.

Mit Afifi. Second picking, from Behera Province.

9639.

Mit Afifi. From Charkieh Province.

9640.

Mit Afifi. From Dakahlieh Province.

9641.

Mit Afifi. From Kalioubieh Province.

9642.

Mit Afifi. First picking, from Kalioubieh Province.

9643.

Mit Afifi. First picking, from Gharbieh Province.

9644.

Mit Afifi. Second picking, from Gharbieh Province.

9645.

Mit Afifi. First picking, from Menufieh Province.

9646.

Jannovitch. First picking, from Behera Province.

9647.

Jannovitch. From Charkieh Province.

9648.

Jannovitch. From Dakahlieh Province.

9649.

Jannovitch. First picking, from Gharbieh Province.

9650.

Jannovitch. Second picking, from Gharbieh Province.

9651.

Abbasi. First picking, from Behera Province.

9652.

Abbasi. Third picking, from Behera Province.

9653.

Abbasi. From Charkieh Province.

9654.

Abbasi. From Dakahlieh Province

9635 to 9660—Continued.**9637 to 9660—Continued.****9655.***Abbasi.* Third picking, from Kalioubieh Province.**9656.***Abbasi.* Second picking, from Kalioubieh Province.**9657.***Abbasi.* First picking, from Gharbieh Province.**9658.***Abbasi.* Second picking, from Gharbieh Province.**9659.***Abbasi.* First picking, from Menufieh Province.**9660.***Abbasi.* Second picking, from Menufieh Province.**9661 and 9662.****Ornementals.**

From Funchal, Madeira. Received through Messrs. Lathrop and Fairchild (Nos. 1177 and 1178, April 21, 1903), May 18, 1903.

9661. STREPTOSOLON JAMESONII.

"This is one of the showiest flowering shrubs I have ever seen. It is a native of South Africa and there and in Madeira the bushes are covered with dense masses of yellow and orange colored blooms. Already known in California." (*Fairchild.*) (No. 1177.)

9662. BIGNONIA CHAMBERLAYNII.

"A beautiful lemon yellow flowering species, which grows to perfection here on walls and trellises. It is covered with masses of big trumpet-shaped flowers." (*Fairchild.*) (No. 1178.)

9663. PERESKIA ACULEATA.

From Funchal, Madeira. Received through Messrs. Lathrop and Fairchild (No. 1183, April, 1903), May 18, 1903.

"Cuttings of this member of the cactus family, which is used for a stock on which to graft cacti. As a stock it is well known, but as an ornamental climber probably less well known. In Funchal a single plant, 3 years old, had covered the front fence of a private house with a wealth of beautiful foliage. It was loaded with one-seeded fruits, which, though edible, had little taste. Already known in California." (*Fairchild.*)

9664. CANARINA CANARIENSIS (?).

From Funchal, Madeira. Received through Messrs. Lathrop and Fairchild (No. 1185, April, 1903), May 16, 1903.

"Seed of a pretty creeper, native of the Canaries and deriving its generic name from the islands. It has luxuriant light-green foliage and bears bell-shaped orange-red flowers which are quite showy. It requires much moisture and grows naturally in shaded valleys of the Canaries. These seed came from the villa of Mr. Reid, some distance above the town of Funchal, in Madeira. Should thrive in Florida and possibly in southern California. Sometimes grown as a hothouse plant." (*Fairchild.*)

9665. CANNABIS SATIVA.**Hemp.**

From Yokohama, Japan. Received through The Yokohama Nursery Company, 21-35 Nakamura, Yokohama, Japan, May 20, 1903.

Aizu.

9666 and 9667.

From Surat Government farm, India. Received May 11, 1903.

9666.

Unmated seed.

9667. ORYZA SATIVA.

Rice.

9668. HELIANTHUS ANNUUS.

Sunflower.

From Moscow, Russia. Received through Mr. E. A. Bessey from E. Immer & Son, May 22, 1903.

White-seeded variety, grown for oil making.

9669. MANGIFERA INDICA.

Mango.

From Beira, Portuguese East Africa. Received through Messrs. Lathrop and Fairchild (No. 1089, January 28, 1903), May 25, 1903.

Lathrop. "During a trip down this East African coast seven years ago, Mr. Lathrop found at Beira a few mangoes of such extraordinarily fine quality that he has often spoken of them as a possibly valuable present to the mango growers of America. We reached Beira at the end of the season for this mango and could only secure one fruit of it to test and one seed of another fruit. The fruit eaten, which was given us by the American consul, Mr. Glenn, was of exquisite flavor and as free from fiber as a firm custard. The seed of this fruit and the other seed of the same variety are labeled No. 1091, L. & F., S. P. I. No. 9486. The following scanty information was obtainable about this mango: On the island of Chiloane, some 60 miles south of Beira, a monastery was established by the Portuguese several centuries ago. This monastery has been abandoned for many years, a century or more, we are told. Long after that time some fishermen found mango trees growing in the abandoned garden of the once monastery and brought the fruit to Beira. Since then small lots of this fruit are brought from Chiloane by any fishing boat passing during the mango season. The repute of this mango has spread along the African coast as being far superior to any other variety grown there. So far as we could learn no effort has been made to introduce the plant to the mainland, except in the instance of a single young tree in Beira grown from a seed. The sample we ate was delicious in flavor, delicate in texture, and of large size. This variety was named after Mr. Barbour Lathrop, its discoverer and first introducer into America." (*Fairchild.*)

9670 to 9699. MANIHOT sp.

Cassava.

From Robert Thomson, Half Way Tree, Jamaica. Purchased on the recommendation of Prof. P. H. Rolfs. Received May 7, 1903.

9670.

Pacho No. 1.

9671.

Pacho No. 2.

9672.

Pacho No. 3.

9673.

Pacho No. 4.

9674.

Heleda No. 1.

9675.

Heleda No. 2.

9676.

Heleda No. 3.

9677.

Heleda No. 4.

9678.

Heleda No. 5.

9679.

Heleda No. 6.

9680.

Heleda No. 7.

9681.

Rio (Pie?) de Paloma.

9682.

Negrita No. 1.

9683.

Negrita No. 2.

9670 to 9699—Continued.

9684. <i>Negríta No.</i>	9692. <i>Chingele.</i>
9685. <i>Negríta No. 4.</i>	9693. <i>Manteca.</i>
9686. <i>Blancita.</i>	9694. <i>Lingua de Venada.</i>
9687. <i>Cajon amarilla.</i>	9695. <i>Solita amarilla.</i>
9688. <i>Notoseves.</i>	9696. <i>Mantera.</i>
9689. <i>Cabasa dura.</i>	9697. <i>Cantabriera.</i>
9690. <i>Pie de perdig.</i>	9698. <i>Solita blanca.</i>
9691. <i>Cenaguera.</i>	9699. <i>Bitter.</i>

9700 to 9732.

From Jamaica. Received through Prof. P. H. Rolfs, May 7, 1903.

A collection of scions as follows:

9700. CITRUS AURANTIUM. Tangerine.

"A tangerine seedling, secured at Porus, Jamaica. An extra large variety, nearly as large and equally as good flavored as the *King*, ripening earlier, and of a much finer color." (Rolfs.)

9701. CITRUS AURANTIUM. Tangerine.

"A tangerine very similar to No. 9700, but ripening somewhat later." (Rolfs.)

9702. CITRUS AURANTIUM. Navel tangerine.

"Similar to No. 9700 in size, color, and general make-up of the fruit, but being seedless and producing a small accessory orange, as in the case of the Washington navel; otherwise being of the distinct tangerine type." (Rolfs.)

9703. MANGIFERA INDICA. Mango.

Alfoos. "This mango was introduced from India to Jamaica about fifteen years ago, and is considered to be one of the finest of the East Indian varieties." (Rolfs.)

9704. MANGIFERA INDICA. Mango.

Bombay. "The tree from which the scions were obtained was ripening fruit in winter. The fruit weighed about three-fourths of a pound. Very luscious and producing very little fiber. Altogether a superior mango." (Rolfs.)

Cuttings as follows:

9705. HIBISCUS SINENSIS.

"A beautiful ornamental of unusual appearance, producing a rose-colored flower." (Rolfs.)

9700 to 9732—Continued.

9706. HIBISCUS SINENSIS.

"Another beautiful *Hibiscus* with very dark center and yellow outer portions of the petal." (Rolf.)

9707. BOUGAINVILLEA SPECTABILIS VAR. LATERITIA (?).

"One of the most showy decorative plants for the lawn. The orange-colored bracts produce a very pleasing contrast with the dark-green background." (Rolf.)

9708. THUNBERGIA GRANDIFLORA.

"A large flowering vine, very useful for arbor and house decoration." (Rolf.)

9709. THUNBERGIA HARRISSII.

"A beautiful arbor plant." (Rolf.)

9710. THUNBERGIA LAURIFOLIA.

"A beautiful plant for covering arbors and sides of houses." (Rolf.)

9711. RUPPELIA GRATA.

"An ornamental, producing very striking and pleasing effects on an arbor." (Rolf.)

9712. POINSETTIA sp.

"An especially fine extra double race of this variety." (Rolf.)

9713. PASSIFLORA QUADRANGULARIS.

"The granadilla of the Tropics, bearing large fruit the size of an ostrich egg, the inner pulp of which has a very pleasant subacid flavor." (Rolf.)

9714. PETREA VOLUBILIS.

"An arbor ornamental of extra good qualities, making a dense shade and producing a profusion of flowers." (Rolf.)

9715. BEAUMONTIA GRANDIFLORA.

"A vine of large proportions, producing an immense white bloom, the tips of the corolla being pink. A valuable climbing plant for out-of-doors." (Rolf.)

Seeds as follows:

9716. COFFEA ARABICA.

"A variety of this species growing in a higher altitude and producing fruit of an extraordinarily good quality." (Rolf.)

9717. CLITORIA sp.

"A peculiarly crested form of this plant which makes an excellent plant for covering a lattice." (Rolf.)

9718. LUFFA AEGYPTICA.

"A dishcloth gourd, the inner parts of which produce a fibrous material useful for various culinary purposes." (Rolf.)

9719. CANANGA ODORATA (?).

Ilang-Ilang.

"Seed produced from tree growing in Jamaica." (Rolf.)

9720. HURA CREPITANS.

Sand box.

"Useful for shade and ornamental purposes." (Rolf.)

9721. ACROCOMIA sp.

"This species produces nuts that are used like hickory nuts and are most excellent." (Rolf.)

9700 to 9732—Continued.

9722. OREODOXA OLERACEA. Mountain palm of Jamaica.
 "A very handsome ornamental plant." (Rolfs.)
9723. SABAL sp. Cuban sabal.
 "A very sturdy, big-trunked tree." (Rolfs.)
9724. LIVISTONA HOOGENDORPIL.
 "An ornamental palm." (Rolfs.)
9725. SABAL ADANSONI.
 "A dwari palmetto." (Rolfs.)
9726. PANDANUS VANDERMESCHIL.
9727. ARECA ALICAE.
9728. COCOS BOTRYOPHORA.
9729. LIVISTONA ROTUNDIFOLIA.
9730. PANDANUS UTILIS.
9731. ROYSTONIA REGIA.
 "Is supposed to be distinct from the Porto Rico and Florida royal palm, making a tree of much grander stature." (Rolfs.)
9732. ANANAS SATIVUS. Pineapple.
 "Seedling pineapple plants." (Rolfs.)

9733. SECHIUM EDULE. Chayote.

From San Juan, P. R. Presented by Miss Jennie H. Ericson. Received June 1, 1903.

9734 to 9749. MEDICAGO spp.

From Madrid, Spain. Received through Messrs. Lathrop and Fairchild (No. 1189, a to p, May, 1903), June 1, 1903.

"The Botanic Gardens of Madrid have represented in their collection a large number of grasses and fodder plants, and the head gardener, Mr. Luis Aterido, has kindly furnished us with a collection of seeds of sixteen species of *Medicagos*, some of which may prove of value for breeding purposes. They are as follows:

- | | |
|-----------------------------|------------------------------|
| 9734. MEDICAGO LUPULINA. | 9742. MEDICAGO TUBERCLATA. |
| 9735. MEDICAGO RIGIDULA. | 9743. MEDICAGO MUREX. |
| 9736. MEDICAGO GERARDI. | 9744. MEDICAGO PRAECOX. |
| 9737. MEDICAGO LACINIATA. | 9745. MEDICAGO SUFFRUTICOSA. |
| 9738. MEDICAGO INTERTEXTA. | 9746. MEDICAGO RADIATA. |
| 9739. MEDICAGO DISCIFORMIS. | 9747. MEDICAGO CILIARIS. |
| 9740. MEDICAGO ORBICULARIS. | 9748. MEDICAGO FALCATA. |
| 9741. MEDICAGO TENOREANA. | 9749. MEDICAGO SCUTELLATA. |

"Among these, several are indigenous to Spain and all of them have a greater or less value as fodder plants. They are mostly annuals, however, and are therefore limited in value for direct use." (Fairchild.)

9750 to 9774. TRIFOLIUM spp.

From Madrid, Spain. Received through Messrs. Lathrop and Fairchild (No. 1190, May, 1903), June 1, 1903.

"Small packets of seeds from the Botanic Gardens of Madrid (see Nos. 9734 to 9749). These are for the use of anyone who is especially interested in breeding *Trifoliums*." (Fairchild.) They are as follows:

9750. TRIFOLIUM ANGUSTIFOLIUM.	9763. TRIFOLIUM OCHROLEUCUM.
9751. TRIFOLIUM ARVENSE.	9764. TRIFOLIUM PANORMITANUM.
9752. TRIFOLIUM BONANII.	9765. TRIFOLIUM PRATENSE.
9753. TRIFOLIUM CHERLERI.	9766. TRIFOLIUM REPENS.
9754. TRIFOLIUM DIFFUSUM.	9767. TRIFOLIUM RESUPINATUM.
9755. TRIFOLIUM FRAGIFERUM.	9768. TRIFOLIUM RUBENS.
9756. TRIFOLIUM GLOMERATUM.	9769. TRIFOLIUM SPUMOSUM.
9757. TRIFOLIUM HISPIDUM.	9770. TRIFOLIUM STRIATUM.
9758. TRIFOLIUM INCARNATUM.	9771. TRIFOLIUM STRICTUM.
9759. TRIFOLIUM LAPPACEUM.	9772. TRIFOLIUM SUBTERRANEUM.
9760. TRIFOLIUM MARITIMUM.	9773. TRIFOLIUM TOMENTOSUM.
9761. TRIFOLIUM MEDIUM.	9774. TRIFOLIUM VESICULOSUM.
9762. TRIFOLIUM MONTANUM.	

9775.

From Honduras. Presented by Mr. Frank Dean, Black River. Received June 1, 1903.

"One large seed of Oracco; a fine fruit, like the Maumee sapota." (Dean.)

9776.**Palm.**

From Honduras. Presented by Mr. Frank Dean, Black River. Received June 1, 1903.

"Seeds of the Coyol palm. A large variety, growing to a height of 40 feet. Produces wine and vinegar. Seeds good for cattle and hogs." (Dean.)

9777.

From Honduras. Presented by Mr. Frank Dean, Black River. Received June 1, 1903.

"A climber, with flowers like the *Allamanda*; yellow, with red center. Fine plant. Name unknown." (Dean.)

9778 to 9789.

From Khojend, Russian Central Asia. Presented by Mr. E. M. Valneff, of Khojend, through Mr. E. A. Bessey. Received June 17, 1903.

A collection of seeds, as follows:

9778. PISTACIA VERA.	Pistache.
From Hissar, Bokhara. Crop of 1902.	
9779. ANDROPOGON SORGHUM.	Sorghum.
<i>Djougara.</i>	

9778 to 9789—Continued.

9780.	SESAMUM INDICUM. Seed of mixed colors.	Sesame.
9781.	TRITICUM VULGARE. Winter wheat.	Wheat.
9782.	TRITICUM VULGARE. Spring wheat.	Wheat.
9783.	HORDEUM VULGARE. Spring barley.	Barley.
9784.	CHAETOCHELOA ITALICA.	Millet.
9785.	PANICUM MILIACEUM.	Broom-corn millet.
9786.	PHASEOLUS MUNGO.	Mung bean.
9787.	CARTHAMUS TINCTORIUS.	Safflower.
9788.	MEDICAGO SATIVA.	Alfalfa.
9789.	LINUM USITATISSIMUM. Grown for oil making.	Flax.

9790 to 9800.

From Tashkent, Russian Central Asia. Presented by Mr. H. W. Dürrschmidt, seedsman, of Tashkent, through Mr. E. A. Bessey. Received June 17, 1903.
A collection of seeds, as follows:

9790.	TRITICUM VULGARE. <i>Alabjurag</i> winter wheat.	Wheat.
9791.	TRITICUM VULGARE. <i>Iantagbay</i> or <i>Yantagbay</i> .	Wheat.
9792.	TRITICUM VULGARE. <i>Kisilbugday</i> .	Wheat.
9793.	TRITICUM VULGARE. <i>Tschulbugday</i> . Grown in winter on irrigated land.	Wheat.
9794.	TRITICUM VULGARE. <i>Aulieata</i> . Grown in winter on unirrigated land.	Wheat.
9795.	ZEAMAYS. <i>Kukurusa</i> .	Corn.
9796.	ANDROPOGON SORGHUM. <i>Dshugara Balchá</i> .	Sorghum.
9797.	SESAMUM INDICUM. Mixed brown and white.	Sesame.
9798.	PANICUM MILIACEUM.	Broom-corn millet.

9790 to 9800—Continued.

9799. CHAETOCILOA ITALICA.

Millet.

Kumak.

9800. CARTHAMUS TINCTORIUS.

Safflower.

9801. ERIBOTRYA JAPONICA.

Loquat.

From Yokohama, Japan. Presented by the Yokohama Nursery Company at the request of Messrs. Lathrop and Fairchild. Received June 5, 1903.

Formosa. Seed of the Formosan loquat.

9802. NEPHELIUM LITCHI.

Leitchee.

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 792, December 20, 1901), January 30, 1902.

Hak Ip, black leaved. "This is one of the best varieties grown about Canton, China. It is said to be a large-fruited sort, of excellent flavor, but with medium-sized stone. The dried leitchees of the market here are mostly of this form. The plant is not reproduced from seed but is grafted or inarched." (*Fairchild.*)

9803. NEPHELIUM LITCHI.

Leitchee.

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 793, December 20, 1901), January 30, 1902.

No Mai, "tender rice" leitchee. "This is a small-seeded, very superior sort, one of the favorites on the Canton market where four or five different varieties are known and where the sale of this fruit is a very important one. Dr. J. M. Swan, of the Canton Hospital, pronounces this one of the two or three best varieties known to him." (*Fairchild.*)

9804. DIOSPYROS KAKI.

Japanese persimmon.

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 794, December 20, 1901), January 30, 1902.

Hung tsz, large red persimmon. "This is a soft variety of medium to large size, round to oblate spheroid, dark in color, and reported to be very sweet in flavor. It is imported as being probably a Chinese variety and worthy of trial in comparison with the Japanese sorts." (*Fairchild.*)

9805. AMYGDALUS PERSICA.

Peach.

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 795, December 20, 1901), January 30, 1902.

Hung Wat tim. "A variety of the 'Honey' type, reported to be good for preserves and not so sweet as the *Ying tsui* or Eagle Beak variety. It is medium early. Worthy of trial as coming from the south China region, though probably not of superior excellence." (*Fairchild.*)

9806. PRUNUS sp.

Plum.

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 796, December 20, 1901), January 30, 1902.

Hung Mui. "A large red plum, fairly sweet, but of the hard-fleshed type. Like the other Chinese plums about Canton it is said to have a somewhat bitter taste when cooked and allowed to stand for an hour or so. Europeans in Canton do not prize these Chinese plums very highly. This variety blooms in February or March." (*Fairchild.*)

9807. BAMBUSA sp.

Bamboo.

From Canton, China. Received through Messrs. Lathrop and Fairchild (No. 797, December 20, 1901), January 30, 1902.

Kam Chuk, golden bamboo. "The most beautiful of all the bamboos about Canton, a golden-stemmed sort, with stripes of green. It is rather rare on the island of Hongkong, I am told by Mr. Ford, and it is not very common about Canton. It is worthy of trial in Florida and southern California." (*Fairchild.*)

9808. MANGIFERA INDICA.**Mango.**

From Mussorie, India. Presented by Rev. H. Marston Andrews, principal of Woodstock College. Received August 8, 1903.

Malda. Said to be of very large size and spicy flavor.

9809. VITIS RUPESTRIS VAR. METALLICA.**Grape.**

From Cape Town, South Africa. Presented by the Cape Colony department of agriculture, through Messrs. Lathrop and Fairchild (No. 1137, March 10, 1903). Received August 10, 1903.

"Plants of a South African originated variety of resistant American stock, which has proved itself most admirably suited to the conditions at the Cape and especially adapted to 'any loose soil, loam, gravel, or sand, and also in dry, open, heavy soils. It can, besides, stand a fair amount of moisture in loose soils. It forms an excellent graft bearer for all varieties of European vines except *Hanepoot* and possibly also the members of the Muscat family.' (Cf. J. P. de Waal, in the *Ag. Jour. Cape of Good Hope*, December 19, 1901, p. 838.) This variety, Mr. Pillans says, is the best of all the resistant stocks yet tried at the Cape, as its ease of grafting, great vigor, suitability to different kinds of soil, and grafting affinity for all but varieties of the Muscat type make it a general stock of great value. Even those who do not claim that it exceeds in vigor any other sort, admit that *it is the easiest grafted of any of the American stocks.* The stock originated at Great Constantia Wine Farm, in a lot of seedlings from seed sown in 1886. It is uncertain whether the seed came direct from America or from France. This is entirely distinct, according to F. J. Bioletti (formerly of the experiment station at Berkeley, Cal., now at the Elsenburg Agricultural School), from the *metallica* of French vineyardists. Its name applies to the luster of its foliage. The seedling was picked out in 1894, and by quick propagation in 1901 yielded 687,000 cuttings. In 1902, 864,000 cuttings were distributed. It has been tested side by side with many French stocks, such as *Aramon rupestris*, *Riparia Gloire de Montpellier*, and takes its place as their equals in all points and their superior as regards ease of propagation and suitability to the varieties of soils mentioned. Mr. Pillans goes so far as to predict that it will drive all other sorts out except for Muscat sorts. He claims for it a remarkable yield-giving power, extreme vigor, and resistance to the phylloxera. Mr. Bioletti admits its excellent qualities, and practical growers are enthusiastic about it. This is well worth the serious consideration of California vine growers. The originators of this remarkable seedling are Messrs. J. P. de Waal and Eustace Pillans, of the Cape of Good Hope department of agriculture, and its trial in California should be made at once. We are indebted to Mr. Pillans for the plants sent. See No. 9607, the identical variety." (*Fairchild.*)

9810 to 9814. VITIS sp.**Grape.**

From Cape Town, South Africa. Presented by the Cape Colony department of agriculture, through Messrs. Lathrop and Fairchild (No. 1149 to 1151, and 1153, March, 1903). Received August 10, 1903.

9810. VITIS VINIFERA.

Red Hanepoot. "A variety of table grape that is believed to have originated in South Africa and which, according to Mr. Bioletti, formerly vine expert of the California Experiment Station, at Berkeley, is not known in America. The variety belongs to the *Muscat* type and may be described as a *Muscat* with the red color of the *Flaming Tokay*. It is one of the most popular of the South African varieties and is exported to England. It is an excellent shipper and a showy table sort. Sent by Mr. Eustace Pillans, from the Government vineyard at Constantia." (*Fairchild.*) (No. 1149.)

9811. VITIS VINIFERA.

Hermitage. "This is the grape from which the Cape claret is made. It is said by experts to rank high as a claret maker and not to have been tested in California. Mr. Bioletti, formerly of the California Experiment Station at Berkeley, Cal., remarks (in the *Cape Journal of Agriculture*, Vol. XX, No. 12, p. 696), that the Cape *Hermitage* is distinct from the sort grown in the Hermitage vineyards of France and is not so good as the *Shiraz* or *Sirah* grape, which is well known to Californians." (*Fairchild.*) (No. 1150.)

9810 to 9814—Continued.**9812. VITIS RUPESTRIS.**

Le Roux. "A variety of American phylloxera-resistant stock which, according to de Waal (in the Cape Agricultural Journal, Vol. XIX, No. 13, p. 839), originated from a seedling, selected by Mr. J. G. Le Roux, of Klein, Drakenstein, Paarl. It requires a loose loam, gravel, or sand, and also grows in dry, open, heavy soils as well. *It is especially suitable as a stock for the Hanepoot and very likely also for the other Muscat varieties*, and is a good general grafting stock. Mr. Bioletti, formerly of the California Experiment Station at Berkeley, Cal., thinks this sort will be keenly appreciated in California for a stock for Muscat varieties." (*Fairchild.*) (No. 1151.)

9813. VITIS RUPESTRIS.

Pillans. "A variety of resistant American stock which has been selected by Mr. Eustace Pillans, agricultural assistant in charge of the Government wine farm at Constantia. Mr. Pillans thinks this will prove an excellent stock for the Muscat varieties of grape and, although it has not yet been thoroughly tested, he predicts its general use for this class of vines. The *Hanepoot*, which is of the *Muscat* type, does well on it. These cuttings are sent by Mr. Pillans himself." (*Fairchild.*) (No. 1153.)

9814. VITIS VINIFERA.

White Hanepoot. "Probably descended from the *White Muscat.*" (*Fairchild.*)

9815. AMYGDALUS PERSICA.**Peach.**

From Constantia, South Africa. Presented by the Cape Colony department of agriculture through Messrs. Lathrop and Fairchild (No. 1152, March 16, 1903). Received August 10, 1903.

Constantia. "A variety of peach which originated at Constantia. It is said by Mr. Eustace Pillans to be an excellent shipping variety, of good quality and one of the best sorts grown in Cape Colony. It deserves a trial in the collections of California and Georgia, but may not prove hardy enough for Maryland, Delaware, or Michigan. Sent by the Cape department of agriculture." (*Fairchild.*)

9816. MEDICAGO SATIVA.**Alfalfa.**

From Willard, Utah. Received through Mr. P. A. Nebeker, June 9, 1903.

Turkestan alfalfa seed grown by Mr. Nebeker under agreement with the Department of Agriculture from imported seed (S. P. I. No. 991), furnished him in 1900.

9817. TRIFOLIUM PANNONICUM.

From Erfurt, Germany. Received through Haage & Schmidt, July 17, 1903. Seed from the 1902 crop.

9818 to 9823.

From Heneratgoda, Ceylon. Received through J. P. William & Bros., July 31, 1903.

Seeds of trees for arid regions, as follows:

9818. CASUARINA EQUISETIFOLIA.

9821. ALBIZZIA LUCIDA.

9819. DALBERGIA SINSSOO.

9822. ALBIZZIA JULIBRISSIN.

9820. ALBIZZIA PROCERA.

9823. EUCALYPTUS GLOBULUS.

9824 to 9826.

From Santiago, Chile. Presented by Federico Albert, of the ministry of industry and public works. Received July 9, 1903.

Seeds as follows:

9824. *ARAUCARIA IMBRICATA*.

9826. *BELLOTA MIERSII*.

9825. *JUBAEA SPECTABILIS*.

9827. PINUS PINEA.

Umbrella pine.

From Rome, Italy. Presented by Hon. Hector de Castro, United States Consul-General. Received August 7, 1903.

9828 to 9830.

From Monte, Grand Canary, Canary Islands. Presented by Mr. Alaricus Delmard, through Messrs. Lathrop and Fairchild. Received August 14, 1903.

Seeds as follows:

9828. *CANARINA CAMPANULA* var. *CANARIENSIS*.

9829. *PAPAVER* sp.

9830. *PINUS CANARIENSIS*.

9831 to 9850.

From Mexico. Secured by Mr. G. Onderdonk, special agent of this Department, and sent to G. L. Taber, Glen St. Mary, Fla., for propagation.

9831 to 9846. *PRUNUS ARMENIACA*.

Apricot.

9831. Onderdonk's No. 1, Taber's No. 1.

From garden of Crispin Mariscal, Coyoacan, Distrito Federal. Freestone; 4 inches in circumference; blush; rich; sweet; season, May.

9832. Onderdonk's No. 2, Taber's No. 2.

From garden of Crispin Mariscal, Coyoacan, Distrito Federal. Freestone; 4½ inches in circumference; blush; rich; sweet; season, May.

9833. Onderdonk's No. 3, Taber's No. 3.

From garden of Crispin Mariscal, Coyoacan, Distrito Federal. Freestone; 4½ inches in circumference; blush; rich; sweet; season, May.

9834. Onderdonk's No. 4, Taber's No. 4.

From garden of Crispin Mariscal, Coyoacan, Distrito Federal. Clingstone; 3¾ inches in circumference; blush; rich; sweet; season, May.

9835. Onderdonk's No. 5, Taber's No. 5.

From garden of Crispin Mariscal, Coyoacan, Distrito Federal. Freestone; 4½ inches in circumference; blush; rich; sweet; season, May.

9836. Onderdonk's No. 6, Taber's No. 6.

From garden of Crispin Mariscal, Coyoacan, Distrito Federal. Fruit not yet grown. Season, August 1.

9837. Onderdonk's No. 7, Taber's No. 7.

From garden of Carlos Ortero, San Angel, Distrito Federal. Fruits not fully grown; 5 inches in circumference; fine; season, June. Twelve buds inserted, all dead July 15, 1903. Mr. Onderdonk states that the trees do not make a vigorous growth, literally bearing themselves to death. He promised to furnish Mr. Ortero a tree if any lived, as he was permitted to take all the bud wood there was on the tree. Wood altogether too young when taken. Freestone; yellow; blush.

9831 to 9850—Continued.

9831 to 9846—Continued.

9838. Onderdonk's No. 8, Taber's No. 8.

From garden of Martin Velasco, San Angel, Distrito Federal. Freestone; $4\frac{1}{2}$ inches in circumference; cream yellow; blush; season, June 1.

9839. Onderdonk's No. 9, Taber's No. 9.

From garden of Hilario Abilo, Contreras, Distrito Federal. Freestone; $6\frac{3}{4}$ inches in circumference; cream colored; blush; sweet; season, May 25 to June 1.

9840. Onderdonk's No. 10, Taber's No. "A."

From J. R. Silliman, Saltillo, Coahuila. Variety, *Perry*. Unripe fruit six inches in circumference; cream colored; blush.

9841. Onderdonk's No. 11, Taber's No. "B."

From Santa Anita gardens, near Saltillo. Fruit $4\frac{1}{2}$ inches in circumference; yellow; blush; sweet; season, May.

9842. Onderdonk's No. 12 (or 13), Taber's No. "C."

From Santa Anita gardens, near Saltillo. Fruit $5\frac{1}{2}$ inches in circumference when not fully grown; yellow; blush; season, June 5.

9843. Onderdonk's No. 13 (or 12), Taber's No. "D."

From J. R. Silliman, Saltillo, Coahuila. Unripe, $4\frac{1}{2}$ inches in diameter; highly recommended by Mr. Silliman; season, July. Mr. Taber writes that the packages containing these last two numbers were both marked 12, so that it is not possible to tell which should be 12 and which 13.

9844. Onderdonk's No. 15, Taber's No. 15.

Probably from garden of J. R. Silliman, Saltillo, Coahuila. A very fine apricot, $5\frac{1}{2}$ inches in circumference; yellow; blush; season, May 25; named *Nellie* for owner's daughter.

9845. Onderdonk's No. 16, Taber's No. 16.

Probably from garden of J. R. Silliman, Saltillo, Coahuila. A very fine apricot; $5\frac{1}{2}$ inches in circumference; yellow; blush; season, June 1; named *Dorah* for owner's daughter.

9846. Onderdonk's No. 17, Taber's No. 17.

From garden of Henrique Maas, Saltillo, Coahuila. Said to be a very fine large variety. Season about July 5.

9847. PRUNUS CERASUS.

Cherry.

Onderdonk's No. 14, Taber's No. 14. Mr. Onderdonk writes that this is the Capulin cherry but does not state where the buds were secured.

9848 to 9850. AMYGDALUS PERSICA.

Peach.

9848. Onderdonk's No. 11, Taber's No. 11.

From garden of Carlos Ortero, San Angel, Distrito Federal. A large, yellow, blush, clingstone.

9849. Onderdonk's No. 12, Taber's No. 12.

From garden of Carlos Ortero, San Angel, Distrito Federal. A yellow, blush, freestone.

9850. Onderdonk's No. 13, Taber's No. 13.

From garden of Martin Velasco, San Angel, Distrito Federal. A large, white, blush, clingstone.

- 9851. PRUNUS CERASUS (?)** **Cherry.**
 From Mexico. Received through Mr. G. Onderdonk, June 29, 1903, by Mr. W. A. Taylor, pomologist in charge of field investigations.
Cupulin.
- 9852. ANDROPOGON SORGHUM.** **Kafir corn.**
 From Durban, Natal. Presented by Mr. Claude Fuller, Government Entomologist, through Messrs. Lathrop and Fairchild (No. 1193a, August 5, 1903). Received August 31, 1903.
Mahele or *Mapele*. "This variety has proved more resistant than any other to a species of aphid which injures all the common sorts." (*Fairchild.*)
- 9853 and 9854. TRITICUM DURUM.** **Wheat.**
 From Poona Farm, Kirki, India. Sent by the superintendent through Latham & Co., Bombay, India, addressed to Dr. S. A. Knapp. Received July 23, 1903.
- 9853.** **9854.**
Piola Karte. From Shuedrager(?). *Shet Gahu.* From Poona.
- 9855 and 9856. ANDROPOGON SORGHUM.** **Sorghum.**
 From Poona Farm, Kirki, India. Sent by the superintendent through Latham & Co., Bombay, India, addressed to Dr. S. A. Knapp. Received July 13, 1903.
- 9855.** **9856.**
Gidgep Jowar. *Dagdi Jowar.*
- 9857. CASTILLA sp. nov.**
 From Costa Rica. Presented by Mr. Guy N. Collins, of the Department of Agriculture, June 16, 1903.
 Seed of a new species of great promise as a rubber producer.
- 9858. THEOBROMA sp. nov.** **Cacao.**
 From Costa Rica. Presented by Mr. Guy N. Collins, of the Department of Agriculture, June 16, 1903.
 Seeds of a new species.
- 9859. CASSIA AURICULATA.** **Avaram.**
 From Manamadura, South India. Presented by Rev. Edward P. Holton, through Miss Nina G. Holton, of this Department. Received September 5, 1903.
 Grown and used extensively in South India; the bark for tanning, the leaves, twigs, and seed pods as a fertilizer for salt lands, wet cultivation. Habit, low and bushy like a blueberry bush on rocky, sandy, dry, waste lands.
- 9860. CYPERUS NUTANS.** **Matting rush.**
 From Japan. Received through Mr. R. H. Sawyer, Kennebunk, Me., July 23, 1903.
 Cultivated in the rice fields of Japan. Straw dried and used in the manufacture of the coarser, cheaper grades of Japanese matting.
- 9861. CYPERUS TEGETIFORMIS.** **Matting rush.**
 From China. Received through Mr. R. H. Sawyer, Kennebunk, Me., July 23, 1903.
 Native in salt marshes along the coast of China. Three-cornered rush split, dried, and used in manufacture of Chinese floor matting.

9862. ANDROPOGON SORGHUM.**Sorghum.**

From the Sudan, Africa. Presented by Dr. L. Trabut, Government Botanist, 7 Rue des Fontaines, Mustapha, Algiers, Algeria. Received September 14, 1903.

A few seeds of a strain originated in the Sudan. Recommended by Doctor Trabut as of extraordinary size and quality.

9863. PYRUS MALUS.**Apple.**

From Stockholm, Sweden. Presented by Mr. Axel Pihl, secretary of the Swedish Pomological Society, through Messrs. Lathrop and Fairchild. Received September 22, 1903.

Salens. "A newly-discovered variety, promising because of its hardiness and ability to live on poor soils." (*Fairchild.*)

9864. TRIFOLIUM PANNONICUM.

From Erfurt, Germany. Received through Haage & Schmidt September 26, 1903.

9865. SECALE CEREALE.**Rye.**

From Stockholm, Sweden. Received through Mr. J. E. W. Tracy, of this Department, August 17, 1903.

Wasa. Three small samples, from different seed houses. As the bags containing two of the samples were broken and the seed mixed, it was decided to give but one number to the three samples. (1 sample from Sellberg & Co., Stockholm; 1 sample from Öhmans, Söner & Co., Stockholm; 1 sample from another seed house.)

9866. EUPHORBIA PULCHERRIMA var. PLENISSIMA.**Poinsettia.**

From Hope Gardens, Kingston, Jamaica. Presented by Prof. William Fawcett, director, through Messrs. Lathrop and Fairchild. Received October 8, 1903.

"In 1898 Mr. Barbour Lathrop noticed a single plant of this variety growing in the Hope Botanic Gardens, of Kingston, Jamaica. Although he had seen the double variety of this plant in many places in the Tropics and in greenhouses, nowhere had he observed a plant with such unusually full whorls of colored bracts. The plant in its full glory was a perfect blaze of color, forming one of the handsomest decorative shrubs for landscape purposes that we have ever seen. The writer is inclined to believe that this is a strain from the ordinary double poinsettia, and that it can be propagated from cuttings. Its special beauty may possibly have been, however, produced by specially favorable soil conditions in Jamaica. If the former presumption is true, this will probably prove a very valuable strain for park use in those regions of the South where it will grow, and it may even prove superior to the ordinary type for greenhouse culture. It is worthy of a serious trial, both out of doors and under glass. Under notes L. and F., No. 56, in 1898, the Department's attention was called to this variety." (*Fairchild.*)

9867. PRUNUS LAURO-CERASUS.**Cherry laurel.**

From Trebizond, Turkey. Presented by Mrs. Julia F. Parmelee. Received October 9, 1903.

Kara yemish. Five plants brought by Mrs. Parmelee from Trebizond to Dunkirk, N. Y. Given to the Department through Mr. W. A. Taylor, pomologist in charge of field investigations.

9868. OCIMUM VIRIDE.

From Kew, England. Presented by the director of the Royal Botanic Gardens, Kew. Received October 9, 1903.

Obtained at the request of Dr. L. O. Howard, Entomologist of this Department, for experiments on the effect of this plant upon mosquitoes.

9869. GARCINIA MANGOSTANA.

Mangosteen.

From Heneratgoda, Ceylon. Received through J. P. William & Bros., October 19, 1903.

"One thousand seeds of this most delicious of tropical fruits, which, it is believed, will prove of great commercial value to the fruit-growing interests of Porto Rico." (*Fairchild.*)

9870. PERSEA INDICA.

From Madeira. Presented by Mr. J. B. Blandy, through Mr. D. G. Fairchild. Received October 15, 1903.

"This tree is a native of the Canary Islands, and is hardier than the alligator pear. It is introduced for the purpose of testing it as a stock upon which to graft *Persea gratissima*. According to the statement of one of the principal growers in Florida, such a stock is especially desired, because the trunk of the young alligator pear is its weakest part." (*Fairchild.*)

9871. TRITICUM VULGARE.

Wheat.

From Erivan, Caucasus, Asiatic Russia. Received through Mr. E. A. Bessey (No. 300, August 24, 1903), October 21, 1903.

"Red wheat from the mountains near Erivan. It is grown without irrigation and is sown in March. It should be tried in dry mountain regions." (*Bessey.*)

9872. TRITICUM DURUM.

Wheat.

From Erivan, Caucasus, Asiatic Russia. Received through Mr. E. A. Bessey (No. 301, August 24, 1903), October 21, 1903.

Galgalos. "A variety of macaroni wheat which is said to be very good. It is prized for flour. It brings 30 kopecks a pood more than No. 9871. It is also grown without irrigation in the mountains. It is mostly grown as a winter wheat, being sown in October. It is also sown early in March." (*Bessey.*)

9873. JUNCUS EFFUSUS.

Matting rush.

From Kobe, Japan. Presented by Dr. A. G. Boyer, of the United States consulate at Kobe. Received October 25, 1903.

Seed of the round Japanese matting rush. This seed was picked from the plants which are growing for next year's crop of matting grass, i. e., from roots that are 2 years old. The seed ripens in July.

9874 to 9876. TRIFOLIUM ALEXANDRINUM.

Berseem.

From Cairo, Egypt. Secured through the courtesy of Mr. George P. Foaden, of the Khedivial Agricultural Society. Received November 7, 1903.

9874.

Muscovi.

9876.

Saida.

9875.

Fachl.

9877. HORDEUM VULGARE.

Barley.

From Cairo, Egypt. Secured through the courtesy of Mr. George P. Foaden, of the Khedivial Agricultural Society. Received November 7, 1903.

Mariut.

9878. AVENA SATIVA.

Oat.

From Paris, France. Received through Vilmorin-Andrieux & Co., November 9, 1903.

Belgian winter.

9879. GARCINIA COCHINCHINENSIS.

From Saigon, Cochin China. Presented by M. E. Haffner, director of agriculture of Cochin China, through Messrs. Lathrop and Fairchild. Received November 11, 1903.

"A species of *Garcinia* which is closely related to the mangosteen, and upon which it is hoped this delicious fruit tree can be grafted. This species is said to be much less limited in its range of soil and climatic conditions, and it may prove a valuable stock for the mangosteen." (*Fairchild.*)

9880. GARCINIA FERREA.

From Saigon, Cochin China. Presented by M. E. Haffner, director of agriculture of Cochin China. Received November 11, 1903.

"A species of *Garcinia* introduced for the same purpose as No. 9879, as a stock for the mangosteen." (*Fairchild.*)

9881. GARCINIA MANGOSTANA.**Mangosteen.**

From Heneratgoda, Ceylon. Received through J. P. William & Bros., November 11, 1903. Shipped from Ceylon August 31, 1903. A wardian case full of plants of this delicious tropical fruit.

9882. AMYGDALUS PERSICA VAR. NECTARINA.**Nectarine.**

From Marplan, Turkestan. Presented by Prof. Ralph Pumpelly. Received November 11, 1903.

Five seeds of a variety of nectarine which Professor Pumpelly describes as a very delicious, large sort, which was abundant in that portion of Turkestan. Professor Pumpelly's first impression was that this was a smooth-skinned peach, thinking that the nectarine would not be likely to occur in that portion of Turkestan.

9883. CLERODENDRON FOETIDUM.

From Cape Town, South Africa. Presented by Prof. P. MacOwan, of the Cape department of agriculture. Received November 9, 1903.

A hardy, ornamental bush 3 to 6 feet in height, said to be hardy in the Middle and Southern States and not new to this country.

9884 to 9886.

From Guadalajara, Mexico. Presented by Mr. Federico Chisolm. Received November 16, 1903.

Seeds of native Mexican plants as follows:

9884. DAHLIA sp.**Wild dahlia.**

Dwarf, leaves very thickly covered with fine prickly hairs, flowers on stem 24 to 48 inches tall, have a diameter of 1½ to 2 inches, petals blood red, with very high glaze, center yellow.

9885.**Tuberose (?)**

Chicalam. Small bulb, one or two slender, round leaves 12 to 36 inches long. Flowers exquisite, colored like a fuchsia, in clusters on slender, round stem 12 to 40 inches high. Blooms July, August, and September. (Doctor Rose says this is probably a tuberose.)

9886.

Bulb with leathery leaves splotched with brown. Flowers green, not valuable, August. Leaves sometimes 12 inches long by 4 inches broad. May be useful for foliage. Doctor Rose says probably *Amole* (*Chlorogalum pomeridianum* or *Agave americanum*).

9887. SECALE CEREALE.**Rye.**

From North Watergap, Pa. Received through Mr. M. L. Michael, November 14, 1903.

Winter Ivanof. Grown in 1903 from S. P. I. No. 1342.

9888. TRICHOLAENA ROSEA.

From Honolulu, Hawaii. Presented by Mr. Jared G. Smith, special agent in charge of the Hawaiian agricultural experiment station. Received November 23, 1903.

9889 and 9890. PHASEOLUS VIRIDISSIMUS.**Bean.**

Grown from S. P. I. No. 6430, in 1903.

9889. Received through Mrs. Hattie L. Asseltine, Fruithurst, Ala., November 28, 1903.

9890. Received through Mr. John J. Dean, Moneta, Cal., December 4, 1903. The California grown seed is noticeably larger than that grown in Alabama.

9891. EUTREMA WASABI.**Japanese horse-radish.**

From Yokohama, Japan. Presented by Mr. H. Suzuki, of the Yokohama Nursery Company, through Messrs. Lathrop and Fairchild. Received December 7, 1903.

"Described in B. P. I. Bulletin No. 42. The Japanese horse-radish, which is eaten with raw fish as commonly in Japan as ordinary horse-radish is eaten in America with raw oysters." (*Fairchild.*)

9892. ATRIPLEX LEPTOCARPA.**Saltbush.**

From Sydney, Australia. Received through Anderson & Co., December 5, 1903.

9893. DESMODIUM TRIFLORA.

From Mayaguez, Porto Rico. Sent by Mr. G. N. Collins, of the Department of Agriculture, through Mr. D. G. Fairchild. Received December 14, 1903.

This plant is used as a soil covering on the coffee plantations in Porto Rico.

9894 to 9896.

From Tanegashima, Japan. Presented by Mr. R. Chester, through Mr. R. B. Handy, of this Department. Received December 12, 1903.

Native Japanese seeds, as follows:

9894.**Red jessamine.**

One-half ounce of seed that looks like four-o'clocks.

9895.**Lily.**

Very decorative.

9896.

A few seeds, without name or other data.



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