21543 to 21545.

From São Paulo, Brazil. Presented by Mr. T. Julius Schalch. Received November 5, 1907.

21543. MANIHOT UTILISSIMA. **Bitter cassava.**

"Manioc, a Brazilian plant growing in the Temperate Zone; produces roots 2 to 3 feet long, 3 to 4 inches in diameter; used exactly as Irish potatoes; can be boiled, baked, or fried, and is of very fine flavor. All the starch made down in that country is made of Manioc. Tapioca is also made from Manioc. It is planted on the same kind of soil as potatoes. Cut every stick in two or three pieces, 6 or 8 inches long, plant slanting on the hill about 3 or 4 feet apart. It will grow 7 to 10 feet high." (*Schalch.*)

21544. HAEMANTHUS MULTIFLORUS. **Imperial crown.**

"A beautiful, delicate flower growing in the Temperate Zone. To be planted the same as any bulb. Grows very easily if the temperature is right." (*Schalch.*)

21545. PISUM sp. **Pea.**

"Crooked pea is the name given in São Paulo for this kind of pea. It is a very tender, stringless variety, and can be cooked with the pods, for it is very sweet and extremely tender and makes a very palatable dish. It is planted the same as any pea and has always been raised in the Temperate Zone." (*Schalch.*)

21547. PYRUS POLLVERIA.

From Christiania, Norway. Presented by Prof. N. Wille. Received November 8, 1907.

In Gartenflora, of January 15, 1905, there is an article entitled "An Account of a Supposed Graft-Hybrid Between the Pear and the Hawthorn," in which the author, von Jens Holmboe, gives a good description of this tree and attempts to clear up the mystery of its probable origin.

The tree is located in the Manor of Torp, Parish Borge, in Smaalenene, between the towns of Fredrikstad and Sarpsborg, and was planted some time in the early seventies and discovered by an apothecary late in the eighties. It was grafted on *C. oxyacantha* but has characters intermediate between those of Pyrus and Crataegus. The fruit is small and pear shaped, but red like that of Crataegus. The taste is insipid and also intermediate between that of the pear and the hawthorn.

To the author it seemed that this curious hybrid resembled in most of its characters *Pyrus pollveria* L. (*P. communis* L.×*Sorbus aria* Crantz), and he states that it would be hard to separate it specifically from that species (or hybrid) on morphological characters only.

Since the foliage of some of the seedlings grown from the "Torp" tree could hardly be distinguished from that of the pear, and that of others resembled so closely that of *C. monogyna*, this form might again be considered a hybrid between *P. communis* and some species of Crataegus and the appearance of two distinct types in its progeny be perfectly natural. But here, too, it is mentioned that Crataegus-like foliage is in rare cases found among seedlings of both *P. communis* and *P. malus* and also that no Crataegus grew in the neighborhood which might have taken part in the cross-pollination of the flowers which gave rise to these seedlings.

Hence, according to the author, there are but two alternatives: The tree whose hybrid character admits of no doubt is either the rare *Pyrus pollvera*, which is not found anywhere outside of the Christiania Botanic Gardens, but found its way in some inexplicable manner, through a nursery located in Sarpsborg, into this garden; that the Crataegus-like foliage of the second hybrid generation, which in Norway has never before been observed in *P. communis* and its relatives, is due to a mutation; or that some until now entirely unknown hybrid of *P. communis*×*Crataegus* sp. existed in this same nursery and was unintentionally grafted upon the *Crataegus oxyacantha* stock.

In concluding, the author contends that it would require an extraordinary combination of circumstances to bring either of these alternatives about and