

41316 to 41341—Continued. (Quoted notes by Mr. O. F. Cook.)

ful climber and the flowers are magnificent, not so strikingly colored as some of the passion flowers, but a very attractive pink."

41317. MUTISIA sp. Asteraceæ.

"(No. 834. San Miguel and Torontoy, Peru, June 9, 1915.) Seeds of a large trailing vine with a magnificent flower. The rays attain a length of nearly 5 cm. and are recurved against the involucre, which is covered with long, recurved, channeled scales, appearing spinelike and suggesting a thistle, but not stiff or sharp. The flowers are pendent and have a stalk 6 to 10 inches long. The rays are orange at the base, passing through scarlet and scarlet red and then to deeper shades, finally discoloring to black. The anthers are dark brownish and the style yellow, tipped with red. The rays are of firm texture and evidently remain showy for a long time, several days at least. Probably would not thrive outside of a greenhouse unless in Florida or California."

41318. LYCOPERSICON sp. Solanaceæ.

Wild tomato.

"(No. 1185. June 10, 1915.) Seeds of a wild tomato growing near a small watercourse between Ollantaytambo and Torontoy and about 1 league above the latter place, at an altitude of more than 8,000 feet, in a rather dry district, with cacti and other desert vegetation. Only one plant was found at the place where the fruit was obtained, though the species was noticed two or three times in other localities. The vine was large and woody, trailing over bushes 10 to 12 feet high. The foliage, flowers, and fruit have much the same form as those of the cultivated tomato. The flowers are of a bright yellow color, but the fruits remain green, even when the seeds are mature. Finally they become somewhat yellowish, but with no approach to the bright colors of the cultivated varieties. The fruit also lacks the characteristic odor and taste of the tomato, but has a pleasant, slightly acid flavor, more like that of the apple. Another difference is that the outer wall is much firmer in texture than in the cultivated tomato, and the keeping qualities are apparently very much better. Fruits collected on June 10 and brought to Ollantaytambo in a saddlebag remained apparently unchanged, with no signs of decay or withering, until July 20, and some of them were still fresh when they reached Washington in September.

"In addition to the botanical interest attaching to this plant as a wild relative of the tomato, there is the possibility of making use of it in hybridizing and breeding new varieties. If such a cross can be made, it may be expected to give a wide range of variation and yield new types of fruit adapted to special purposes, such as woody perennial varieties that can be trained over arbors like grapevines, or varieties with special flavors, greater firmness of flesh, and improved keeping qualities. An increase of hardiness might also be expected, in view of the fact that this species grows wild at a rather high altitude in a valley bordered by high mountains with perpetual snow fields. The nights are very cold, with frequent frosts during the winter season. The fruits are over an inch in diameter, several times as large as those of the red-fruited wild tomato found later at Santa Ana, from which the cultivated tomato appears to have been derived. The fruits are borne in large flat clusters on a dichotomously (?) branched inflorescence that becomes stiff and woody as the fruits mature. The Indians are said not to use the fruit, but the plant is supposed to have medicinal properties."