25543—Continued.

bark and wood forms the drug catechu, and the dyeing and tanning agent cutch." (*W. W. Stockberger.*)

Distribution.—A medium-sized tree, native of India, being found in the Himalayas from the Punjab to Sikkim, and in Burma.

25544 to 25546.

From Alger-Mustapha, Algiers, North Africa. Purchased from Rossier Frères et Soeur. Received May 29, 1909.

Plants of each of the following:

25544. CITRUS BERGAMIA Risso.

"This is the bergamot, grown commercially in some parts of southern Italy for the essential oil which is expressed from the peel of the fruit. This has been imported for the citrus-breeding experiments of the Office of Crop Physiology and Breeding Investigations." (*W. T. Swingle.*)

25545. CITRUS NOBILIS Lour.

Clémentine. See No. 25196 for description.

25546. CLAUCENA LANSIUM (Lour.) Skeels. (Cookia punctata Sonnerat.; Quinaria lansium Lour.; Claucena wampi Oliver.)

"This is the well-known wampee which is cultivated for its fruits in southern China. These fruits are said to be of a very agreeable though somewhat aromatic flavor and are about the size of a loquat, though the tree is probably not so hardy. These plants were imported for the breeding experiments of the Office of Crop Physiology and Breeding Investigations." (*W. T. Swingle.*)

25547. Raphionacme utilis Brown & Stapf. Ecanda rubber.

From Ochileso, Africa. Presented by Mr. T. W. Woodside, A. B. C. F. M., Benguella, Angola (via Lisbon). Received June 1, 1909.

"A rubber-producing member of the milkweed family, recently described as a new species. (Kew Bulletin, 1908, p. 215.) The genus already includes about 20 species distributed through the subtropical desert regions of the southern part of Africa. The plant may be described as a perennial herb or very low shrub. There is a large, fleshy, flattened, turnip-shaped, perennial root, said to attain a diameter of 5 or 6 inches, though the present supply does not contain roots larger than 4 inches. The other parts of the plant are annual, except for a short stem or crown which produces a succession of short branches, but apparently only one at a time. Temporary roots appear to be sent out from any part of the permanent root.

"The structure and habits of growth indicate that the plant behaves in nature as an extreme desert type able to survive with very little water and requiring several years to reach maturity. More favorable conditions might hasten development, but might also have an adverse effect on the amount of rubber produced. The proportion of rubber extracted from the fresh roots falls below 1 per cent, too little to justify any assurance of commercial value. But if simple methods of propagation can be learned we may expect to secure strains that contain larger amounts of rubber, through selection and breeding. It is first necessary to ascertain whether the plant can be grown and multiplied in the United States, either from seeds or from cuttings.

"The roots should not be buried too deeply, only enough to bring the stem end to the surface of the ground. Soil of a loose, open texture may be preferable, though we have no detailed information regarding the natural conditions." (*O. F. Cook.*)