

104213 to 104216.

From Ceylon. Seeds presented by T. H. Parsons, Curator, Royal Botanic Gardens, Peradeniya. Received February 1, 1934.

104213. *ACTINORHYZIS CALAPPARIA* Wendl. and Drude. Phoenicaceae. Palm.

A robust palm 40 feet high, with a smooth stem conspicuously ringed, pinnate leaves 9 feet long and 6 feet wide, and a large pendulous cluster of small flowers followed by ovoid, red fruits 3 inches long. Native to the East Indies.

For previous introduction see 94093.

104214. *ARECA* sp. Phoenicaceae. Palm.

104215. *EUTERPE EDULIS* Mart. Phoenicaceae. Para palm.

A palm, native to Brazil, which becomes 40 feet high, with a slender inclined trunk, pinnate leaves, and fruits the size of marbles. A nutritious beverage is made by the natives from the fibrous flesh surrounding the seeds.

For previous introduction see 97913.

104216. *MARTINEZIA EROSA* Linden. Phoenicaceae. Palm.

A small ornamental feather-leaved palm from tropical America, which is covered throughout with long needlelike spines. A related species (*Martinezia caryotactolia*) is grown to some extent in lower Florida.

For previous introduction see 72600.

104217 to 104219.

From Africa. Seeds presented by H. G. Poynter, Department of Agriculture, Ibadan, Nigeria. Received February 3, 1934.

104217. *PHOENIX RECLINATA* Jacq. Phoenicaceae. Senegal date palm.

Okunkun or *Okun*. Collected about 5 miles from the town of Oyo, Nigeria. A date palm 20 to 30 feet high, native to tropical and subtropical parts of Africa. The reclinate pinnate leaves are 6 to 9 feet long and have rigid green leaflets. The yellowish fruits with sweet edible pulp are half an inch long.

For previous introduction see 102637.

104218. *STRYCHNOS* sp. Loganiaceae.

Sample A. Collected about 4 miles from the town of Oyo.

104219. *STRYCHNOS* sp. Loganiaceae.

Sample B. Collected about 5 miles from the town of Oyo.

104220 to 104225.

From Cuba. Seeds presented by Robert M. Grey, Superintendent, Atkins Institution of the Arnold Arboretum, Soledad, Cienfuegos, through F. G. Walsingham. Received February 6, 1934.

104220 to 104224. *CINCHONA* spp. Rubiaceae.

Seeds received from the Government Cinchona Plantation, Musong Kalimpong, Bengal, India.

104220. *CINCHONA LEDGERIANA* Moens.

A tree, native to the Andes, yielding a bark remarkably rich in quinine

104220 to 104225—Continued.

which crystallizes readily as quinate sulphate. The percentage of the other alkaloids present is relatively small. The bark of this species matures in the fifth or sixth year and does not increase its quinine content after that age.

For previous introduction see 103441.

104221. *CINCHONA LEDGERIANA* × *OFFICINALIS*.

For previous introduction see 100115.

104222. *CINCHONA LEDGERIANA* × *SUCCIRUBRA*.

For previous introduction see 100116.

104223. *CINCHONA OFFICINALIS* L.

A small tree only 20 feet high, native to Peru and Ecuador in the high valleys of the Andes. It is now the most important species grown in the Nilgiri Hills in India.

For previous introduction see 100987.

104224. *CINCHONA SUCCIRUBRA* Pavon.

104225. *FLACOURTIA INERMIS* Roxb. Flacourtiaceae.

Collected at the Plant Introduction Garden, Summit, Canal Zone. The *Low-lev* tree of Ceylon. The brilliant red fruits, the size of cherries, are produced in immense quantities. They are very sour and are said to make excellent jelly and preserves.

For previous introduction see 102666.

104226. *TSUGA FORMOSANA* Hayata. Pinaceae.

From Japan. Seeds presented by Motoo Ohsako, Forest Experiment Station, Maguro, Tokyo. Received February 8, 1934.

For previous introduction and description see 103989.

104227 and 104228.

From French Indo-China. Seeds presented by M. Polanc, Institut des Recherches Agronomiques de l'Indochine, Division de Botanique. Received February 12, 1934.

104227. *CITRUS* sp. Rutaceae.

104228. *CITRUS* sp. Rutaceae.

104229. *ZEA MAYS* L. Poaceae. Corn.

From Brazil. Seeds presented by Dr. J. F. Assis. Received February 10, 1934.

Introduced for the use of Department specialists.

104230. *QUERCUS DENTATA* Thunb. Fagaceae. Daimyo oak.

From Japan. Seeds purchased from the Yokohama Nursery Co., Yokohama. Received February 15, 1934.

A large tree, native to Chosen, northern and western China. 75 to 80 feet high. The obovate, sinuate-lobed leaves, dark green above and grayish tomentose beneath, are 10 to 12 inches long and 9 inches wide, and the ovoid acorns, 1 inch wide, are about half covered by the cup which has lanceolate spreading scales. The leaves turn a gorgeous red in the autumn.

For previous introduction see 89697.