

24350—Continued.

"Introduced especially for the purpose of testing its stems in the manufacture of a matting woven for the purpose of taking the place of ordinary laths. If the stems are suitable for lath-matting purposes it may be possible to grow this bamboo profitably on steep hillsides in the South. Its use as a soil-binder is worthy of consideration, but the effect on the development of trees should be carefully considered before the plant is given a wide distribution." (*David Fairchild.*)

24351. ALEURITES MOLUCCANA (L.) Willd.**Candle nut.**

From Honolulu, Hawaii. Received through Mr. J. E. Higgins, horticulturist, Agricultural Experiment Station, December 17, 1908.

"Seeds procured for experiments in Cuba, Isle of Pines, and Porto Rico and for the expression of samples of candle-nut oil for analysis and comparison with the oils furnished by other species of the same genus.

"*Aleurites moluccana* (very generally known also under the synonym of *A. triloba*) is at home throughout Malaysia and Polynesia and has been naturalized on the tropical mainland of Asia, in Madagascar, and other tropical countries. It is abundant in the forests of New Guinea, Queensland, Samoa, Tahiti, New Caledonia, Fiji, and many of the Malayan Islands, extending to the Philippines. It is strictly an East Indian or Polynesian plant and may not originally have been native farther west than Java. The tree in its native haunts appears to prefer protected situations, being common in woods and especially in narrow valleys and gullies. It grows luxuriantly to an altitude of 3,000 feet, becoming gradually rarer to 4,000 feet, when it falls off altogether. It is a rapid grower and gross feeder, and propagates itself readily from seeds, which sprout in from 4 to 5 weeks. Its large, three-lobed leaves, silvery pubescent underneath and glossy above, make it admirably suited for shade and ornament in tropical countries, where it should be planted for its valuable seeds.

"The fruits resemble in size, and somewhat in appearance, the black walnut, with a thick fleshy rind and one or two heart-shaped seeds about the size of a horse-chestnut. The seeds or nuts are very thick shelled, containing but 33 per cent of kernel. The kernels yield approximately 60 per cent oil, making for the unshelled seeds 20 per cent of oil, which, owing to the thickness of the shells, is lower than that for *Aleurites fordii*, although the percentage of oil in the kernel is higher than in the Chinese species. The raw kernels are purgative, but are said to lose this property when roasted; so, too, the half-ripe seeds are considered of delicate flavor when eaten with salt, while the ripe ones are unwholesome. The Pacific islanders roast or cook the nuts slightly, when the shells can be broken with a light tap. The kernels are then threaded on bamboo splinters or cocoanut-leaf ribs, bound in leaves or bark, and in this way beautifully bright burning, but sooty and disagreeably smelling torches are obtained—herein the origin of the name candle nut.

"Candle-nut oil is known and sold under many names, which are used also to designate the tree or nuts which produce it: In Hawaii, kukui; in Ceylon, kekune; in India, belgaum walnut; in Jamaica, Spanish or country walnut; in the Philippines, lumbang; in French colonies, bancoul or noix de Moluques or chandelles (candle). According to Louis Edgar Andés the oil compares favorably with linseed in the durability of products made from it, but with some advantage over the latter in the rapidity with which it dries. It can consequently be used industrially for the manufacture of the same products. Its present price however—due principally, it seems, to the lack of cheap and efficient methods of shelling the nuts—does not allow it to compete with linseed. Candle-nut oil is not imported into the United States, but small quantities of the kernels find their way from Australia, various parts of Polynesia and Malaysia and the Philippines to European ports, where the oil expressed from them is used principally for soap making." (*Walter Fischer.*)