

**COCO-NUT<sup>1</sup> PALM** (*Cocos nucifera*), a very beautiful and lofty palm-tree, growing to a height of from 60 to 100 ft., with a cylindrical stem which attains a thickness of 2 ft. The tree terminates in a crown of graceful waving pinnate leaves. The leaf, which may attain to 20 ft. in length, consists of a strong mid-rib, whence numerous long acute leaflets spring, giving the whole the appearance of a gigantic feather. The flowers are arranged in branching spikes 5 or 6 ft. long, enclosed in a tough spathe, and the fruits mature in bunches of from 10 to 20. The nuts when mature are oblong, and triangular in cross section, measuring from 12 to 18 in. in length and 6 to 8 in. in diameter. The fruit consists of a thick external husk or rind of a fibrous structure, within which is the ordinary coco-nut of commerce. The nut has a very hard, woody shell, enclosing the nucleus or kernel, the true seed, within which again is a milky liquid called coco-nut milk. The palm is so widely disseminated throughout tropical countries that it is impossible to distinguish its original habitat. It flourishes with equal vigour on the coast of the East Indies, throughout the tropical islands of the Pacific, and in the West Indies and tropical America. It, however, attains its greatest luxuriance and vigour on the sea shore, and it is most at home in the innumerable small islands of the Pacific seas, of the vegetation of which it is eminently characteristic. Its wide distribution, and its existence in even the smallest coral islets of the Pacific, are due to the character of the fruit, which is eminently adapted for distribution by sea. The fibrous husk renders the fruit light and the leathery skin prevents water-ging. The seed will germinate readily on the sea-shore, the seedling growing out through the soft germ-pore on the upper

<sup>1</sup> The spelling "cocoa-nut," which introduces a confusion with *coa* (*q.v.*) or cacao, is a corruption of the original Portuguese form, coming from (and largely due to) Johnson's *Dictionary*. The spelling "coker-nut," introduced to avoid the same ambiguity, is common in England.

end of the hard nut. The fruits dropping into the sea from trees growing on any shores would be carried by tides and currents to be cast up and to vegetate on distant coasts.

The coco-nut palm, being the most useful of its entire tribe to the natives of the regions in which it grows, and furnishing many valuable and important commercial products, is the subject of careful cultivation in many countries. On the Malabar and Coromandel coasts of India the trees grow in vast numbers; and in Ceylon, which is peculiarly well suited for their cultivation, it is estimated that twenty millions of the trees flourish. The wealth of a native in Ceylon is estimated by his property in coco-nut trees, and Sir J. Emerson Tennent noted a law case in a district court in which the subject in dispute was a claim to the 2520th part of ten of the precious palms. The cultivation of coco-nut plantations in Ceylon was thus described by Sir J. E. Tennent. "The first operation in coco-nut planting is the formation of a nursery, for which purpose the ripe nuts are placed in squares containing about 400 each; these are covered an inch deep with sand and seaweed or soft mud from the beach, and watered daily till they germinate. The nuts put down in April are sufficiently grown to be planted out before the rains of September, and they are then set out in holes 3 ft. deep and 20 to 30 ft. apart. . . . Before putting in the young plant it is customary to bed the roots with soft mud and seaweed, and for the first two years they must be watered and protected from the glare of the sun under shades made of the plaited fronds of the coco-nut palm, or the fan-like leaves of the palmyra." The palm begins to bear fruit from the fifth to the seventh year of its age, each stock carrying from 5 to 30 nuts, the tree maturing on an average 60 nuts yearly.

The uses to which the various parts of the coco-nut palm are applied in the regions of their growth are almost endless. The nuts supply no inconsiderable proportion of the food of the natives, and the milky juice enclosed within them forms a pleasant and refreshing drink. The juice drawn from the unexpanded flower spathes forms "toddy," which may be boiled down to sugar, or it is allowed to ferment and is distilled, when it yields a spirit which, in common with a like product from other sources, is known as "arrack." As in other palms, the young bud cut out of the top of the tree forms an esculent vegetable, "palm cabbage." The trunk yields a timber (known in European commerce as porcupine wood) which is used for building, furniture, firewood, &c.; the leaves are plaited into cajan fans and baskets, and used for thatching the roofs of houses; the shell of the nut is employed as a water-vessel; and the external husk or rind yields the coir fibre, with which are fabricated ropes, cordage, brushes, &c. The coco-nut palm also furnishes very important articles of external commerce, of which the principal is coco-nut oil. It is obtained by pressure or boiling from the kernels, which are first broken up into small pieces and dried in the sun, when they are known as copperah or *copra*. It is estimated that 1000 full-sized nuts will yield upwards of 500 lb. of copra, from which 25 gallons of oil should be obtained. The oil is a white solid substance at ordinary temperatures, with a peculiar, rather disagreeable odour, from the volatile fatty acids it contains, and a mild taste. Under pressure it separates into a liquid and a solid portion, the latter, coco-stearin, being extensively used in the manufacture of candles. Coco-nut oil is also used in the manufacture of marine soap, which forms a lather with sea-water. Coir is also an important article of commerce, being in large demand for the manufacture of coarse brushes, door mats and woven coir-matting for lobbies and passages. A considerable quantity of fresh nuts is imported, chiefly from the West Indies, into Britain and other countries; they are familiar as the reward of the popular English amusement of "throwing at the coco-nuts"; and the contents are either eaten raw or used as material for cakes, &c., or sweetmeats ("coker-nut").