

sometimes two men to be constantly baling out the water. Notwithstanding all this, they make very long voyages,—to Tonga, Rotuma, and the Samoan Islands. The canoes are generally built of the *vas wood*.

The planks are brought into and kept in shape by small ribs, almost exactly as in our mode of boat-building.

The following are the dimensions of a double canoe of the most common size:

Length of the larger canoe,	. . . . .	70 feet.
Length of the smaller canoe,	. . . . .	55
Distance of the canoes apart,	. . . . .	7
Length of the platform,	. . . . .	30
Breadth of the platform,	. . . . .	15
Length of the cuddy,	. . . . .	15
Breadth of the cuddy,	. . . . .	6
Height above water,	. . . . .	10
Draught of water,	. . . . .	2 to 3
Length of yards,	. . . . .	15, 35, and 60
Length of mast,	. . . . .	35

Such a canoe will carry conveniently forty or fifty men.

When a chief requires a house or a canoe to be built, he applies to the head carpenter, whose title is *rokola*, and whose office is hereditary. He is a person of great consequence, and the workmen constitute a caste, in which the trade is hereditary also. The chief gives the *rokola* a whale's tooth as a fee, and pays him for the work, not even feeding the workmen, who are paid by the *rokola*, and provide themselves with food. With great exertion, a canoe may be built in three or four months, but it usually takes as many years.

The principal tool of the carpenters is an adze, which, since the introduction of foreign tools, they make by lashing a plane-iron to a crooked handle, with sennit. They also now use the chisel and knife. For boring holes, they use the long spines of the echina, bones, and, of late, nails. Carving is performed by the teeth of small animals (*rats* and *mice*) set in hard wood, much as diamonds are set for glaziers' purposes. Their patience, industry, and perseverance in their occupation are great, and the workmanship excellent, when the imperfection of their tools is considered. They are aware of the superior qualities of our tools, and anxious to possess them. That which they prize most is the American hatchet, which comes nearer in shape to their own instrument than any other. Their knives are made of the outside of a piece of bamboo, which is cut down for the purpose and put into the proper form while green. After it has dried for a time it is charred, which makes it very hard and sharp. It may be fitted for surgical