

## Construction of traditional outrigger fishing canoes in Tuvalu

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Tuvalu consists of a group of 9 islets and atolls situated between 5 ° and 10 ° S and 175 ° and 180 ° E. The nation has a population of about 9600 persons, of whom about half live on Funafuti, the capital island.

Fishing still plays a very large part in the lives of Tuvaluans, especially in the outer islands. For example, at a recent meeting to form a Fisher's Association, on Nukufetau Atoll, a total of 61 fishers were registered. This represents about 10 per cent of the total atoll population of around 600 people. Undoubtedly there were several others who did not attend the meeting.

Some of these fishers use plywood or aluminum skiffs powered by 15–40 hp motors. But many still use traditionally-constructed outrigger canoes propelled by sails. It is locally believed that some fish, particularly the large yellowfin (*takua*), will more likely be caught by a sail-powered trolling canoe than by an outboard-powered skiff. A 1996 survey conducted on Nanumea (population around 1000) found some 80 such canoes still in use.

These outrigger canoes are made from local trees. In some islands of Tuvalu, notably Nanumea in the north, the *fetau* tree (*Calophyllum inophyllum*) is

mostly used for the main hull (*vaka*) and outrigger beams (*kiato*), whereas the lighter-weight *puka* (*Hernandia nymphaeifolia*) is used for the outrigger (*ama*). In Nukufetau and Nui, in the central Tuvalu group, the main hull and outrigger are constructed from *puka*, and the beams from *fetau*.

A suitable tree is selected, felled and trimmed. At the same time, a smaller tree from which to make the outrigger is also felled and then debarked, so that it will be dry by the time the main hull has been finished. The trees usually come from land owned by the family of the person requiring the canoe. Otherwise, compensation for the tree might be required by the land owner.

The main hull tree is then formed roughly along the sides into the shape of the canoe, using an axe and short-handled hoe. A chainsaw, if available, can be substituted for the axe, making the work easier and faster. The inside of the canoe is then removed by making crisscross cuts with the chainsaw or axe, and then chipping out the sections with the hoe. A metal adze is used for finishing.

The top plate of the canoe (*oa*) is cut from another tree and shaped accordingly. It is attached to the top of the main hull by stitching with cord. (Nowadays monofilament fishing line is used.) The join is heavily covered with tar or paint, to prevent leaking.

The whole process can take 2–3 months or longer to complete, depending on whether or not the undertaking is regarded as a full-time occupation. There are still a number of canoe-builders in the islands of Tuvalu, and old men still pass their knowledge down to their sons. A young man may be assigned such heavy work as chopping and rough shaping of the tree, while the older man offers technical advice and assists in the lighter, finishing work.



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It is said that a canoe made from *puka* can last more than 10 years if properly cared for. This involves protecting the timber with paint, and keeping the canoe out of the sun when not in use. In recent years in Nukufetau approximately 15 *puka* canoes have been constructed annually. Canoes from *fetau* wood are reported to last much longer than those made of *puka*. This is perhaps the reason that few canoes were observed being built in Nanumea, although a large number are in use there. Although most canoes are used locally, several may be transported to the capital, Funafuti, where a shortage of land and trees means canoes are no longer built there.



The sail (*la*) is a simple crab claw design, made locally from synthetic fiber either tarpaulin or sail cloth. Canoes are skilfully steered by means of a paddling/steering paddle (*foe*).

With fuel on the outer islands of Tuvalu costing up to A\$1.15 per litre, these locally-produced craft are an economical choice for local fishers.

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- assessing the conditions of coral reefs worldwide,
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