

Terengganu Heritage

Traditional Boat Building - Pulau Duyong

So far as the writer is aware, there has been no systematic account of local boat-building around the East Coast of the Peninsula. The people of Terengganu have always been more than just fishermen and the boat building industry flourished throughout in the 19th century. Apart from small fishing-boats 3m to 4m long, the Terengganu people also built large trading boats called Perahu Besar, between 13 and 27m long.



There are several types of fishing boat such as Kolek, Payang, Bedar and Sekoci and four types of Perahu Besar such as Dogol, Pinis Dogol, Pinis Gobel and Anak Bedar. The latter vessels plied the trade routes around what is today Vietnam and Indonesia.

Terengganu is the centre of boat building for the East Coast, principally in the mouth of the main river and to a lesser extent at other points along the seaboard. At the present time one of the more popular places for traditional boat building methods is at Pulau Duyong, Kuala Terengganu. There, traditional boat-builders continue to produce seaworthy vessels relying entirely on traditional skills and long experience. The same method of construction is in widespread use throughout the region, and can be traced right back to the time when records began. Their methods are particularly well adapted to local requirements and prevailing conditions, using just the tools that are locally available.

It would appear that the earliest boats used by the Malay people were dug-out canoes made from a half or three quarter log. Later, when sawn planks became available this simple design was improved. The new type of boat now incorporated the basic dug-out keel, with two pieces of sawn plank added to the hull, these being secured by ropes or rattan. This type of boat was known as a "lash lug" planked boat.



Boat construction then evolved to lash lugs with ribs added for strength and stability. These boats were constructed around the shell of a dug-out, which provided the base, or bottom of the boat. Planks were then added edge to edge, fixed with wooden pegs, or dowels. The ribs were then inserted. The planks themselves were shaped to follow the contours of the dug-out base. At each end where the planks converged, they were cut off diagonally with a large, solid baulk of wood inserted to form the stem at the front and the stern-board or transom at the back.

As techniques evolved, the dug-out canoe base was replaced by a much simpler keel made from a straight plank. The first of these entirely plank-built boats was the Perahu Kolek. Boats such as the Perahu Koleh had straight keels rising to a curved stern and stem. Finally a crescent shaped keel was adopted. These boats had added advantage of easy maneuvering with quarter rudders on either side of the stern of the boat. These could be easily lifted when the boat was aground, and were less prone to sticking in the river mud.

Stages Of Construction

Terengganu boat builders prefer to make use of the local high quality cengal wood (*neobalanocarpus*), with penaga wood (*mesua ferrea*) for the dowels. Kulit gelam (tree bark - *melaleuca leucadendron*) is used for caulking, the water-proof packing pressed between the planks.

The cengal wood planks were left to season under the sun for several months before use. This rendered them lighter, more easily worked and less liable to warp. Before modern tools were introduced, all the work, starting with laying the keel, the molding of the hull and finally the construction of the cabin was done by hand.



The first step was laying the keel, the length determining the final size of the boat. The keel was then grooved for the first plank with holes drilled at 20cm intervals to take the dowels that held the first plank in place. The position of these holes was marked with a pencil on the edge of the plank to be fixed. The corresponding holes could then be bored in the correct position.

To ensure a snug fit the tips of the dowels were sharpened before the incoming plank was fixed on top. The number of hull planks varied according to the size of the boat. Before each plank was fitted edge to edge it was bent or steamed into the correct curve, using a slow fire. Once in position a layer of gelam bark, an extremely effective caulking material, was laid along the plank edge to be pierced through by the dowels as the plank was pressed into position.

Once the hull was ready, ribs for stiffening the hull were carved into shape and then fitted. There were two types of rib; lower and upper. The lower ribs were attached to the keel and the first two or three hull planks: The upper ribs are attached from the lower ribs up to the upper hull plank. After that, the transverse pieces, or thwarts were fitted. Finally the decking was fixed.



For modern boats the construction is essentially the same, except that when the hull and decking are complete, the engine is fixed in position followed by the cabin above.

Some boats built in Terengganu were large enough to have three spacious double cabins and when fitted with modern engine could travel at a speed of 8 knots. When the boat is ready, it is time to launch. At the launch, everyone will pull and push the boat on rollers of round wood until it finally reaches the water to much applause!

Boat Building In Terengganu, Today.

During the war the Japanese discovered the boat-building skills of the Terengganu people and was said to have forced them to build wooden minesweepers. After the war, some overseas orders were placed for new boats to be built in Kuala Terengganu. Since then, Kuala Terengganu largely built fish-trawlers and ferries for local use. Even this has declined. Rising timber prices and a declining industry has led to the closure of a number of boat-building yards. Efforts are however made to preserve the skills and tradition of this heritage of Terengganu.

TUAN HAJI MOHD YUSOF ABDULLAH is Director of the Terengganu State Museum.