

"Born to Row" by John Murray

Not quite, at the age of five I struggled to paddle a canoe made by my Dad from the wing tank of a WW2 fighter plane. Not long after I found myself straining to row clinker hire boats on the promise that I would bail them free of water. Often the water would flow in faster than I could bail it out, and sometimes we rowed into waters where man-eating sharks were still devouring people (Middle Harbour in Port Jackson). One poor fellow from the Mediterranean was warned not to dive in and was taken the instant he hit the water. Then, in the sea scouts I struggled with heavy hardwood oars to row whaleboats. Really! Were whaleboats so heavy and clumsy? Apparently so, it was just as hard to row the replica whale boat to re-enact the trip of Captain Arthur Phillip 8 miles up the Hawkesbury river for the Australian bicentennial in 1988 (these were not the proper super light weight whaleboats used to chase whales).



Later I demurred to row a surfboat because of a bad back but when pressed into service was delighted to find my bad back cured. I had the experience of coasting into the beach trailing oars on a wave that a surfboard would find far too shallow to catch. Then, on to the purposeful rowing of a dinghy as I sailed around the world. Now here was a boat I could row easily if not at a great speed. On one occasion I rowed the damn thing 5 miles to a reef off Tagula Is. in New Guinea, where I had been shipwrecked, for a spot of spear fishing. I had to turn back when a huge shark cruised by, as I was about to enter the water.



These days I am consumed with the desire to have the perfect recreational rowing boat. I discovered the Herreshoff rowboat and have made about 30 for the islanders to commute from Dangar Island in the Hawkesbury River to the mainland. They seem to me to be as close to the perfect rowboat as you can get. I have seen a young mother gaily row in a large chop, daughters and all disappearing from

view as each swell passed by. The image had all the charm of a Homer Winslow painting. All of this is not only good for the soul but also the environment.



But a few things bothered me. The boat was great but the oars and oarlocks were not up to standard. After studying racing oarlocks I spent a couple of years incorporating their best features into the design of the Gaco oarlock.



Then the oars needed attention. I still had my fathers oar made in the 1950's. They were beautifully made and showed attention to the structural properties of wood. For instance the tension side of the loom was thinner than the compression side (wood is twice as strong in compression as in tension). However, the taper in most of these old oars did not seem to be as extreme as engineering considerations allowed (that is, drawing the taper from 2 ¼" at the oarlock to an imaginary width of zero at the end of the oar blade). As well most of the oars I had used required an annoyingly firm grip to stop them rotating as they pulled against and up the round oarlock. Now, one unintended consequence of the Gaco was that its broad flat plastic bearing area obviated the need for a leather or plastic oar protection. As well the shape of the oarlock allowed a modified D-section oar to hold the blade vertical in the rowing stroke. The larger section oar at the oarlock meant it was now stiffer. The loom was made by judicious use of circular saw and router bits ranging from ½" to 1" radius. I might add that it was necessary to purchase a variable speed router for the large diameter bits. The only decent Oregon without knots I could buy was from a recycled timber yard. These lengths of 4" by 2" had probably been seasoning for 50 years or so in the roof of a suburban house.

What to do about the blade? At first I considered using veneers but soon realized it could only be curved in one direction. So now it is made after much experimentation from fiberglass using, 10 oz. woven roving on the tension side, 4mm coremat and 1 ½" oz chopped strand mat on the compression side. (chopped strand mat is superior in compression).

The blades are finished off with white polyurethane paint and the looms are varnished to give the oars an aesthetic appeal. They are much more pleasant to use as they are lighter outboard and the

blades have an efficient grip on the water. The most pleasant surprise is the constant angle the blades keep, vertical to the water, without any effort on my part.



I have had the opportunity to observe the dynamics of rowing with my crew of eight galley slaves in the surfboat. It took some time to train them to take long slow strokes, but when we were headed by the wind, they reverted to quicker shorter strokes. Much more energy was used during the shorter strokes as the momentum of the oar and rower's body has to be changed more often and more violently. You can actually feel the wasted effort as you push on the oar at the beginning of the return stroke. However this extra effort is partly compensated for by the fact that the middle part of the oar stroke is the most efficient as it is pushing the water straight back. At the beginning and end of the stroke the water is pushed both back and sideways. The short quick strokes have the extra advantage of keeping the momentum of the boat going against the headwind.



Much effort is often made to put weight onto the inboard end of the oar, to reduce the effort of raising and lowering the oar in and out of the water. Sometimes this is done by leaving inboard part of the oar a square heavy section or alternately lead weights are incorporated near the handle. Both these solutions add to the effort required to change the momentum of the oar at the beginning and end of the stroke. Seeing as we have so little horsepower to row with, a better solution offers itself. This involves reducing the weight of the outboard part of the oar. So far I have done this by engineering the appropriate taper into the loom, and keeping the blade as light as possible.



I have noticed that experienced rowers take long slow strokes in calm conditions. For long distance rowing this works best. However, it is best to vary the length of the rowing stroke over time as this brings different muscles into use. The end result of a nice long row is a good sleep and wonderfully strong stomach and back muscles. To say nothing of how the quiet contemplation of nature lifts the spirits and abolishes depression.



The materials to make each oar cost less than \$30 and the oars are certainly more aesthetic than the carbon fibre oars which cost over \$500. Then there is the added difficulty of making the bought oars fit the oarlock. So in the meantime I am very happy with the present product and still have room for refinement. Now I am very close to the goal of owning the perfect rowing combination. What a pleasure it is to gently pull the boat through the water in such an efficient manner that you can go on and on indefinitely.