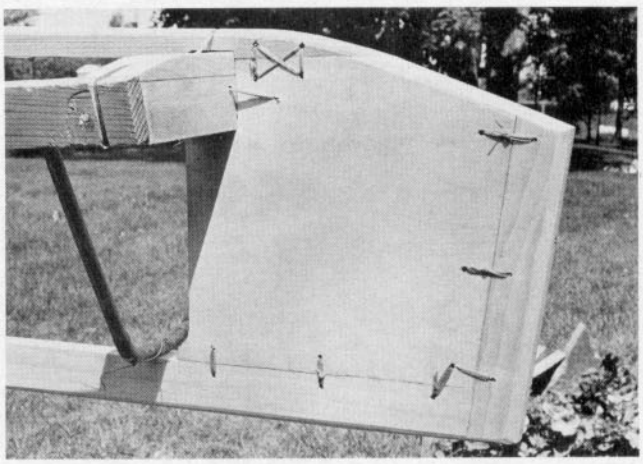

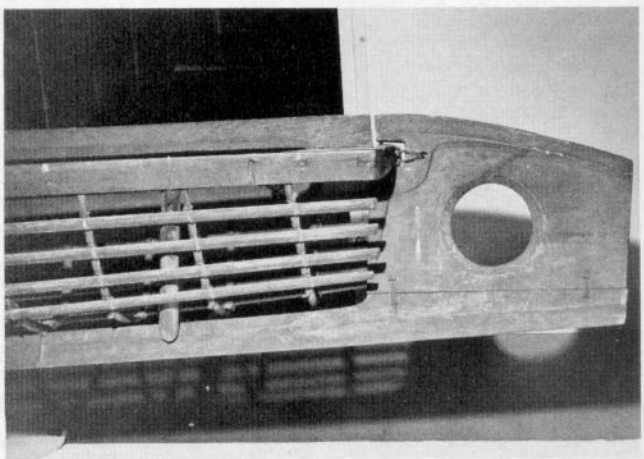

None of the internal structure needs to exactly copy that of the Aleut original. Note the differences between the author's stern section (left) with the Aleut structure below it. The hole served only to reduce weight.

getting out, righting his craft, bailing it, and reentering. He placed inflated seal or sea lion stomachs alongside the kayak for extra stability through all of this, but especially for entering. Pushed inside the bow and stern, these bladders also maintained positive buoyancy in case of holing.

Although the Greenland Eskimo kayaks and kayakers are well known for their several dozen capsize recovery techniques and their clever, beautifully-made kayak attachments and equipment, Alaskan Eskimos — the Aleut in particular — had the best woodworking techniques, bar none. Their fine joinerwork is nowhere more evident than in the one-hole bidarka at UCLA's Lowie Museum, brought back from Atka in 1934 by anthropologist Margaret Lantis. The red-painted frame was collected without its skin cover, allowing me to inspect its construction and make detailed measurements. It is the finest kayak I have seen.

Based on this examination, a study of the ethnographic literature, and my own reproduction of a two-hole Aleut bidarka from the Smithsonian's collections, this article, along with the one to follow in *SBJ* #30, describes the construction of a one-hole Aleut kayak, using modern tools and materials. The resulting craft will be a high-performance hunting machine — lean and fast, light and tippy — and a joy to look at. It is not meant for everyone.

Making the Pieces

For woodworkers accustomed to glue and metal fastenings, the lashed-together construction of the Aleut kayak will seem strange indeed. I caution anyone against thinking that he will improve the boat by using screws and epoxy in the final joinerwork, however. This kayak is built very light and needs the movement of its parts to work with the waves.

In general, the parts of the kayak should be fabricated completely before actually joining them. All pieces can be gotten out of lumberyard stock, with care taken to find knot-free pieces for the gunwales and deck beams. Spruce, Sitka if available, is a good choice for all parts, but many other woods are suitable. Use whatever is available locally at a reasonable price.

All the measurements are given in centimeters. If this is your first time working with metric measurements, you may not have a feel for dimensions. But in time you'll find the actual use of a metric rule infinitely easier than the clumsy feet, inches, and eighths. Just remember: 2.54 centimeters is the same length as an inch, and 100 centimeters is just a bit longer than 39 inches (3 inches more than a yard).

The only part of the construction that is at all difficult is the bow section shown by exploded diagram in figure 1. Figures 2 and 3 are measured drawings of the upper and lower bow pieces, which may be made of pine for easier working. The upper bow piece is more easily built up in two parts; that is, a horizontal top plate lashed to a vertical piece to achieve the approximate shape. The important thing to remember is that only the wood that eventually comes in contact with the canvas cover will affect the final shape of the kayak. The Aleut design of the pieces keeps the weight as low as is consistent with high strength, but none of the internal pieces of *your* kayak need mimic them. Photograph 1 shows the built-up bow of my two-hole Aleut kayak reconstruction, with the top plate mentioned above lashed to the upper bow piece.

Because I could not find naturally-curved wood for the lower bow piece (shown in figure 3) as the Aleut did, I glued it up from two blocks with the grain in different directions, then sawed and sanded it to the final shape shown in the photograph. The lower bow piece also forms the forward part of the keelson and should be left about 160 centimeters long to allow for later scarphing. Cut the middle length of