





Sea Kayaker

Marking and Cutting the Mortises

In the process of editing this article, I used David Zimmerly's instructions to build a ¹/₄-scale version of the East Arctic kayak. To speed up the process of marking and cutting the tenons, make a pattern of thin metal for the V-shaped tenon. The pattern (photo #1) is a right-angled isosceles triangle with a tab running parallel to the triangle's hypotenuse. The triangle must be slightly taller than the mortises in the gunwale are deep. Tape the pattern to the outside of the sliding arm of the bevel gauge.

Cut the deck beam stock to length fol-

lowing Zimmerly's table. To get the bevel across the wide face of each deck beam, set the deck beam piece on top of the gunwales directly over the mortise. The corner of the deck beam should be at the inside face of the gunwale. Trace along the bottom face of the deck beam and the inside face of the gunwale. Saw the end along that line. With a piece of scrap set across the gunwales and lined up over the cockpit-facing end of each mortise, use the bevel gauge to get the angle between the outside face of the gunwale and the scrap across the top.

With the bevel gauge set for each deck

beam location, hold the bevel gauge on the deck beam stock and set the tip of the triangle at the edge of the deck beam. See photo #2. It is not critical where the point falls along the edge as long as both ends of the deck beam are marked the same.

Draw lines on the top, bottom and end of the deck beam parallel to the edges that you have to cut. You could use a marking gauge to draw these lines, but I just hold a pencil between my thumb and index finger and slide my middle finger along the work piece as shown in photo #3. These lines will serve as guides as you plane, saw or sand the faces of the tenon.

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From 1971-1982, David Zimmerly was the arctic anthropologist with the National Museums of Canada, now called the Canadian Museum of Civilization. He is the author of Hooper Bay Kayak Construction and QAYAQ: Kayaks of Alaska and Siberia. David has a web site of interest to builders of traditional kayaks: www.arctickayaks.com. He and his wife Helga live in Perth, Ontario, Canada.

