



From The Hawaiian Canoe by Tommy Holmes

The cross booms joining the hulls of a double canoe were of a somewhat different configuration than the 'iako of an outrigger canoe. "The arched sticks of the outrigger (iako) were carefully selected from the bent trunk of an ohia lehua as they were the best of all arched sticks," noted I'i, an Hawaiian contributor to *Nupepa Kuokoa* in the late 1800's. He goes on to say that "some double canoes had three arched sticks (iako) of ohia lehua but if the canoes were long, four or five ohia were used—carefully selected and prepared, for these were the strongest." There are few woods anywhere that are stronger than 'ohi'a lehua, and no structural or load-bearing configuration in nature stronger than an arched beam. Hau does not even begin to approach the strength of 'ohi'a and would be of marginal utility on a large double canoe, though Haddon and Hornell seem to think it sufficed. While four or five 'iako would suffice for many large double canoes, occasionally even more were used. Paris' drawing in 1839 of a forty-seven-and-a-half-foot long double canoe showed six; one observer in 1793 saw eight.

Though arched 'iako on double canoes were standard at the time of contact, according to Malo "iakos used in ancient times were straight sticks. This continued to be the case until the time of Keawe [last quarter of the 17th century] when one Kanehuna [son of Keawe II] invented the curved iako." This raised the decking well over the water, eliminating wave resistance and affording drier and more comfortable placement of people and baggage. A double canoe model brought back to the British Museum by Vancouver in the late 1700's is fitted with two perfectly straight booms which, as Haddon and Hornell note, is either "a late survival of the older method or an extemporization out of two outrigger hulls." In large part because of the difficulty in securing arched 'iako, many 'iako on double canoes described in the second half of the nineteenth century were straight pieces, as were 'iako of virtually all double canoes in the twentieth century.

These 'iako either laid on top of the gunnels if there was only one, or "in those with two strakes [gunnels] they passed through the upper one or partly through both and rested on the upper part of the lower." Wherever an 'iako spanned the open part of

the hull there would be located a wae for purposes of lashing the 'iako and giving rigidity to the hull. The ends of the 'iako projected a few inches beyond the outside gunnel and were often knobbed or notched for better purchase of shroud lines and occasional back stays.

Often the foremost and aftmost 'iako rested on top of and were lashed to the respective end covers (kupe). Both end booms, note Haddon and Hornell, were "usually bowed slightly higher than the others, whereas the second from the fore end was stouter and wider than its fellows and carried the socket in which the mast was stepped."

The distance separating the two hulls was variable, depending on the size and intended use of the canoe, and, to a lesser extent, sea conditions. As a rule, wider spacing between two hulls afforded greater stability; however, speed was sacrificed and the tendency of the hulls to work against each other was increased.

Cook estimated that the hulls of a seventy-foot double canoe were lashed eight feet apart, while Supercargo Ebenezer Townsend two decades later notes a canoe of the same length with hulls only five feet apart. In 1843, there are reports of two different forty-five-foot double canoes, one with a one-and-a-half-foot spacing and the other a nine-foot spacing between canoes