

IV Conclusions

One of the results of this computer study is that it makes many formerly obscure ethnographic statements quite reasonable and understandable. For example, an Aleut proscription against dumping ballast overboard in stormy conditions even though loaded down with game now makes sense. Rock ballast kept the center of gravity lower in the kayak than did dead sea otters and the craft was more safely operated.

Another example -- displacement with the waterline up at the deck level (hull displacement in figure 5) provides a maximum figure for loading the kayak. That is, the weight of the kayak, plus the kayaker, plus a cargo of dead seals, for instance, must be less than this hull displacement figure. The displacement to sheer (Disp. to Sheer) amount for the third kayak down in figure 9 is 114.3 k. An average man of 68 k (150 lbs.) and a dead seal of 68 k together weigh more than this figure. The conclusion is that the Koryak user of this kayak had to tow back any game killed as the weight of it in or on the boat would have caused a capsize or sinking.

These are just two examples of the use of the computer data in verifying, both positively and negatively, the ethnographic accounts of people and lifestyles long disappeared. Statistical analysis of the comparative data could shed some light on similarities and differences of design related to movements of people and ideas.

While I have used the computer program specifically for the study of kayaks, it could be used with little or no modification on canoes, dugouts and almost any small displacement vessel. The lines and weight of a craft are basically all that are necessary for a computer analysis. The program needs a computer with a Fortran compiler and 140 K of memory. Anyone interested in using this program may contact me at the National Museum of Man, Ottawa K1A 0M8 for further information.