

Form Followed Function —

And The Function Was Hunting

KAYAKS WERE THE most important item of technology for many ancient Arctic dwellers. Among some groups, a boy wasn't considered a man until he had his own kayak. Only then could he hunt the sea mammals that were his culture's mainstay. Only then could he take a wife and support a family.

The climatic and topographic conditions under which kayaks evolved varied widely. In southern Greenland or Alaska, the waters stayed open virtually year-round. The high Arctic offered only a 90-day respite from the ever-present ice. As the conditions varied, so did the kayaks. Currently, evidence of some 40 different native kayak designs has been catalogued.

Sea-mammal hunting boats depended on stealth rather than outright speed for success, because a frightened seal will dive and be gone in an instant. The boats had to be seaworthy, too; the windswept Arctic coasts demanded no less. Finally, such boats had to be able to carry home captured game, sometimes over considerable distances. These seagoing kayaks came in four basic forms, though slight changes in response to local conditions were common.

The Greenland Eskimos designed low-profile, low-volume sea kayaks with a needle shape and upswept ends (pictured above). Typically 17 to 18 feet long, these narrow (about 19-inch) hard-chined boats with their V-bottom cross-sections demanded the utmost skill from a paddler. The Greenlanders responded with over 25 capsized recovery techniques, both self- and team-rescue tactics. With his watertight sealskin parka sealed tightly around the cockpit rim, wrists, and head, the kayaker faced capsizing with relatively little trepidation.

These boats required that their paddler continually balance with either paddle or body movements. For those who couldn't make the grade, the consequence was death or that malady peculiar

to Greenland Eskimo paddlers known as "kayak angst" or fear. Victims became totally disoriented (usually under overcast or snowy conditions), and couldn't tell up from down or sideways. Dizziness set in, which usually led to a capsize from which the paddler could not recover or reach shore without help from a comrade. Once contracted, kayak angst prevented its victims from ever hunting by kayak again.

The boats' ultra-low profile shed the Arctic gales well and was difficult to spot from a seal's-eye view. But the low, flat decks offered little carrying capacity for captured game. Instead, the Greenland hunters usually towed their quarry home using elaborate toggle systems.

The Baffin Islanders, who also hunted sea mammals, solved the seaworthiness/carrying capacity in a second, far different manner. They built wide, flat-bottomed kayaks that were so stable capsized recovery techniques weren't needed or at least not learned. These most stable of all Eskimo kayaks had flared sides and high cockpit coamings, nearly eliminating the need for a sprayskirt. They had great game-carrying capacity atop their broad, flat afterdecks — up to 1,000 pounds.

From the Bering Strait south to the Aleutians, native kayaks exhibited a third solution to the general problem. Short (15-16 feet), with generous beam (up to 29 inches), these boats had flat bottoms, multiple chines and moderate flare to the topsides. This fairly stable cross-section combined with raised (peaked) decks to efficiently shed water in a rough sea.

But carrying game on deck raised the center of gravity too high for good stability. The solution: the Bering hunters butchered their game on a nearby icefloe, then stuffed it into the kayak ends with special gaffs and hooked implements. These boats' other unusual feature came in the form of a single-bladed paddle; a limited number of single-blade capsized

recovery techniques were known and used. (*C-boaters take note — Ed.*)

The Aleut and Koryak peoples developed a fourth solution. Though their respective kayaks were very dissimilar-looking, both types used rock ballast carried low in the hull to improve stability. Evidently, the ballast worked; neither group relied on capsized recovery techniques.

The Koryaks of Siberia used very short (9 to 10 feet), beamy (28-inch) V-bottom craft and simply did not use them in difficult conditions.

The Aleuts ranged the cold, rainy Aleutian Islands in far more capable boats. They were renowned for paddling 10 miles or more out to sea, often for over 12 hours. They usually traveled in pairs and could "catamaran" together for stability in heavy weather. They carried water in bladder containers that could also double as float bags!

The sleek and fast Aleut kayaks were a match for any others in the Arctic. Hulls were around 17-19 feet long, with a narrow beam of 17-19-inch, multi-chined with a moderate V-bottom. They also featured raised, wave-shedding decks.

Of these four solutions to the sea kayak design problem, many Europeans chose to emulate the Greenland model, not because it was necessarily better, but through simple historical accident. Greenland Eskimos and their kayaks were first met by the early explorers because Greenland was nearer to Europe than was Alaska. Greenland kayaks were brought back to Holland and England by whalers, especially in the 16th and 17th centuries, and were often hung in churches and town halls for all to see (in one place complete with a stuffed dead Greenlander!) They became the Eskimo kayak stereotype.

It's a pity that other, equally fine native sea kayaks haven't yet inspired recreational models, but that may be changing. Kayak builders from Greenland, Canada and Alaska all adapted different designs to meet their particular needs for stealth, seaworthiness, and carrying capacity. Today's ocean paddlers can do the same.

With modern materials and ancient knowledge, a sea kayaker can choose the design ideally suited to his or her needs, a design to carry the desired gear over the desired seas. Then, as always, the paddler can travel there in silence.

— David Zimmerly