The Art of Building the Birch Bark Canoe

Long before the French arrived in North America, the native inhabitants of the eastern the art of building birch bark canoes. Lightweight, strong and portable, the birch bark for the first Europeans.

French, English and Dutch trappers and traders quickly mastered the art of building the canoes from the material at hand, and just as quickly modified the birch bark canoe for commercial ventures.

Birch bark, slow to rot and tolerant of frost and heat, was used to build these Anishinaabe canoes and wigwams photographed in about 1900.
(Lake Superior Marine Association Archives, Lake Superior Maritime Collection at University of Wisconsin-Superior, McDermott Collection)

Using an axe, a crooked-handled knife and an awl, a Native American or a *voyageur* could build a canoe in several days using readily available forest materials. Bark from white or yellow birch trees rots slowly, and it tolerates both frost and heat. Since the bark is made up of individual layers, it could be trimmed and applied in whatever thickness the builder deemed necessary.[1]

Canoe builders went into the swamps to gather spruce, balsam or cedar roots. They stripped the bark from the roots and split them in half. Then they laid thick layers of birch bark on a flat surface to form the canoe. Eastern white cedar was split and dried to make the ribs. The canoe was formed around the cedar ribs and gunwales, with the white bark side in. Using an awl, the bark was lashed to the ribs and gunwales with the peeled, split roots. [2]

The final stage of making the birch bark canoe consisted of gathering spruce gum in the woods. The hardened gum was heated and strained to remove impurities and then mixed with bear fat. The gum and fat mixture was again heated and applied to the seams with sticks and fingers. [3]

Birch bark canoes were notoriously prone to capsizing, and the bottoms were easily ripped out on rocks. For those reasons, the paddlers precisely balanced the human and cargo load, and paddlers would typically hop out in shallow water and guide the

canoe gently into shore rather than beaching it on rocks or sand bottom.

The canoe of the woodlands inhabitants had room for two paddlers and a small amount of cargo. French *voyageurs* modified the birch bark canoe in the 17th century to carry more paddlers, passengers and cargo. The Montreal canoe, with a length of upward of 36-40 feet and a beam, or width, of 6 feet, was the standard canoe for traversing the Great Lakes. A Montreal canoe carried as many as a dozen paddlers and a cargo approaching three tons, broken up into 90-pound packs for carrying across portages. [4]

The smaller North canoe was used on the lakes and wider rivers of the country north and west of the Great Lakes. With a beam of 4 feet and a length approaching 24 feet, the North canoe carried a crew of six paddlers and 3,000 pounds of cargo.

The bigger canoes were more difficult to portage because of their weight. In later years of the fur trade, North West Company and Hudson Bay Company officials often stationed canoes at the ends of difficult portages. The great portage around the cascades of the St. Louis River west of Fond du Lac near present-day Duluth had lighter canoes at the upper end of the portage for use in the interior and North and Montreal canoes at the lower end of the portage for use on Lake Superior. North West Company trappers were thus spared the labor of hauling their canoes back and forth across the grueling portage. [5]

Depending on wind and wave action and the number of paddlers, Montreal and North canoes were capable of traveling 5-6 nautical miles per hour (knots) on the Great Lakes. Jury-rigging an oilskin sail to the gunwales could propel a canoe at 8 knots or better. [6]

The birch bark canoe was an elegant, yet utilitarian mode of transportation that truly opened up Lake Superior and the Great Lakes to commercial navigation.

[1] Newman, Empire of the Bay, p.294

[2] The Making of a Birchbark Canoe, http://www.cyberus.ca/~jriver/eng_photo_tour5.htm

[3] Building a Birchbark Canoe,

[4] Newman, Empire of the Bay, p.295

[5] Birk, “When Rivers Were Roads,” p.366

[6] Newman, Empire of the Bay, p.295