

Thin strips of cedar (*Thuja occidentalis*) for the ribs, and the sheeting used between the ribs and bark to prevent injury to the latter, are obtained, split into approximate sizes and placed in water to render them more flexible. Another important requisite is the birch-bark, which peels off most easily late in June or early in July. This is rolled up and laid away in the shade. Towards evening, or at any time, if the day is cloudy, stakes (nine or more to a side) are driven into the ground at intervals to approximate the length and width of the canoe. These are made to flare outward slightly. The bottom pieces of bark are now placed in position, overlapping a few inches in the middle where they are to be joined. A single length of bark is preferred for the bottom. This, however, is not always obtainable, so that two pieces, or even three, may be used. Stones are laid on the bark to hold it down, and a bottom frame, approximating the width of the canoe at the bottom and pointed at both ends, is applied. The work so far is done by the men. The next operation, that of shaping the bottom by making slashes or gores on each side and sewing these with spruce root, is done by the women. The gores are made towards the ends, where the canoe begins to narrow. The upper edges of the bark are also trimmed evenly. The spruce root for sewing has been split by the women to a suitable size and rendered flexible by steeping in fish broth. The men next lay the upper lengths of bark alongside, measure them by trial, then place them in position. The bottom pieces are now scored along the bottom with an axe where they are to be creased for the taper to bow and stern, after which both upper and lower barks are pinched together by stakes driven closely and tied at the top. An inner frame (or "inside gunwale") giving shape to the upper edge of the canoe, and having exactly the right taper and curve, has been prepared beforehand and is now placed between the upper barks and sewn closely and firmly to them. Pieces of cedar, bent to the approved shape of bow and stern, are placed between the barks at the ends of the canoe, the bark trimmed to conform to these in outline, then sewn to them with spruce root. The sewing, as before, is performed by the women, to whom this part of the work is always assigned. Stitches of uneven length are often employed, particularly around the ends, to prevent the bark from splitting.⁵ The gores and laps have in each case been well cemented or stuck together with clear gum boiled a little to thicken it.

⁵Other devices for preventing the edges from splitting along seams, are: The sewing of an extra strip of bark around the outer edge of the canoe beneath the gunwale; also the inclusion under the stitches of a strand of spruce root (often used along longitudinal seams where barks are joined). Both of these schemes are employed by the Dog-ribs, Siaves and Chipewyans.

The bottom frame, which is merely temporary, is now removed, the ribs taken from the water, bent to shape around the knee, cut to length and driven into place with a mallet. Other thin strips of cedar, three or four inches wide, are driven between the ribs and bark as the work proceeds. The purpose of these is to form a protective flooring and siding. The canoe, particularly at this stage, is kept well moistened both inside and out. The placing of the ribs and sheeting proceeds, generally speaking, from each end to the centre. Cross-pieces, to keep the top spread, are hammered in at every second rib. The ribs are a couple of inches wide and about the same width apart. When the insertion of ribs and sheeting is completed, the canoe may require a general correction in shape, which is given by tying it between stakes and exposing it for a while to the sun.

The next process, also a woman's job, is to get ready, or rather, to have ready, the spruce gum and to gum the seams. All laps have their outer edges running backwards or towards the stern, so as not to obstruct the motion of the canoe. The spruce gum is obtained from trees which have been gashed the year before, is boiled a while to thicken it and mixed with powdered charcoal—some say, to make it look nice. The bottom seam is coated with clear gum and pegged, not sewn.

A little grease is said to be added to the gum by most tribes to render it more elastic. The addition of the powdered charcoal is not universal.

Among the Micmac of Nova Scotia and Cape Breton the women and girls are said to have prepared the gum by chewing it.

The last step in Saulteaux canoe-making is to attach a top gunwale strip. This is nailed on at present, but may have formerly been fastened on by tying or binding with spruce root.

The Malecite, according to information supplied by Mr. William McInnes, Director of the Geological Survey, Ottawa, construct temporary or emergency canoes of spruce bark which are used for bringing out furs from the hunting camps in the spring. The ribs and frame are roughly constructed of withes or saplings, flattened slightly and rather widely spaced, the bow and stern being chinked with clay.

Mr. McInnes also furnishes an interesting description of the manner in which the Malecite protect the bottoms of birch-bark canoes in shallow streams: Lengths of spruce bark, with the smooth inner surface placed outward, are wrapped around the bottoms of the canoes from end to end and held in position by tying their edges to the thwarts with cedar inner bark. Another material, which is preferred to the spruce bark on account of its lightness, consists of strips of cedar about two inches wide and three-quarters of an inch thick. The strips run