

**Steve Cayard  
11 Taylor Road  
Wellington, Maine 04942  
Phone 207-683-2841**

### **Birchbark Canoe Maintenance and Use**

Here are a few tips for maintaining your canoe in good shape for years to come. Birch bark canoes are very strong and durable, but they do require a little attention now and then. None of it is very difficult, but there are some important points to be aware of.

During the first year or two of its life, birchbark tends to darken from exposure to light. This is normal, and it gives the canoe a rich patina. However, excessive exposure to sunlight and heat should be avoided. Exposure to the sun in normal use is fine, but when transporting on a car be sure to park in the shade. The heat of a sunny parking lot can cause the gum on the seams to melt.

An outdoor shed or barn is ideal for storage. It should have good air-flow and should preferably be in a shady area – it must not be a spot that heats up in the summer such as a loft or attic. Storage in a heated building is less preferable because of the drying effect on the bark. However, the canoe can be kept indoors, as long as the effort is made to keep temperature and humidity even. Above all, do not take the canoe outdoors in the winter if it has been in a heated building. The thermal shock and sudden contraction can burst the bark. Even if it is stored in an unheated outbuilding, the canoe should not be moved unless the temperature is above 20 degrees Fahrenheit, because colder temperatures can make the bark and gum brittle.

If the canoe is dirty, it can be cleaned. I recommend using a solution of Murphy's Oil Soap, with a soft, non-abrasive nylon scouring pad. When dry it can be rubbed with Formby's Low Gloss Tung Oil Finish, inside and out. This product is available at most hardware stores. This finish can also be used on paddles. Cleaning and refinishing the canoe every couple of years is a good idea to help preserve the colors.

The best way to store the canoe is bottom up on two level padded sawhorses or similar supports. These should be placed even with the quarter thwarts, which are the first pair of thwarts or crossbars out from the middle. This is important because if the supports are too far apart the canoe will eventually develop a "hogged" bottom. Birchbark canoes are relatively vulnerable to the effects of gravity, because the interior woodwork is not fastened, but held by pressure. Therefore proper support is essential. The canoe can be left upright on a flat surface for limited periods of time, but the best way to store the canoe upright for long periods is to use a custom-built padded cradle with contoured supports. If two such supports are used for upright display, they should be placed in positions halfway between the quarter thwarts and end thwarts. I can provide more information on upright display methods on request.

For transport, your roof rack should be well padded to prevent abrasion of the gunwale caps. Deep-pile carpeting works well for this. Cinch straps are good for tying down. If the straps must be placed over side panel seams, be sure they are attached to the rack far enough out to be well clear of the seams. One good way to do this is to tie lengths of rope around the rack a foot or so out from the canoe on each side, and then attach the tie-down strap to that. Be sure to avoid the gores with the straps.

A can of canoe gum is provided (pine rosin tempered with lard and beeswax). This is for maintaining the gumming on the seams and gores as needed. These should be inspected before and after the canoe is used, and if any spots get chipped or rubbed off, the pitch can be heated (not too fast, and stir it, but be careful you don't get splashed). When it is liquid, it can be applied with a natural bristle brush (provided), and while still warm, smoothed with a wet thumb. After the pitch is cool, or for a little smoothing any time, a hair dryer will warm the gum enough to be workable. This is especially useful for smoothing up occasional puckered edges on the end cloths, which may appear during the first year or so. Do not use a heat gun or torch because the excessive heat may blister and damage the bark. After winter storage the gumming might crack a bit, and should be inspected and touched up as needed in spring. The can, or a portion of its contents, may be carried on canoe trips in case of damage to the gum, or in case any new leaks develop. The area to be gummed must be completely dry, especially in the case of gumming over the spruce root stitching, to avoid trapping in moisture. For the same reason you should avoid letting water stand inside the canoe, and you should always turn it over after use. The gum mixture is an organic material, and it may deteriorate somewhat in flexibility after 10 years or so. If it gets to the point where it is excessively brittle, the gum should be replaced. To do this the canoe should be left in a cool area (40-50 degrees F) overnight and all brittle gum carefully scraped off with a paint scraper, and new gum then applied. I can supply the gum, and if you like I can arrange to do this or any other maintenance work for you.

Birchbark canoes traditionally do not have seats, but are paddled from a kneeling or semi-kneeling position, both of which provide far greater stability, control, and strength than paddling from seats. In the semi-kneeling, position, one kneels on the bottom, while leaning some weight on a thwart. A variation on this method, especially useful for stern paddling, is to extend one foot forward and place it on the bottom, for greater power. In any position, liberal use can be made of boat cushions for padding. My favorite way to kneel directly on the bottom is to place one soft cushion under the shins to support the ankles, and another one on top of the shins to sit on. In this position, there is no weight on the feet, which trail behind, and one has all the advantages of a low center of gravity, without the discomfort normally associated with kneeling. The thwarts are not meant to be used as seats, and may not support a person's entire weight, although the end thwarts may be used in this way by a stern paddler, because of the proximity of the gunwales there. If seats are desired, simple saddle-type seats may be constructed from rigid foam. Although the ends of the canoe are alike, and it can be paddled in either direction, it does have a designated bow, indicated by the builder's name on the headboard.

