

## MAKING A SKI SLED

By Oliver Cameron  
with Ole Wik

When I was living in Ambler, I built a small ski sled that was designed to fold up so that I could carry it in an airplane. One side could fold against the other side, making a narrow package that was perhaps 1/3 longer than the overall length. It was good for storage and for transport.

I used it when Dan Denslow and I hunted caribou together. He was a busy man, and besides, he couldn't hunt on the same day that he flew. So, he flew me and Thelma down by Onion Portage where the caribou were crossing, or were arriving and hadn't yet started to cross.

I outfitted the sled so that I could use it to gather up the carcasses. I'd skin them and cut them up into pieces that were suitably sized for him to load into his plane and haul back to the village.

**Tell me about your design for a ski sled.<sup>1</sup>**

As the name suggests, I use old skis for the runners. Skis are wider in the front and back than they are in the middle. I like to plane the edges of the rear part down so that it is the same width as the center. I leave the front wider.

Then I get the camber out of the skis, as it would make the sled hard to steer. I take a rip saw and cut off the thicker wood at the center part of the ski, parallel the top and bottom surfaces. That makes the runner uniformly flexible.

After taking off this wood, I heat the skis and clamp them into a frame that is wide enough to hold the entire sled. It's designed so that the skis are a little bit closer at the front. I just leave the runners flat, rather than setting the inner edge a bit lower as I would with a metal shoe on a heavy sled.

Older skis are made with glues that if you heat carefully, the ski will take a new bent shape once it has cooled. I provide a reverse camber by putting a shim under front and back ends. The sled will be loaded with most of the weight aft of center. The camber raises the front end a bit, aiding the sled in climbing over humps.

Next I cut some blocks of wood from a little pole and drill hole down vertically through them. They are essentially short stanchions that simply connect the skis to the bed, maybe 2-1/2".

I put a carriage bolt up through the bottom of the ski, through the stanchion, through a crosspiece, and then through a piece that's parallel to the sled on top of the crosspieces. That takes a rather long carriage bolt, 8" or so. I file off the sides of the head so that when the bolt is passed up through the bottom of the ski, the heads will be embedded a little bit in the wood inside the groove.

The total number of crosspieces is probably four or five. The first crosspiece is back a little bit from the front of the skis, maybe 18", or at least back behind where the ski starts to curve up. I

like to leave a little spring there. If you make the front part of the ski too short, it's much easier to break the end off.

I usually drill holes for the bolts, put the bolts in, and clamp the skis back to the frame while I am assembling the rest of the sled.

The bed slats are fairly light and a couple of inches wide. I space them a couple of inches apart, so that snow won't ball up and load up on the surface of the sled. I use whatever wood I happen to have. I like birch because it's quite strong, it's flexible, and it doesn't break as easily as spruce.

I usually nail the slats down with a single nail at each crosspiece. The sled is going to be working a little bit, and the nails will split them.

The outermost bed slat continues ahead and fastens to the front of the ski. In order to do that I may have to lift the front of the ski a little bit and pull it back to the piece where I'm tying it. I usually drill a hole crossways through that slat, drill two holes through the tip of the ski, lace it round and round, and tie it off.

That is a pretty critical place, as it will take a lot of abuse. A bolt or other rigid fastener would raise the likelihood of having trouble.

The back ends of the skis are bent up a little bit, like the front. That end will take a lot of strain when you're coming off of a hump with a heavy load, so you put your last crosspiece fairly close, in order to brace it and prevent it from breaking off.

On one sled I was worried about that, so I put a reinforcement on top of the runner. It was thick enough that I could taper the end to fit the curve of the back of the ski. It was about 1/2" thick right underneath the last stanchion, and ran ahead a little ways. As I recall, I glued it on.

I only did it that one time, and haven't had any problem on other sleds without it. The runner is not intended for rider to stand on.

I use ski sleds with one dog, often for firewood. There is no basket or anything above it—I just stack the wood and tie it on. They're also convenient when I need to haul a couple of long poles or small logs. There's no way to load those on a short sled.

What I have done is tie a fairly heavy piece of wood, like a 4x4, toward the back of the sled, and another just behind the front crosspiece. I usually tie them to the crosspieces and let them stick out six to eight inches beyond edges of sled. That way I can put a fairly long pole with the butt end ahead on top of that to get it off the ground far enough that it's not hanging up. It also gives me a chance to get to a brake.

The 4x4s let you place the log so that its balance point is a little behind the center of your sled. They also get the end of the log up from touching the ground, distribute the weight, and mainly enable you to carry that kind of load at all with this kind of sled. The same system can also be used with the other types of sleds to haul long material.

But if you want to add a basket, you can tie a couple of small sticks to the front of the sled for top rails, with a couple of uprights to brace them, and add a crosspiece for a kind of handlebar. That will give you something to push on if you need to, and will help to keep your load in place on the sled. You can also tie a rope up and down from those low top rails to the outermost slats of the bed in order to keep things from falling out the sides.



Howard Kantner and son Kole haul river water on a ski-type sled.  
Kobuk Valley, ca. 1966. Image: Sasha Wik

I usually add a brush bow. It curves around from the second stanchion back and ties in to the junction where the tip of the ski joins the outermost slat. Since the sled is pretty low to the ground, I don't want the bow sticking too far ahead, where it would tend to dig. The bow needs a little give, so I tie the back end just tightly enough to hold it in place against a smaller impact. On a severe bump, I want it to break loose.

Sometimes I just lash one sapling on each side with the small ends ahead, and tie them together. I could also boil or steam a piece of birch and bend it on a frame, but I don't usually bother with that.



Oliver's ski sled, Kobuk Valley, 1975. Image: Sasha Wik

There are various ways of pulling a ski sled. I usually attach a light chain that runs from the front crosspiece around the outside of the sled and up to a ring, where I tie the tow line.

If I'm pulling it myself, I attach a long doubled rope. I step into it or slip it over my head and down it to my waist. Then I pull the bight that's in front of me ahead and put it over my head and shoulders, around the back of my neck, and under my shoulders and back to the sled.

That works pretty well, but quite often, especially if I'm helping a dog, I just throw the loop over one shoulder. By fastening it to the upper part of my body, it's not as jerky as it would be if it were fastened to my waist.



Oliver strides out on snowshoes ahead of his dog and sled.  
Kobuk Valley, spring camp, 1975. Image: Sasha Wik

I usually fasten a sled bag on the back of any sled. I carry a piece of candle or paraffin, and when I stop to put the sled away, I rub some on bottom of the runners. It doesn't look as if much is rubbing off, but it keeps the frost from building up on the runners, which would drag real heavy. With the paraffin, the overnight frost rubs right off as soon as you start up again in the morning.

**Did you use any kind of wood preservative?**

I never have, but it might be a good idea. I ordinarily use the sled when the weather is cold, and the rest of the time it's under shelter someplace.

1) This essay stems from a series of telephone conversations that Ole Wik had with Oliver between December 2007 and February 2008. Highlighted text indicates remarks made by Ole.

=====



Oliver's daughter Dorene heads for spring camp. Baka tows the ski sled. Kobuk Valley, 1974. Image: Sasha Wik



Kalle Wik follows along in a Blazo box ski sled. Kobuk Valley, 1974. Image: Sasha Wik