

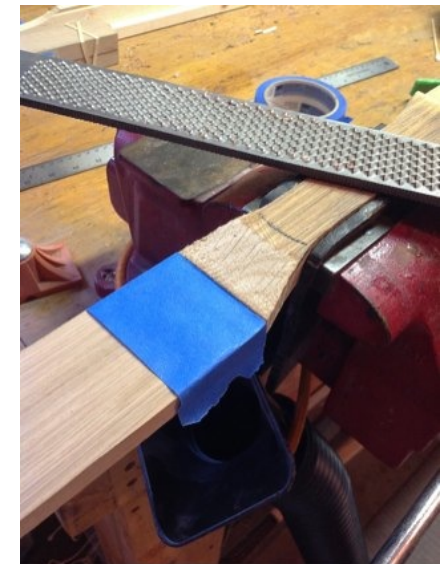
We left off with a heat-straightened pyramid bow shape. We’ve adjusted our bow profile to follow the primary grain lines in the board, and we’ve left enough wood on either side of the center line to create the pyramid shape we want. At this stage it isn’t quite ready to start bending, but we’re close.



First, I trimmed the pyramid profile from the widest part of the limb straight to 1/2” tips, 1/4” on either side of a straight line from tip to tip through the handle center. I did this with the band saw, but you can easily do it with a hand plane, rasp, or sanding block. We’ll cover use of hand tools on bows during the clinic.

Next, based on our earlier experience with pyramid bows, I marked a similar taper on the belly side, leaving the fade at full thickness, and reducing the tips to 3/8”. Whatever you use to remove the extra wood, take care that the wood is always thicker towards the handle, and thinner towards the tips. This will become very important later when the bending becomes very sensitive to small thickness differences. A mechanic’s outside caliper is a useful tool to check this, we’ll have them at the clinic.

Now it’s time to tackle the handle ends we left rough-cut. Due to leverage from the limb’s length this can be a weak point where the limbs go from thin to thick. **(Revised: leave the pedestal flat where a handle will go, or glue wood on now before smoothing the fades; read page 2 first)**



Power tools are very dangerous here, because they can so easily thin out the limb just beyond the handle fade. I suggest putting tape over this sensitive area, then using a rasp or sanding block to shave the wood down to a gradual taper. At right, you can see how the width will taper down to the handle, while at the same time increasing in depth. Make all transitions smooth and gradual. At left is a taper ready for final sanding, which we’ll do from the handle side until the final cut marks are gone.

At this point, our blanks are only about 1" thick here in the middle, about 3/4" less than a traditional bow grip. If you want a bigger wooden handle (as I usually do) now will be a good time to glue on more wood. One purpose of the pedestal we leave in the center is that it helps keep bow stresses from popping off or cracking the thinned ends of glued-on handles.

The first step is to prepare the surface of the blank where the new wood will sit. At right I'm using a disk sander, with the bow clamped to a square block to keep the surface level - you can use a large sanding block to do the same thing. Just check your work with a straight edge so the new wood will fit well.



Next we need some wood. Fortunately I have a lot of small pieces left over from previous bow builds. Dave and I will bring a number of different wood pieces to the clinic for you to select from. I had a couple scraps nearby that seemed to fit; could be bocote and walnut - or not; sometimes I pick up a bag of exotic wood bits from "WoodCrafters" and they aren't labeled.

CAUTION: If you're not working in a dust-controlled, vented room, wear a dust mask when working with tropical woods. It may be OK when working briefly on small pieces but in any quantity these can be lung irritants.

I sand the surfaces of the handle pieces, and then wipe all glue surfaces with acetone to remove oils that will effect the bond. For some tropical hardwoods, it takes several acetone wipes before the cloth is free of a greenish or reddish smear. Make it clean.

While I use a two-part bowyers epoxy (Smooth-On EA40) Dave has good luck with Titebond III, so we'll use that for the clinic. Clamping or stretch+ inner tube-wrapping as shown here for an hour should about do (though I wait 24 hours before stressing the joint by bending) Then it's time for rasping into rough shape so we can get on with the real job - tillering!

