

# Building Smarter Blanks with a Bandsaw

## (and other Ordinary Power Tools)

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Over the last two years I have tried to become more production oriented in my rod making, as orders pile up and I frantically try to catch up. There comes a time when every rod maker needs to consider his or her current set up and try to maximize efficiency in the shop. One way to maximize efficiency is to incorporate everyday shop tools into your rod making routine. More than any other tool, my band saw is becoming an integral part of my rod making routine, not to mention its numerous uses for non-rod related projects.

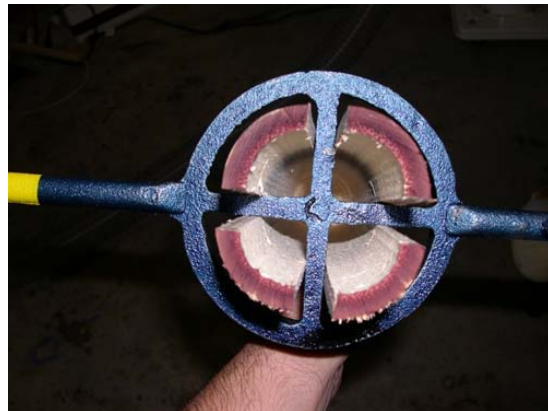
As I have written previously, I believe that power tools should be utilized as much as possible in rod making. They make things quick, and they add a repeatability and efficiency that one cannot match in “hand” technique. I have the greatest respect for the rod makers out there who use hand tools to do all of the aspects of blank making from splitting, roughing, tapering, sanding, and final planing. It is just not for me. The following is what I do now. When I stick to this plan, it works well for me and gives me exceptional control over the blank making process.

My goal in working with the band saw was to get strips that are uniform in size. By having equal length, depth, and width strips, machines further along in the process like Medved style bevellers and Bellinger roughing bevellers can be set up for the first strip and be set to go for all the rest with little adjustment. By having the entire initial strips “in the same ball park” you eliminate many of the problems that are associated with “machined” rod making. I would highly recommend the Golden Witch Technologies video, *Roughing and Tapering under Power*. Much of my methodology comes from that video, and the rest comes from various rod making advice I have picked up along the way.

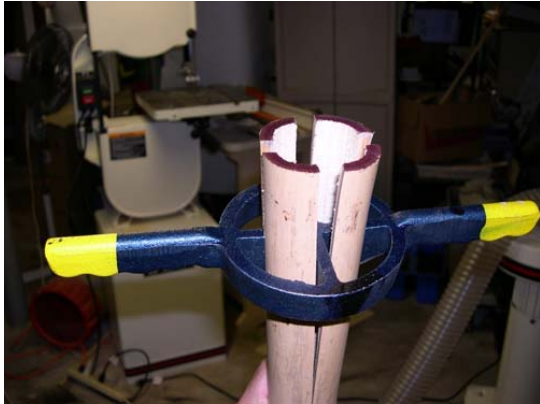
### Splitting the raw culm

My first step is to chop the longer 12’ culms down to more easily handled 6’ sections. I use a hacksaw with a bi-metal blade simply because it is convenient to bring to the sun porch where the culms are stored. If I had a big shop where the culms were stored, I would most likely use my miter saw to quickly chop the culm in two. I find the half waypoint and then I cut the closest node out, chopping about 3 inches on either side of the center of the node.

I mark the lower end of the butt sections with a black permanent marker, and I mark the tip sections in red. Generally, I plan on making two rods at a time, and I usually get enough strips in the end to make two butt sections and three tips.



The culm is first split using a four-way splitter from Hida Tools. Insert the pointed end inside the butt of the culm and give it a firm whack with a rubber mallet. Make sure the splitter blades are centered on the culm (see above) and aligned to your drying/check split. After the blades have split an inch or



two into the culm, grab the handles of the splitter firmly and strike the opposite end of the culm against the cement shop floor or some other hard surface (cinder block?). This is the most liberating of all shop exercises, smashing the splitter down the culm towards the floor. As I get towards the floor, I continue to hold the splitter with my left hand and gather the strips dangling above with my right hand to keep them from striking me when they come unattached. One more wallop and the splitting is done. I now have four fairly equal width strips.

### **Flaming the culm and prepping for the band saw**

It is at this point that I will flame the strips if I desire a flamed rod. I do not worry about slightly charred edges, as these will be removed later during sawing, roughing, and tapering. I find the quarter culm sections to be a



good handling size for me.

From here, I plan to saw my strips out into equally wide and square strips. First, I must remove the inner nodal dams that remain on the culm's pith side. I simply whack them out with a small hammer. I just want to remove enough to minimize the amount of cutting the saw blade will have to make.

After the nodal dams are removed, I switch to the disc sander and quickly take of the lip of the nodes. I try to limit work on the nodes until they are at their smallest, but at this stage, a large lip on the node can inhibit the culm as it passes through the saw. Once again, I am simply prepping the nodes prior to cutting the culms into strips. I have a large 12" disc sander, but you might also use a 6" version like the one commonly attached to belt sanders. Another alternative is to use a sanding disc on your table saw. Either way, I would recommend the largest diameter disc you can accommodate. The larger discs have less of a ten-

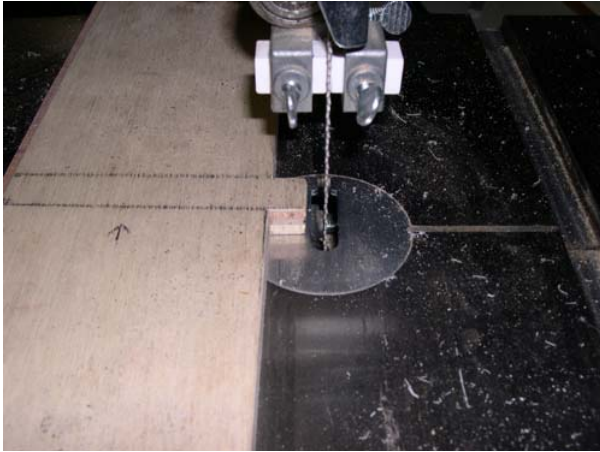


dency to cut into the bamboo and leave unsightly dips in the enamel.

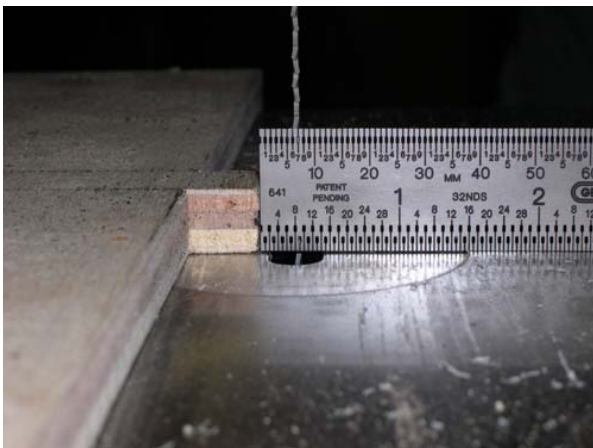
### **Sawing out strips**

At this point, I have four equal strips that have no protruding nodes that will catch on my saw table or slow down the blade. My band saw is a Jet 14"  $\frac{3}{4}$  HP model. The 93  $\frac{1}{2}$ " blade I use for sawing out strips is a Starrett bi-metal 10 tpi

3/8" raker toothed blade. Upon the recommendation of several Rod makers' List members, I have been using the bi-metal blade with great results. It cuts through bamboo like butter and the 3/8" blade keeps the cut straight as the bamboo passes through the saw. (14 tpi 1/2" wide blades have also worked well for me). Other than the blade, one must consider the



fence that is used for sawing. A long table length fence would not work correctly for the sawing procedure because we want to cut parallel to the split out side. This preserves power fibers by cutting along the grain not across it so much. My fence is a 3/8" thick piece of plywood that is clamped to the band saw's table. Parallel to the blade and equal to its length is a short 1" protrusion. This allows the strip to rock on a point as it is pushed past the blade. This insures the parallel sides of the strip. A long fence would cause the saw blade to cut



across the grain and it would give you very unequal width strips. This would be a lot to overcome in the stages to follow.

Using a small ruler, I set the fence up for my cut. Generally, I use .250" for hexagonal butts and .175" for tips. You can use any figures you feel comfortable with, but make sure you give yourself enough extra cane to square up and rough out the strips. I need the extra dimension for the next steps in the process in which I mechanically straighten the strips. I tend to not worry about wasting bamboo, and I see it as the cheapest part of the rod next to the thread and varnish.

The quarter culms are pushed through the saw blades with the enamel side down. I try to keep the split edge flush against the nub of my fence as I push the strip through. If you are using a good bi-metal blade, be careful, as the strip will move through faster than you would think. When the strip is about 6" from being all the



way through, I reach around the saw with my left hand and pull the remaining section through staying very clear of the blade. I continue until all the strips are cut out. I always get more strips than I need.

### **Squaring up the strips**

The next step that I do is rather unique to my knowledge, and I have seen very few mentions

of it outside of the teachings and writings of Chris Bogart and George Maurer. I have always been a big fan of the Medved style bevel-



ler. One pushes the strip through this router-based machine and by flipping the strips side for side you can get a nice triangular piece of cane ready for planing. It was Chris Bogart who first mentioned using the squaring bed to straighten up the bamboo before roughing it into triangles. I simply mount the square grooved bed on my Medved style mill (by JW Fly Rods), and I take passes on each side. Because my strips are all equal in width to start, I set the machine to take a light pass on the first strip and feed the strips through. I then flip the strips and take a pass on the opposite side. After four to size light passes, I get very



square and very straight bamboo strips. This is why I left a little bit extra when band sawing.

If you do not have a Medved style mill, I would recommend that you build one. However, by making a simple form with various straight grooves, one could easily accomplish this step with a block plane or bench plane. See *The Best of the Planing Form* for more details on George Maurer's jig.

It is simply amazing how these squaring passes eliminates the need to heat straighten all but the worst node down the line. Since using this method, my strips have come out straighter and better than ever.

Next time...tackling the nodes and roughing into triangles.

## Sources

### *Hida Tool Bamboo Splitter*

- Golden Witch Technologies  
(<http://www.goldenwitch.com>)
- Hida Tool  
(<http://www.hidatool.com/bamboopage/splitters.html>)
- J.D. Wagner, Inc.  
(<http://www.wagnerrods.com>)

### *Starrett Band Saw Blades*

- Enco  
(<http://www.use-enco.com/>)
- MSC Industrial Supply  
(<http://www.mscdirect.com/>)