Nodeless Bamboo Flyrod Construction

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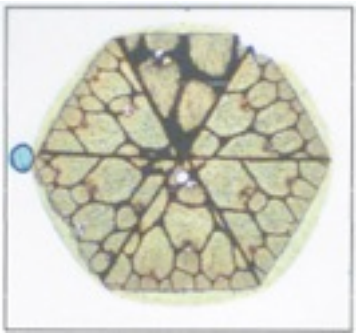
1. Disclaimer

The ideas presented here are strictly the methods I use. They are not intended to be the only methods useable. I hope that, like me, you will base your opinions on your own personal experiences. I feel that as rodmakers, we obsess over matters of little importance and ignore issues of much greater importance out of habit.

Some years ago, a rodmaker constructed a rod with everything he could think of done wrong. Nodes next to each other, one strip flipped end for end, one strip with power fibers angled into the center of the rod. He asked people to cast the rod knowing nothing about it. No one noticed anything wrong with the way it cast. Perhaps the “only way” of making a fly rod isn’t always the only way.

2. Why Nodeless?

My first cane was a sample pack from Golden Witch. The cane was so badly and randomly split that making full length strips was almost impossible. The cane worked just fine for the shorter strips used for nodeless construction. Even after receiving better cane, I still split the culms completely in half. These shorter strips could be heat treated in an ordinary kitchen oven, thus eliminating the need to construct a special oven just for rodmaking. A photograph, from an article “Bamboo Under the Microscope by Wolfram Schott”, showed how the fibers in a node differ greatly from the rest of the cane. Some say stronger, some say weaker, but you cannot deny that they are vastly different. Personally, I also prefer the looks of nodeless rods, without the nodal scars.



3. Removal of Nodes.

The first question seems to be - how much cane to remove on each side of the node. Let's rely on experience rather than opinion. Plane through one side of a node so you can see where the fibers change. Use this as a starting point, removing just enough cane to get into the 'clean' fibers. I think it will be less than you imagine. You will quickly find out when you begin to split the cane. If it splits clean and straight, you've got it. If not, you need to remove more material from each side of the node. With the nodes removed, I mark the butt end of each section with a different color felt tip marker to identify the location and direction of each piece of cane in the culm.

4. Splitting the Cane

With the nodes removed, we can split each section into strips much finer than needed for full length strips. I mark the butt end of each section into the strip width I need. For the tips, I usually get fifteen strips out of each section (1/2 diameter culm). These strips will split best if there is equal amounts of cane on each side of the split. I can usually arrange it so only one split is off-balance, with all other splits balanced. This becomes obvious when you start doing it.

5. Heat Treating

Now that we have the cane split, we need to heat treat it. I use the MD fixtures (now sold by Harry Boyd). Each full length fixture can be cut into four

equal lengths, perfect for nodeless. They are excellent for keeping the strips straight and for insuring even heat along the strips. I bind in a probe from a meat thermometer together with the strips and fixtures. This gives me excellent monitoring of the temperature right at the cane. I will not offer any 'magic numbers' as far as time and temperature are concerned. These will depend on the conditions where your cane has been stored.

6. Making the Splice

My faith in scarf joints was established many years ago when I was making a plywood kayak. One step required taking two strips, 6" wide, and joining them with a scarf joint to make a strip 13' long. The scarf joint was an 8 to 1 joint in the 1/8" plywood. When finished, I bent the strip and looked along the edge. If the scarf joint was stiffer than the rest of the plywood, it would show up as a flat spot in the curve. If the joint was weaker, it would show up as a 'V' in the curve. I could not tell where the joint was. The 8 to 1 splice seemed to match the strength of the original material.

The first step is to scrape the rind off of the outer surface. I use utility knife blades for this. You may need to plane the pith side flat first to make this easier. With a nice flat surface established, the rest of our work is much easier.

You will probably have 15 or 16 splints from the tip section, depending on your cane. Take 12 for this step. My taper jig is set for a 10 to 1 angle. This is more than adequate for strong joints without wasting cane. Using the taper jig, cut the tapers from the top of 6 strips and the bottom of 6 strips. Cut all of these tapers in exactly the same fashion, making sure the now flat power fiber side is pressed firmly against the jig when sanding the taper.

These 12 strips can now be joined to make 6 strips twice as long.

7. Glueing the Splice

First, adjust the angle of the glueing jig to match the sweep of the strips so the area of the splice match each other. I dampen both faces of the splice before coating each face with Gorilla Glue. Use clamps to hold the strips in position on the jig while you wrap them securely with binding string. Make a final adjustment to align the power fiber surfaces as closely as you can. Set aside to dry.

Repeat this process with strips from the second section of the culm and allow to dry completely.

Now you will have 12 long strips that can be joined in exactly the same sequence resulting in 6 full length strips, enough for a complete tip section.

8. Assembling the Strips

If you had extra strips from the first section, they may be used to make 3 of the finished strips longer, thus allowing extra length for easy staggering of the joints.

9. Tapering the Strips.

When glueing up the scarf joints you may find that some of the strips do not match exactly in width. Try to remain consistent with the side you line up.

In your rough taper jig, plane the uneven side so that the strip is reasonably smooth and even.

From this point on, in the final taper planing, I totally ignore the scarf joints.

10. Assembling the Strips

I use a 3X3 stagger on the final assembling. This backs up both sides of each joint with solid cane. I have found that anything more complicated is not necessary. Glue up using your favorite adhesive. I like epon.

11. Summation

Note that the tip section for a 7 1/2 to 8' rod has been accomplished with only the top two sections of the culm (Assuming the original culm was split in half). Of course, the same procedure will be used in constructing a matching butt section.

This results in efficient use of the cane. If there is a flaw in your cane, you do not lose an entire strip, only a small strip of one section.

No cutting half of the splices reversed, no special oven, you may even forget the firing sequence of a 6 cylinder engine (apologizes to Mr. Garrison). Keep it simple, you have better ways to spend your time. Maybe go fishing.