

Rodmakers' Comments: Bamboo Wear and Tear

Compiled by Bob Maulucci

When Ralph mentioned wanting to do a piece on the breaking down of cane rods, I knew that I had to pose the question to other rodmakers. So, I dug out my e-mail contacts and zipped off a question to the very best rodmakers I had access to. The response was overwhelming. The following look at the life span of a cane rod is told through the eyes of rodmakers with years of experience. I am thrilled to be able to share their comments with you here.

Bjarne Fries

Let me start by saying that my opinions are based on 24 years practical experience as a rod builder. I have no scientific proof to back up what I say.

I believe, that with today's high quality glues, a high quality bamboo fly rod can very well be of service for a lifetime and even more. It is my belief that the power fibers (actually, what we view as one power fiber, is made up by several hundred very small power fibers, very much like the muscle fibers in a human body) are very durable and will stand the impact of aging for a very long time. They also will stand up to hard work, even abuse to some degree, for a long time. The weakest point of bamboo is what keeps the bundles of power fibers together: Bamboo's natural bonding material. This is what we take advantage of, when we split a culm of bamboo. When a rod takes a set, I don't think it is because the power fibers are hurt or destroyed but the natural bonding of the power fibers is damaged.

I do not think casting a fly line can hurt any bamboo rod. It may be right when Orvis in their brochure claimed that bamboo would lose some of its working power (I think it was about 5-6%, but after that period they could not measure any difference any longer) during the first 1 or 2 years. This again, in my opinion, is due to the natural binding loosening a little at the beginning. But since this effect takes place little by little over a certain period of time, the fisherman will not notice. At least, I never have been able to do so, and I am trained to "feel things" happening in a fly rod. Never the less, I think during the first one or two seasons a slightly change occurs, the rod has to be "fished in" (the different strips making up the blank, have to get used to living and working together), after that the rod will remain pretty much the same for the rest of its lifetime.

Also I don't think a rod gets hurt by fighting a fish, if you never let the angle between the butt of the rod and the fly line during a fight be less than 90 degrees. The more pressure you want to apply to a fish during a fight, the bigger the angle between the butt of the rod and the fly line has to be. If you use less than 90 degrees you will fight the fish with the tip part of the rod mainly, and that will kill any bamboo rod because the natural binding of the power fibers will be hurt, and your rod will be ruined.

The most dangerous moment for the longevity of a rod is the moment of landing or netting a fish. I have witnessed a lot of "rod murders" during this last stage of the fight with a fish.

Using a short handled net (the most commonly used one) it is impossible to get the fish to the net without keeping the above mentioned angle between rod and line 90 degrees or more.

The larger the size of the fish the more the rod will get hurt.

This is the reason (besides it is much quicker to catch and release a fish this way) why it would be much



more sensible to use a long shafted landing net. The longer the net, the better for the life of your rod, since it allows one to keep the critical angle between line and rod 90 degrees or more during the netting of the fish.

Finally some statistics of my business might put some light on this subject. Just 10 days ago, one of my friends from Germany send me a rod, I built for him 18-19 years ago. He wanted me to change the guides and to revarnish it. After examining it I found a very, very slight set to the right along the whole rod length. Besides of some varnish blemishes and very worn out guides the rod was in perfect condition. My friend is a very enthusiastic fly fisher and fishes a lot, so this rod has been put to work above what one could call average use. Another of my rods of the same age, which has been in my possession until recently, has been used for heavy trout fishing, pike fishing and the last 3 years for saltwater fishing. It has been used slightly under what I would call normal use for this number of years, and was in perfect condition (new guides and revarnished 3 years ago) when one of my Austrian friends talked it out of my hands.



I also had one customer who complained over a “soft tip” after only 2 years. He was right about this, but the reason for this was to be found in his wrong fighting and landing techniques, (see above) and not something to blame the bamboo or the maker for.

One rod broke in the nickel silver ferrule (material fault) and one broke in the butt section (hidden wormhole in one of the strips). There were about 10-14 broken tips (all accidents (like car doors and the like) by the fisherman). In the first years I also had an occasional set to occur, but after one additional straightening this problem was solved.

This is, what has come to my knowledge of the more than 700 rods I have built over the last 24 years, and although 24 years not is a lifetime (hopefully) I think this speaks for the longevity of a cane rod.

Ed Hartzell

I used to own some Orvis rods and it seemed that they got sloppier with age. I attributed it to the heat treatment incident upon the impregnation process. Now that I think about it I am not sure that the impregnation process required more heat than we now give bamboo, but I am sure that the rods were softer with age. My Powell's and Payne's are just as good as new.

Jeffrey Wagner

It seems to me that the possible ‘wearing out’ of cane rods is just another example of non-scientifically verified ‘facts’ and are part and parcel of the romantic ‘lore’ of cane rods. Such views- whether true or not- get propagated through uncritical repetition and a propensity for fly fishing romanticism, so I think it's good that Power Fibers is taking a look at this aspect of cane. This is true even if the discussion is little more than a collection of anecdotal evidence and not a scientific analysis. After all, we learn through experience and observation, but it is in the analysis of our ‘findings’ that things can get a bit askew.

In the 1971 book, *The American Sportsman Treasury* there is a chapter on cane rods written by Leonard M. Wright, Jr. in which he avers, “For each time a bamboo rod flexes, it dies a little. It may take years to notice a change in power and action, for an angler unwittingly suits his casting style to the rod in hand. But fatigue is inexorable. The finest, steeliest dry-fly rod I ever owned-or ever handled for that matter-was an eight foot Halstead. I still own it and cherish it, but I seldom fish with it. After some seven hundred and fifty days of dogged dry fly fishing, it is a slow, lazy parody of its former self.”

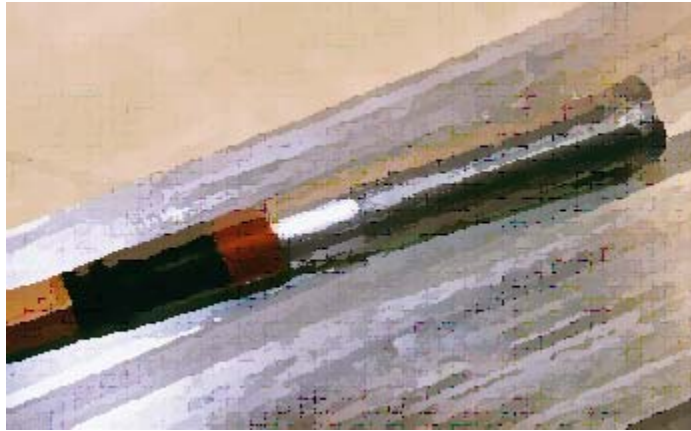
The problem I have with this paragraph is the conclusion the author draws from his subjective experience of fishing a rod over time. Who amongst us has taken their favorite rod to the stream only to find that

on some particular day the rod feels almost foreign in their hand? Nothing goes right- tailing loops, flies stuck in bushes, missed strikes, etc. It would always be tempting to blame the rod for our bad days. And the author notes the softening of his Halstead- his experience with one rod- and extrapolates that as proof of all rods 'dying.'

This sentence in particular strikes me: "After some seven hundred and fifty days of dogged dry fly fishing, it is a slow, lazy parody of its former self." I don't know about his rod, but that sentence could be an equally accurate description of me when I'm on the water now that I'm in my 40's.

Further, casting a rod is a totally subjective experience that is influenced greatly by the expectations and biases of the caster. Two cases in point:

#1) One day I was out test casting a new rod on my front lawn for the first time. This was a very slow



8' 3 wt taper, one of the few that I've ever developed from 'scratch' and designed for one specific purpose. I had the guides mounted on with tape and a temporary grip slid into place. One of the clerks from a local fly shop happened to be driving by and stopped to check out the rod. After a few casts he asked me what I thought of the rod, and I told him my first impression was that the mid was a bit stiff. He asked what I was going to do with the blank and I told him that since this was a prototype I'd sand off a few thousandths from the blank to alter the taper and try it again in the morning.

After he left I cast the rod some more and decided against doing anything to the rod, but the next morning I was out casting it again when the clerk stopped by to check out my 'modification'. He was amazed that the rod could be changed so drastically by my (non-existent) modifications. He threw beautiful relaxed loops, and praised my 'genius'. So the suggestion of a change alone was sufficient to make this person think that the rod was better than it was less than 24 hours prior.

#2) When people test cast rods at shows I make it a point to never describe a rod as 'parabolic'. There is a wealth of writing concerning parabolic rods that states that casting them is for the expert only, or that they require pinpoint timing. I suspect that these views were originally developed more to gratify the ego of the writer and make a subtle comment about their own casting skills than anything else. I've found that if I describe the rod as parabolic before the customer casts it, they invariably get a worried look on their face that inevitably leads to poor casting at the pond. If I just say nothing, they usually think the rod is the greatest thing since sliced bread.

What do these points have to do with a rod 'dying' over time? I would say that if one expects it to occur, it will. Sets in rods- a visual manifestation of a rod not returning to its original straightness- would seem to indicate some physical change in the bamboo that might reinforce that view.

There is so much we don't know because the variables are infinite and actual scientific analysis so lacking. Maybe someone with lots of time can design a machine to repetitively stress some blanks and note their ability to resist loads after so many cycles. That might tell us something a bit more concrete, but then we'd have to consider the rod's taper, moisture content, adhesive, heat treatment, etc. Please share the results because I think we'd all like to know.

Per Brandin

I have also been interested in this question for some time. A good customer of mine who has fished cane most of his life has a Paul Young Para 15 that he said basically wore out from long and hard use.

What I do is that I do a deflection test on each rod before it leaves my shop and I keep this data along with all other info on that particular rod. My idea is that over a long period of time I should be able to have

some idea as to whether my rods are getting softer with time and use. I have to tell you that I have been doing this now for over 10 years and so far when rods have come back and I have done another deflection test, the rods have consistently been slightly stiffer than when they left the shop, the exact opposite of what I expected. I suspect that this is due to the varnish hardening with time, or perhaps the cane seasoning further. I do feel bamboo rods actually get somewhat better with time as all the strips harmonize in their new configuration. I should have a better idea about this in another twenty years.

If it is found that bamboo rods do wear out, I would be curious to know if it is the bamboo or the glue that is wearing down.

I hope this is of some interest to you. One other thought I had in thinking about this is that I think it quite likely that rods which are over strained would be more likely to loose their resiliency, especially over time and repeated abuse. I have always considered the advice from Tom Morgan in the old Winston rod catalogs as to the care of bamboo rods to be excellent. If his tips are followed, the chances of over stressing a rod will be eliminated.

Ron Barch

1. I think the changes in a split bamboo rod are so subtle over time that it is difficult to notice.

2. I believe that the average angler does not get the chance to fish enough to really wear out a cane rod. I could be way off base on this point but will stick with it.

3. Just last week I fished a Garrison 7'6" 5wt. taper that was made in 1989 and it still cast 60 feet of line and the loop looked pretty good. The rod has seen lots of use and landed lots of big fish. Yes, I am bragging. I am not so sure about this "Wearing Out" stuff.

4. Perhaps "Wearing Out" is really like "Wearing In". Maybe a good split bamboo rod is like a bottle or wine, age only makes it better.

5. But I really prefer to look at this topic in terms of the relationship between friends.... It only gets better with time.

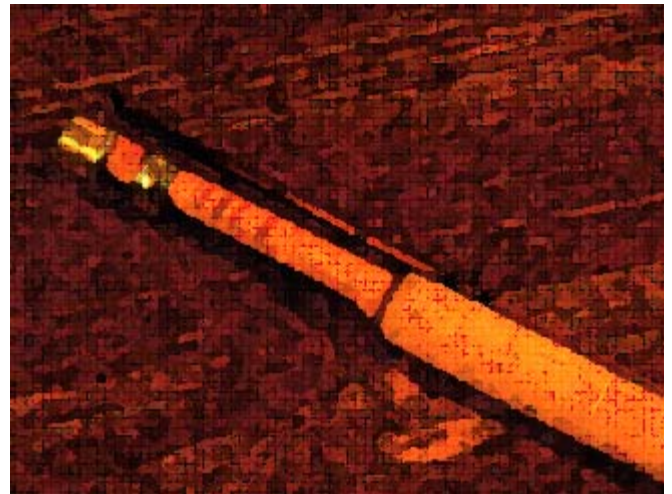
Bob Nunley

First, I find Orvis' estimate of rod deterioration hard to swallow. If it were true, then, as you stated in the article, in 40 years, you would be able to literally tie a rod in a knot like a string. I do tend to agree that rods do deteriorate, or soften, over time, but let's look at WHY they may soften. Keep in mind that Orvis is measuring their rods that are impregnated with Bakelite, a product that, unlike modern impregnants, adds an enormous amount of weight to the cane. That added weight, it would seem would compound the stresses, not only the cane itself, but on the glue joints in the rods that one might see on a non impregnated rod, thereby causing an accelerated rate of deterioration. What other factors might cause similar deterioration in a cane rod? One at a time, I'll give you my take.

First, lets look at the adhesives used. There are several rod adhesives that are proven over time. For example, URAC 185 and Resorcinol. These glues have been used by reputable makers for decades, and in my experience, rods glued with those adhesives have experience minimal deterioration. My worry is with some of the more "modern" glues. I have no proof that they would deteriorate faster, but then again, there's no long-term proof that they

wouldn't. Some of the modern adhesives just have not been around long enough to know what they're going to do in 20, 30 or 50 years, whereas URAC and Resorcinol have. Another "classic" rod glue used by some makers is Hide Glue. Hide glue was very prevalent in the late 19th century and early 20th century simply because it was the best choice around. The only problem with Hide Glue is that it is an organic compound that bacteria will attack. If the varnish were in good condition, the hide glue would last as well as later "classic" adhesives, yet if the varnish were cracked or worn off, the Hide Glue is open to attack from outside elements. I've found a few rods glued with URAC and Resorcinol that had deteriorated, but most generally, these rods had the varnish deteriorated on them and were fished without proper restoration or repair and were dragged constantly into the sun and wind and wet environments (rivers), stored in the trunks of cars or in someone's garage where they were exposed to extreme heat. That will destroy a good rod, regardless of its age or quality of construction. Those extremes in exposure will destroy a good varnish, leaving the adhesive more open to outside elements.

That brings me to the second concern. Can bad varnish lead to advanced deterioration in a rod. Yes, I feel it can. One of the main purposes of varnish is to protect the bamboo from the elements (sun, moisture, etc.). If the varnish is cracked, worn off, chipped, etc., then moisture and ultraviolet light are more apt to have an effect on the rod's deterioration than they would if the varnish were in tact. This leads to another question. Does the varnish used have any bearing on a rod's potential deterioration? I feel that it does. Many varnishes have UV protectants mixed in with them, and it's a common assumption among rodmakers that Ultraviolet light has an adverse effect on bamboo. You'll hear arguments that no varnish, regardless of its chemical makeup, can prevent moisture exchange in bamboo. That is absolutely true. Under



normal conditions, a heat treated blank can gain up to 6% moisture from the ambient air, at which point it will generally stabilize, even with a good varnish over it. BUT... you can expose heat treated cane to extremes, such as dunking it in a river, and it will gain more than 6% if the varnish is not in tact, or if the varnish is of an inferior grade and quality. That excess moisture will cause deterioration to the bamboo itself. The rods WILL become soft. I have seen rods that were soft in one spot. They would take a set where there was a crack or damaged place in the varnish. Those rods could be stripped, properly dried and PROPERLY refinished, and cure the set problem, USUALLY... if the rod has been exposed too long to extremes in moisture, then there can be structural damage to the cane at a cellular level that will prevent it from ever being restored to a usable condition. This of course is all my opinion, based on my experience and should be taken as such and not as a "scientific" observation. As a degreed Engineer, I learned a long time ago that bamboo doesn't care about science, or what "should be" in our world. It lives in it's own world, by it's own rules!

Ted Knott

By aging, I expect that you are referring to "use", not "time". I've seen and used rods that were nearly 100 years old that were in fine shape, both in appearance and in casting performance. I recently refinished a Leonard for a trout bum friend of mine who fishes several times a week. He bought the rod used nearly 15 years ago and aside from a few casting sets, it continues to perform well. If a rod is used often, sets are inevitable. I recall something written by John Gierach where he said that "it wasn't much of a fishing trip if the rod didn't have a bit of a set in it when you got home".

Tom Smithwick

There is no question in my mind that a cane rod will eventually lose some of its zip. I think it takes a long time. Over the years, I have handled and worked on a lot of rods. A few of them just did not seem to have the energy that I expected. I think the main culprit is simply use, possibly compounded by abuse. I suspect that design and construction plays a part as well. Our friends in the archery business say that a wood bow is good for 100,000 shots, after which the wood begins to decline. I think the same principal applies to us, but I could not begin to estimate the number of casts.

I also believe that even if a rod is not fished, it will eventually lose its strength, but that takes a really long time, probably well in excess of 100 years, given reasonable storage conditions.



Russ Gooding, Golden Witch Technologies

I think that wear on cane itself, insofar as this might mean a softening of the action, is so subjective as to almost indiscernible as a matter of historical fact. Certainly the varnish on old rods is frequently flawed in some way: chipped, wrinkled or alligatored, crosshatched with the impressions of rod sack fabric, and so forth. The glued sections may delaminate, though this is often seen in concert with evidence that rod was not well cared for and may well have been stored wet or subjected to extreme attic and/or car trunk heat. But, as regards a softening of the action on a rod that is fifty years old, who but an angler who cast that particular rod at 25 and 75 years of age could compare the action and, even so, against what objective standards? That many older rods feel soft is, I think, less a feature of having aged than a feature of the preferences of the age in which a rod was crafted. Today's cane anglers seem to gravitate toward shorter, stiffer rods - not necessarily in direct emulation of graphite, but certainly rods with more punch than many of those made in the first half of the 20th century. I suspect the general preference in flies has changed as much as rod actions, from larger wet flies and streamers to tiny dries and nymphs.

If by their statement Orvis meant that the rods as a whole wear down, they do, usually in a direct relationship with how well cared for the rods were. The longer a rod has been toted around to fish camps, and the more owners it has had, the worse for the wear it is likely to be. This should not be taken by anyone as a curse upon cane rods that they do, on whole, decline with age. Rather, it is high praise to the makers and the anglers that their rods are crafted and owned and angled with over a period of decades. Cane rods are an intergenerational, heirloom tool that start with a base level of value determined by the maker's skill, reputation, and sense of aesthetics to which is added the on-stream history of fish caught and lost, hook digs, grip grime, and so forth. By the time a grandson or granddaughter is fishing with their grandfather's rod its family history will surpass any collector's price tag. The well-loved rod will shrug off, if not show off as war wounds, any minor aesthetic insults that active angling has bestowed upon it. Age and wear are not necessarily detriments: go ask your grandparents.