

## Anatomy of a Fishing Rod

by Mike Barkley

Basically, there are 3 materials used in today's fishing rods; fiberglass, graphite and in high-end and custom fly rods, bamboo. There are also composite rods, made from a combination of fiberglass and graphite.

For the purpose of this article (plus the fact that it is way out of my area of knowledge), we will forget about bamboo and stick to the others.

There are advantages/disadvantages to both fiberglass and graphite, depending on what they are used for.

Fiberglass is much more flexible and can handle abuse (usually inflicted by the angler, seldom by the fish) much better than graphite, although it is a little heavier and less sensitive. Fiberglass rods are much better suited for trolling, downriggers, Dipsey's, planer boards, etc., where the rod is under constant pressure and sensitivity is not really an issue. Most other applications are better served by graphite rods (although many anglers still prefer fiberglass for all of their fishing).

**GLX, IMX, SCIV, SCII IM6, Titanium, FTII.** It's enough to drive an Angler crazy! What does it all mean? To get past all of the marketing hoopla and get to the meat of it, it helps to know a LITTLE bit about how a rod blank is made and today's graphites.

Believe it or not, today's fishing rods are still built by hand, rolling graphite material on to tapered steel mandrels. For companies like St. Croix, G Loomis, etc. that have literally dozens & dozens of models, it means having a lot of different size and tapered mandrels (no, a 5 foot rod is NOT a six foot rod with a foot cut off).

It should be noted here that most of the rods sold under various tackle company and store names are not made by the companies that have their name on them, but rather by rod manufacturer's to their own specifications. Much like Sear's does not manufacture anything).

A little about graphite. For our purposes, graphite is rated by "Modulus of Elasticity," referring to the relationship between stress and strain. It usually defines the stiffness to weight ratio of the fibers used to construct the rod blank. Generally speaking, the higher the modulus of the fiber used to make the blank, the lighter the resulting blank can be for any given stiffness. A graphite fiber called IM6 pretty much revolutionized the industry. With IM6, you had a high modulus, high strain rate graphite that made it possible to produce a lighter, more sensitive rod.

The modulus of graphite used in rods keeps getting higher and higher, making for more sensitive, lighter and more efficient rods. With that comes a trade off. There is no doubt that the higher the modulus rod, the easier it is to break and the less (angler) abuse that it can take. Graphite in of itself is very strong and the increasingly high modulus of top end graphite enables rod blanks to become lighter and more sensitive due to the ability to make blanks with thinner walls. Of course, the downside to this is they are much more susceptible to angler abuse. The thin walls just cannot stand up to rough handling and being banged around in the boat, truck, etc. The type of fishing that you do and the way that you treat your equipment should determine your rod choice, NOT company hype or status.

Is there any benefit to using a high-modulus, top of the line rod for bottom-bouncing? Probably not. Is there benefit to using one for jigging? Probably. Only you can decide if the benefit increase can justify the large cost increase.

Another important thing to consider in a rod is Action. **Action** is used to describe the flex point of a rod, **NOT** it's power. Generally, a **Fast action** rod will flex in the upper 1/3 of the blank, a **Medium/Moderate action** will flex in the upper 1/2 of its length and a **Slow action** all the way to the butt.

**Power** generally refers to a rod's stiffness/resistance to bending and is usually defined in terms like Ultra-light, light, medium, etc. Thus, you can have light power/fast action rod which is light and flexes in the upper third or a light power/slow action rod which would be the same power but flexes all the way into the butt. Again, this should be determined by the type of fishing that you will be doing with the rod.

There are a couple of things to look for when purchasing a new rod (in addition to the blank itself) Check out the grips. Not all cork is created equal! Quality cork rings are VERY expensive and other than a few of the top companies, few use them. Look at the handles closely. Compare them to top of the line rods and you will see the difference. Although they may look pretty good, grips on cheap (and many not so cheap) rods are usually built from inexpensive cork grips which are riddled with pits and imperfections which are hidden by the use of fillers. It makes for a nice looking grip until the filling starts to fall out (and it definitely will). Make sure that the thickness of the grip is sufficient and will be comfortable in your hand after fishing with it for a few hours.

Guides are another area where corners can be cut by manufacturers. There are 3 main guide manufactures, Fuji, Pac Bay and American Tackle, that are used by the top end companies. Many manufactures cut corners by using cheap components. Look at rods made by G Loomis, St. Croix, Rogue, etc. and compare the guides/components on the other rods to them. You will be amazed at the difference, not only in the quality but the number, size and spacing.. You may not be able to afford (or even want) one of the high end rods, but compare!! There are some very good less expensive quality rods out there that use the same components as the big guys, you just have to be selective.

**One final thing!** Look for quality of workmanship. Remember, every fishing rod is still hand made and the quality can vary from rod to rod even in the same model from high end companies. You particularly want to inspect the guide wraps closely. Make absolutely certain that the epoxy coating completely covers the little gap/tunnel at the base of the guide foot. If water gets down in that tunnel, it's only a matter of time before the guide will fail.

**One thing to always remember when fishing with a high-end (or any rod, for that matter) rod is to avoid "high-sticking" When you have a snag or very large fish, resist the temptation to point the rod to the sky and horse it. That is just asking for a broken rod. Always point the rod directly at a snag. Put the stress on the line, not the rod!**

**Keep in mind, there is usually a reason that the \$20 rod costs \$20.**