



# The Catskill Angler

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## The Leonard Model 50 DF: Pleasure and the art of gene splicing

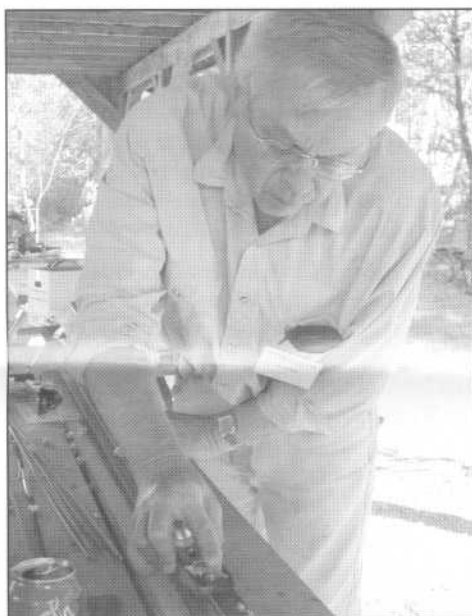
Chuck Benedict

The weekend of September 7, 2002, found 70 of the Eastern Cane Rod Builders (ECRB) splitting and planing bamboo at the CFFC&M. It was the seventh time the group had met, and third time in as many years that it had done so at the Center.

Mind you, by its very nature crafting a cane rod is hair-splitting, micrometer-measuring, precision work. Working alone, a master crafter might spend 80 hours crafting one rod. During that time, the shavings that curl away from the crafter's hand planes can measure less than 5/10000in thick. But that's just the everyday stuff. The folks who were at the Center in September have skills that go way beyond that. They are the gene splicers of cane rod building.

The Museum's mission is to preserve flyfishing's past. The Center's mission is to make the past serve the present. In coming to CFFC&M, the ECRB's mission was to blend the two and carry them into the future by "cloning" an identical twin of one of the most celebrated bamboo rods in the Museum's collection: The original prototype of the Leonard Model 50 DF (DF for dry fly), manufactured in 1915 by the H.L. Leonard Rod Company of Central Valley, NY.

According to CFFC&M Executive Director Paul Dahlie, Arthur "Hap" Mills, former president of both the H.L. Leonard factory and outdoor outfitter and retail store William Mills & Son in Manhattan, donated the rod to CFFC&M in 2001. ECRB is donating the "clone" to the Museum for fund



Robert Nunn uses a hand plane to taper a cane strip. Each of the six strips in the Leonard 50 DF tapers from 4/10-inch at the butt to just 68/1000-inch at the tip top.

raising. The Museum will raffle off the clone sometime in 2003, so watch your mail for details.

Now, with so many graphite rods on the market, why would the ECRB go to the trouble of crafting cane rods in the first place? And why clone a museum piece, especially if the group wasn't going to keep it?

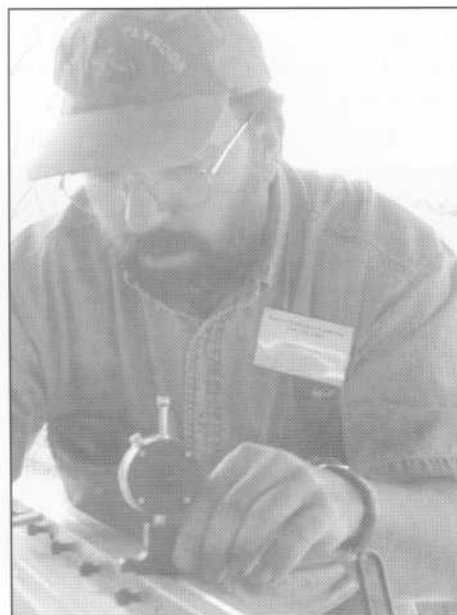
Purely for the pleasure of it.

According to master cane craftsman and ECRB organizer Chris Bogart, who restored the 50 DF for the Museum prior to the ECRB gathering, the rod was built in 1915 and field tested (fished) until 1919. He says

most of the restoration work he did was cosmetic and that the rod is in very good shape.


"The midsection had been whittled to fit the ferrule and the ferrules were in miserable shape" says Bogart. "They were badly tarnished and corroded. But the rod is in remarkable condition and still fishes well in spite of its age. Put a 5wt DT silk on it and it comes alive."

Bogart attributes the 50 DF's spirit to superior craftsmanship, its hexagonal shape, and its precision taper design, all of which originated with the Leonard company, or more precisely, with its founder Hiram Leonard. Leonard pioneered the six-strip cane



John Niemiera uses a dial indicator to measure and adjust the planing form.

rod construction, and was the first to apply "compound tapers of calculated design" in his construction.<sup>1</sup>

What all this means is that the 3pc, 8ft 50 DF is not simply a single strip of bamboo that has been planed or sculpted to have six sides. Rather, it is comprised of six identical, three-sided strips of cane, each of which was planed (tapered) before it was spliced and glued alongside the others. In cross section, each strip forms a perfect isosceles triangle, meaning the three sides are of equal length. Glue the strips together and you get a tapered hexagonal rod. 

Now, here's where some of the gene splicing comes into play. Arguably, in his day Hiram Leonard could hand plane cane better than anyone in the world. Each strip in the 50 DF rod tapers from 4/10 inch at the butt, to a wispy 68/1000 inch at the tiptop. But hand planing was (is) very time consuming. It wouldn't pencil profitably on Leonard's bottom line, so around 1877 he invented a machine to taper the strips.

Called the "beveler," it was so precise, it "... produced glue joints so closely fitted as to be invisible under a 20-power microscope and dimensions accurate to within a few thousandths of an inch at any point on the rod."<sup>2</sup> Justifiably covetous of his invention, Leonard kept the machine under lock and key and only he and his nephew Ruben Leonard were allowed to use it. To this day, only a few people have ever seen the beveler, and only one or two know how to use it.

One such person is cane rod

craftsman and ECRB participant Harold "Hal" Bacon. Bacon owned the Payne Rod Company, which was founded by one-time Leonard Company craftsman Edward Payne, for ten years. For mysterious reasons, Payne (and several other top craftsmen) left Leonard in 1889 and established a cane rod business of his own.<sup>3</sup> Bacon maintained a Leonard beveler at Payne, and had a pattern of the 50 DF taper.

Using a micrometer, ECRB's Chris Bogart measured the 50 DF taper at various points along its length, and then compared his measurements to those on Bacon's pattern. They matched perfectly. Bogart then compared his measurements to older, published tapers purported to be of the 50 DF. What he learned surprised him.

"Over the years some people have told me they'd fished a 50 DF and didn't like it," says Bogart. "But I couldn't understand why, because it's a wonderful rod. Then I compared the (correct) taper with the others. The older published tapers were wrong. They weren't the 50 DF taper."

Some of those tapers are off by as much as 5%. Rods patterned on those tapers can't possibly perform like the original. In short, many rods thought to be 50 DFs, aren't. (Bogart maintains a Website for the ECRB. You can find the correct taper for the 50 DF at <http://www.canerod.com/gatherings/Ind ex.html>.)

Here's where the rest of the gene splicing takes place. Certainly, it's a good bet that 100 years ago neither Hiram nor Ruben Leonard had a micrometer so precise as Bogart's, which can measure thickness down to

a squint-eyed 2.5 microns, or 1/10000 inch. So it is incredible that Hiram was able to manufacture a machine so precise as the beveler, and that he and Ruben could use it to consistently turn out rods so precise as the 50 DF. But while the Leonards didn't have a micrometer like Bogart's, Bogart and the other Eastern Cane Rod Builders didn't have a beveler like Hiram's when they set out to clone the 50 DF at the Center. So, Bogart *et al* had to eye-ball and hand plane the cane for the clone.

According to cane aficionado and CFFC&M trustee Dr. Steve Cohen, it was Ruben Leonard who crafted the 50 DF prototype in 1915. (Hiram died in 1907.) During the 1960s, Cohen was buyer and general manager for William Mills & Son in Manhattan, which had an exclusive arrangement with the Leonard Company, and had many opportunities to talk shop with the principals and personalities at the store and the Leonard Company.

As part of his job description—some would say "privileges"—Cohen had to scrutinize every rod that arrived in the store.

"I had to test and feel all the rods," Cohen says. "Every rod would cast differently, even within models."

But the 50 DF rods were exceptional. Not only were they very consistent in the way they cast, they were exquisite in the way they fished.

"The Model 50 DF is the best 8ft rod ever made," Cohen says.

"Fishing a 50 DF was extremely pleasurable," he says. "You could see and feel every movement of the fish,



*The Eastern Cane Rod Builders at CFFC&M, September 2002. The Gene splicers of the cane rod crafters..*

all the way down the rod and into your hand."

When it comes right down to it, and contrary to the worldview of modern flyfishing's graphite-peddling *marketeers* who live to sell, not sell to fish, the challenge of fishing is in the cast, but the pleasure is in playing the fish. Think about it. If all you *really* want to do is throw perfect loops and make perfect presentations, you don't need fish-or water, for that matter. You only need a rod and line and twice as much open space as the length of your best backcast.

Cohen and Bogart agree that the pleasure imparted by the 50 DF is absent from most modern graphite rods. That's because the pleasure stems not just from the craftsmanship and the tapers, but also from the inherent qualities of the bamboo—qualities that graphite can only mimic, not match.

Graphite rods are essentially hollow, tapered, round tubes, the walls of which are comprised of polymer-coated, spiral-wrapped, woven fabric. The millions of fibers that make up the cloth in graphite rods go in all directions along the rod's length. In contrast, cane rods are solid, tapered, hexagonal sticks. Millions of micro-fine fibers run in only one direction along the length

of the cane. The fibers make cane hard as wood (which it isn't), but supple as a reed (which it is).

When a hollow graphite rod bends under stress, its cross-sectional shape collapses and shifts from round to oval. As it collapses, the stress spreads along the fibers in the cloth and transfers outward, or transversely across the rod. In effect, the stress heads in all directions—off to the sides, and spiraling up and down the rod. Thus, by design a graphite rod disperses the stress, and because of that, the angler's hand does not receive the full "feel" of the fish that creates that stress.

A cane rod handles stress differently. Because it is solid and has fibers running in only one direction, cane does not collapse or distribute stress across itself the way graphite does. Instead, the stress builds and travels in the cane in what Cohen describes as "residual vibrations." These vibrations shoot straight down the length of the rod to the handle, where they transfer directly into the flyfisher's hand.

According to Bogart, the recent resurgence of interest in cane rods has a lot to do with the "maturity" of flyfishers. As a flyfisher matures in the sport, the pursuit of perfect technique gives way to the pursuit of pleasure. But the pursuit of pleasure is not far

reaching. Rather, it brings the entire flyfishing experience closer to hand.

"Eventually, a person's fishing abilities eclipse the materials," says Bogart. "Graphite no longer responds. It can't cast short."

Well, even in Hiram Leonard's time, casting tournaments were big deals. Leonard was proud that his rods won tournaments all over the world,<sup>4</sup> and by switching from Calcutta to Tonkin cane, Ruben Leonard managed to increase the title-winning casting distance from 80ft in 1880 to 102ft in 1888.<sup>5</sup> Today, a tournament caster with a graphite rod can throw a line around 200ft. So, settling for the shorter cast from a handcrafted cane rod would be a big step way back in history.

And that's okay, especially with the Eastern Cane Rod Builders and at CFFC&M, because passing on the pleasure of flyfishing is what it's all about.

1 Sparse Grey Hackle, 'Father of the Fly Rod,' *An Honest Angler*, Lyon's Press, NY, 1998. Reprinted, with permission from Lyon's Press, by the 2002 Eastern Cane Rod Builders gathering, and viewable at <http://www.canerod.com/gatherings/Catskill/Docs/FatherOfFlyRod-all.pdf>

2 Ibid.

3 Austin McK Francis, *Land of Little Rivers*, Beaverkill Press, 1999, p. 144.

4 Ibid.

5 Sparse Grey Hackle.

## Flies of the Year 2000 Continues

### One down and three to go

*Dry Fly Patterns for The New Millennium*, the first book in our Flies of the Year 2000 program, has been published, has hit the racks, and we hope-sits on your shelf. If it doesn't, call the Museum (845-439-4810) and order your copy, today!

The response from contributors, book dealers and reviewers (see Seth Norman's "Books" in *Fly Rod & Reel*, March 2003), and fly tyers has been overwhelming and sales have been brisk. Ultimately our first publishing venture is a success. And no wonder: Without a doubt, there has never been another book containing so many different dry flies tied by so many different tyers, as this one.

*Dry Fly Patterns* contains recipes

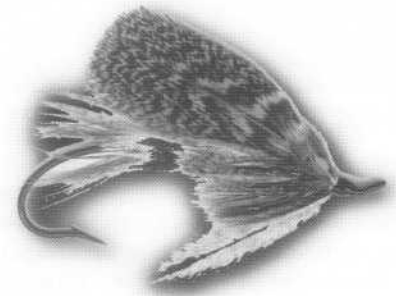
and photos, taken by Poul Jorgensen and Dr. Alan Fried, of every dry fly submitted to Flies 2000, and is richly appointed with many beautiful images of the rivers, fish, and Catskills, captured by photographer Dick Despommier.

The remaining three volumes, *Wet Flies and Nymphs*, *Streamers for Fresh and Salt Waters*, and *Salmon and Steelhead Flies*, are currently in production. We hope to release them by the end of 2003. Each will be published with the same attention to detail as we gave to *Dry Fly Patterns*.

But what about the flies? They are still on display, but will soon come down to make room for several new exhibits. And as soon as the other volumes are available, all flies, books, tackle and other flyfishing memorabilia will be placed in the time capsule, as planned.

CFFC&M Trustee Jim Krul

## The Famous Grouse Flies



Grouse feathers have been used for centuries in fly tying. Yet, this collection of flies will be the first material-specific collection of its kind ever assembled. And you can be part of it by tying and contributing a fly containing at least one grouse feather.

All contributed flies will become the property of the CFFC&M and will be used in future CFFC&M publications and as fund raisers for CFFC&M youth