Bamboo Journal

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Italian Bamboo Rodmakers Association

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Bamboo Journal n. 6 - April 2011

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Front cover: The IBRA board of directors in the Tevere Tailwaters: Marco Giardina, Gabriele Gori, Alberto Poratelli, Moreno Borriero, Massimo Giuliani *(photo by Marco Giuliani)*

Photo on page 2: *Hexagonal tubes in wood and leather with inlays* Made by Roberto Valli

April 3 2011

The participants at the course of the hollow built rods and bamboo ferrules at "Podere Violino":

From left:
Federico Melani, Sergio Guidotti, Gabriele Gori, Andrea Ferranti, Giampiero Bertolini, Gabriele Calzolai, Eros Taglietti, Alberto Poratelli

Editorial

§ § §

“What's Up, Doc?”

There is nothing more relaxing than nibbling on a tender, fresh, juicy little carrot in the fresh afternoon breeze.

Yes, let's relax!

Yes. We had planned the BJ 6 issue in April and now it is April and it is online.

Well, we achieved this goal by turning BJ's from a quarterly into a four monthly issue, but it is only a little detail.

I do hope it is not going to become a six monthly issue!

But it was worth the change!...or not?

I am not introducing the articles, as reading them directly is quicker.

But, before taking off with reading, I express only one final note: a magazine is nourished by the writers who publish articles.

I must say that we are not pressed by many requests or proposals sent us for publishing from rodmakers and bamboo enthusiasts, both Italian and non Italian.

Really, such little interest in contributing?

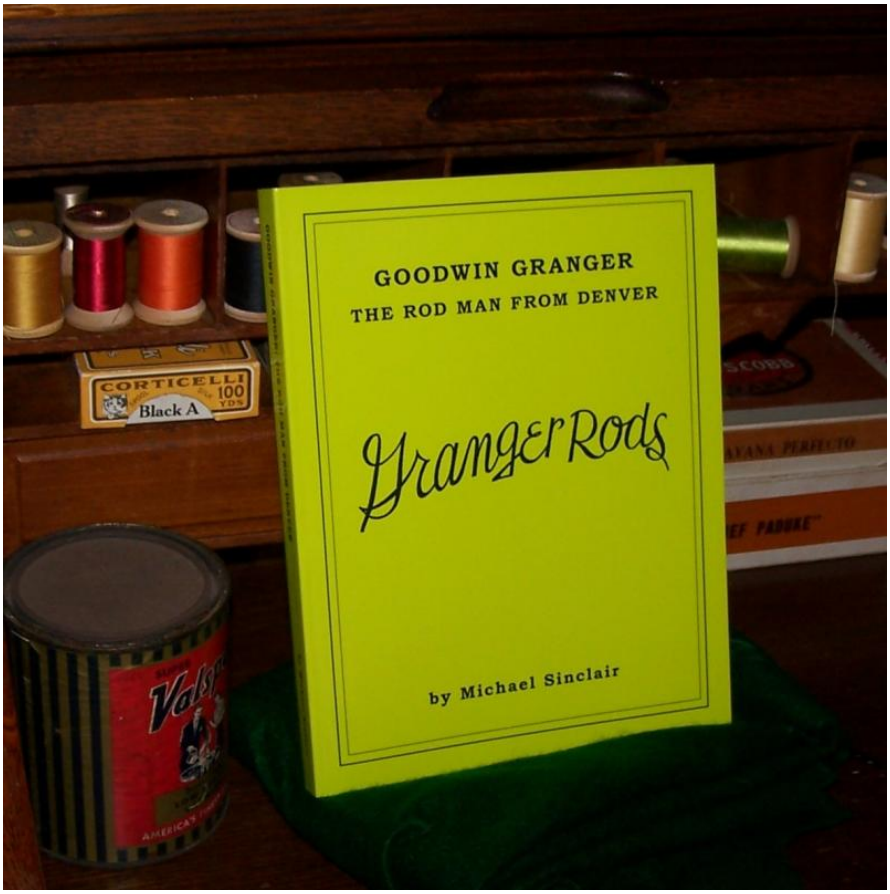
Marco O. Giardina

In this issue:

"SAGOME PESCANTI"

Photos by Fernando "Nano" Biondani

The Rodmaker Bookshelf



"GOODWIN GRANGER THE ROD MAN FROM DENVER"

by Michael Sinclair

Mike Sinclair is a polyhedric man.

If it is true –and it is true- that today we are living in the Renaissance era the bamboo rodmaking, then Michael Sinclair is a Renaissance man.

Writer, essay writer, historian, rodmaker- founder of The New Divine Rods- passionate scholar of the past and of the present of fly fishing bamboo rods, he is fully entitled as an eminent, emblematic, exponent of the Bamboo Fly Rods Renaissance.

His latest important work, recently printed, is a large volume dedicated to a great name in the production of rods and to its founder: Goodwin Granger.

His latest important work, recently printed, is a large volume dedicated to a great name in the production of rods and to its founder: Goodwin Granger.

The book is "Goodwin Granger: The man from Danver" by Michael Sinclair, edited by Michael's Bamboo Books, Paducah, KY. 2010

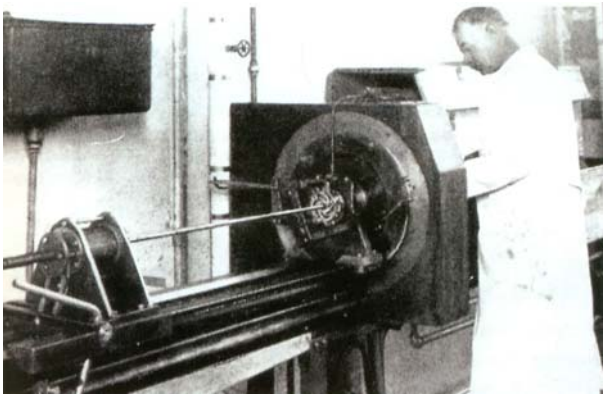
The book is a large volume of 353 pages, large format, rich of photos and illustrations.

In his first book of 1991, Sinclair had already traced Granger Rod's history, along with the history of other manufactures of Colorado rods, but this new work is an incredibly thorough and comprehensive compendium - with new and unpublished documents – about the story of a man and an enterprise that helped develop fly fishing in the US.

The author takes the reader by the hand to discover not only of the events of the Granger Rods' historical path, but also the events of an era's history: the first half of last century. A historical path in the throbbing and sometimes frantic development of a nation, the U.S., and of a state, Colorado, which were entering the century of major technological and social changes.

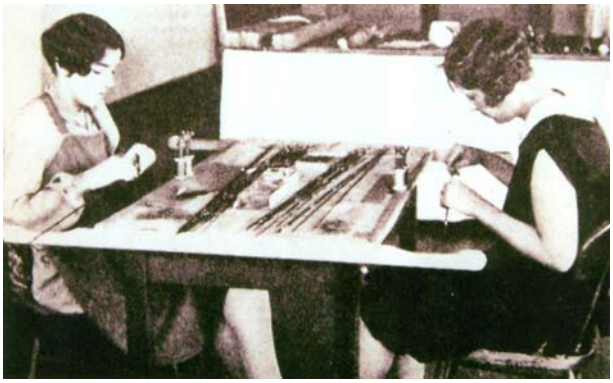
The reconstructions of the various steps through which from 1918 to 1956 the firm has developed the production of canes under Granger's name is exciting and compelling; exciting and engaging as is the description and history of the models that Granger has produced over almost fifty years.

Through his production one can see how, in a span time of almost half a century, the sensitivity of the Americans and the approach to fishing has changed and how fly-fishing has been - and still is - more a



The book is also a huge database of photos.

Photos of rods, vintage photos, advertisements in specialized journals, photos of the components and construction techniques accompanying each step of the book. A real pleasure to read and for one's eyes.



The book is published in three editions: the first is a Registered Edition - in memory of the same edition that distinguished the top of the range of Granger rods - black leather-bound; the second is the Deluxe Edition, caramel-colored leather, the color of Granger rods, and finally the third, Special Edition, green soft cardboard cover, the color of the bindings "Granger Green."

The book can be ordered via the website :

http://grangerbook.com/

By The Bookworm

About myself and my Rodmaking

MATS ÖBERG

I was asked by Mr. Marco O. Giardina to write an article about myself and my rodmaking. I was very flattered so of course I agreed and here is what I, as an amateur writer, has come up with.

My name is Mats Öberg and I was born in 1957. I live in the Stockholm suburbs making my living from my own business in the world of elevators and recently also partly from bamboo rodmaking. I am originally a country boy from up north in Sweden, but ended up in the southern parts and the city when my parents moved.

I have been fishing since I was a young kid and the first outfit I had in the early part of the sixties was a long bamboo pole with a strong cotton line tied to the tip.

The first real fly rod I ever saw was from split bamboo. I think I was about 10 or 11 years old at that time. The gentleman who owned it lived nearby and was regarded one of the best fly fishermen in that part of the county. Seeing this man cast the line, hooking trout on a dry fly, really grabbed me. From that point on the only noble way to catch a trout or a grayling for me was with a bamboo rod.

Later I came to own my own bamboo fly rods and my fascination for these sticks made me want to make them myself. This is how my dear friend and rodmaking mentor Stefan Broms comes into the picture. Stefan Broms has been into bamboo rodmaking since the mid 1970´s. He is one of Scandinavia´s most renowned and respected bamboo rodmakers and his work is represented in some of the finest bamboo fly rod collections in Europe. Stefan makes a completely handmade bamboo fly rod. Split, straightened, nodepressed and hand planed strips makes for the best quality rod available. This is also how I have been taught by him and it is the way I make my rods.

As for the rodmaking companionship between myself and Stefan, it began with a phone call when I asked if it was true he was to part with his rodmaking shop. Here is the story and I apologize for repeating myself as this has been posted on the web earlier. However, I find it of great importance in this presentation of myself as a rod maker.

Stefan was selling all his rodmaking eqipment due to a lack of space and changes in his life so I bought the whole shop. When we loaded the stuff on my truck, he had a strange expression on his face and said; "You know, this is pretty tricky when you haven´t got the hang of it. I´ll help you out with the first one. Ok?" "Oh yeah" I said, and there I was with the best support I could ever ask for as I set the shop up at my place..

Well, the first rod was a wonderful journey with Stefan showing me all the tricks and secrets that would have taken years of trial and error to find out for myself. When the rod was done, dipped and cured and then lawn cast, Stefan had that strange expression on his face again and I knew what it meant this time. This was it.

After 30 years of rodmaking he was done with it. The shop, bamboo and all, was mine now.

So, I heard myself say: -"Hey, I have lots of space here, there´s plenty of bamboo on the shelf and you have already got paid for all the tools and you should still get to use them. Just come by next Wedensday and I´ll have a new bench ready for you."

So, we are two makers in the shop now and I think this is what we usually refer to as a win-win situation.

This was the start of Scandinavian Split Cane and a turning point in my life. I have always loved to work with my hands, accomplishing something, and now I was able to make those bamboo fly rods I had always admired. Soon enough I started to take orders and now I´m looking at a waiting list of considerable length.

It was never my intention to take orders in the beginning. I just wanted to make those beautiful split bamboo rods that were the only proper way to catch a salmonid. But time had it´s way with me and due to some encouragement from Stefan, the third rod coming from my bench was a customer´s rod. The gentleman was pleased and soon he had one more from me. And so I was in the bamboo rodmaking business. I still am and I enjoy it very much. It keeps me alive and kicking during those dark and cold Scandinavian winters.

My rodmaking philosophy is pretty simple. I want to make the best rods I´m capable of, with no shortcuts that may effect the rods ability and/or durability. This is something I value in life in general also. It may be old-fashioned but in todays fast lane lifestyles of "don´t give a damn" and sometimes just plain shoddy workmanship it´s nice to find something that holds true quality, meant to last a generation or more. I guess that´s why I´m so comfortable in the bamboo community.

As for my rods, it may take me some more time to fiddle with something a customer wouldn´t ever notice but it matters to me as a maker. As said before, I split, straighten, press the nodes and hand plane the strips. I am also concerned about the power fibers, so scraping the enamel is done with great caution to preserve them. Heat treating is always done with the old oven, even if the culm has been flamed. I use polyurethane glue and my binder is the old Garrison-styled one Stefan made. This is the basis of my rodmaking and there is nothing special to it in that respect but I am, nevertheless fascinated.

I also find facination in that when making a rod for someone, this person seems to be on my mind the whole build in some way. I´m thinking of these people, where they are going to fish this rod and so on. Also, if I know them well, I know how they cast and when test casting rods I´ve made for them, I find myself trying to simulate their casting style. It´s just a wonderful personal thing, getting to know them, making an extension of myself for them and then, hopefully, being able to see that they like what I made for them. If they don´t, it´s not worth a thing.

Bamboo fly rods are fishing tools and shouldn´t be mistaken for something else. However, I feel there is a certain amount of beauty and grace in them that makes them something more than production rods made from man-made materials. I cannot help myself, sitting on the river bank when taking a break, looking up the shaft of the rod, admiring it, thinking how many times it has been bent in its life and how many more times to come, springing back perfectly straight each time.

My rods are nowadays mostly made from tapers of my own but many have their origin in some of the American classic makers I find interesting. The first one to mention is Edwin Courtney Powell. This innovative American West Coast maker had an impact on my rodmaking due to his semi hollowing technique. Although I´m not laminating my strips with cedar the way he did, the scalloping makes for a nice crisp action and will change the character of many tapers more to my liking. His hollowed B-taper in 2-piece configuration suits me very well as an all-round fishing rod.

Second on my list of influential makers is Jim Payne. His range of tapers and the consistency of build quality and finish in a production rod is highly regarded in my world. Paul Young is also in there for some of his outstanding tapers.

These classic makers are not alone on my list of inspiration. There are quite a few living people whom I admire for their work and/or their dedication. Stefan Broms, of course, as he showed me the way in the beginning and for his never ending encouragement. A,J. Thramer is, for obvious reasons, another of the people who make me shut up and listen when he has something to say. I owe Per Brandin a thank you for directing me to the work of E.C. Powell. Thanks Per, and thank you also for politely answering my stupid questions.

This rodmaking craft has generated many contacts with other makers overseas, especially as I´ve been attending the Metolius Bamboo Rod and Fly Fishing Fair at Camp Sherman, Oregon for the past several years. Chris Carlin, Daryll Whitehead, Steve Kiley, Jerry Kustich, Jim Loucks, Jerry Foster and others whom I have met there have all been a source of inspiration and now I also have the privilege of being able to call these knowledgeable people my friends.

I am very fortunate.

Attending the 1st European Bamboo Rodmakers Gathering in Sansepolcro, Italy was of great influence to my view of rodmaking. So many talented rodmakers in one place at the same time definitely makes for inspiration as well as respect for their knowledge. My thanks to Philippe Sicher, Christian Strixner, Leen Huisman, Rolf Baginski and Marco O. Giardina as well as others for sharing their passion and ideas.

All the ideas and input from these people mixed with my own feelings, values and plain stubbornness have created a line of rods from my bench that I feel proud of. Even though I most often pick a hollowed medium-fast rod in the 8' to 8' 6" range for the fishing I do here in Sweden, I have no specific thoughts about actions in terms of fishability as rods can have a fast or a slower action while both still being good and nice fishing rods. It´s like music, really. There are rock songs that you really like while others don't speak to you at all; classic pieces you find wonderful and those which pass by without notice.

Cosmetics are what many see first when they are examining a rod and therefore I want my rods to look good. That said, I sometimes find people forgetting about the wonderful bamboo rod that is under those wraps and varnish and that makes me a bit sad. I personally like a lightly dressed rod that has some kind of harmony in its appearence. Whether I manage to achieve this goal will be up to each and everyone to judge. I believe I have found my style in both actions and cosmetics and I hope these together will be apparent to the bamboo community as the work coming from the benches of Scandinavian Split Cane.

Split bamboo rods have seen a renaissance in Sweden in recent years and many people who haven´t ever tried a bamboo rod before have become interested. The rodmaking forum on my website is frequently seeing new members and on other fly fishing sites bamboo rods are a more common subject. This is wonderful and I and many enthusiasts are hoping to see the craft and heritage of split bamboo rodmaking as well as the interest them among the younger generations will continue its legacy in Sweden and Scandinavia.

It feels like this is something I will keep doing. Not only is it a delight to make a split bamboo fly rod, but it is very rewarding to catch a fish on a rod you made as is seeing someone fishing and enjoying a rod you made for them. I also have the pleasure of having my son working with me in the shop when he has the time and that adds even more delight to the hours spent there.

The best of regards and tight lines from Scandinavia,

Mats Öberg

RENCONTRES DE MIRAMAS 2011

Le premier regroupement des constructeurs de cannes en bambou refendu avait eu lieu en novembre 2008, organisé par Pierre PERROT, le président du club de MIRAMAS. Ces premières rencontres avaient été marquées par la participation très appréciée de nos amis italiens qui avaient apporté des innovations notables en matière de construction. Alberto PORATELLI et Gabrielle GORI nous avaient initiés à la fabrication des viroles en bambou selon le procédé issu de leurs recherches et expérimentations. Depuis leur intervention ce procédé s'est largement répandu parmi nous sous l'appellation de « viroles à l'italienne » et certains l'ont désormais adopté et généralisé pour leurs nouvelles réalisations.

Puis, à l'initiative du club « La Phrygane » de LABARTHE sur LEZE (environs de TOULOUSE), un second rassemblement avait eu lieu en 2009.

Ce Samedi 5 mars 2011, Pierre PERROT, a renouvelé l'opération et ouvert les 2èmes rencontres organisées par son club. Relayées par le « forum de GILLUM », une quarantaine de personnes ont répondu à son appel et ont effectué le déplacement. Certains sont venus de loin. Il y avait les habitués auxquels se sont joints les nouveaux venus. Chacun a apporté sa contribution en exposant ses dernières fabrications.

FRENCH GATHERING MIRAMAS 2011

The first French rodmakers gathering took place in November 2008 in Miramas and was organised by Pierre Perrot who is the president of the local club. The first meeting was characterized by a large and much appreciated participation of our Italian friends. Alberto Poratelli and Gabriele Gori introduced us to the makings of the Bamboo Ferrule which has been adopted by many of us and which is now known as the Italian Ferrule.

In 2009, the Club called « La Phrygane » from LABARTHE sur LEZE (near Toulouse) organized a gathering.

Last March 5th, Pierre Perrot and his club renewed the tradition and organized their second gathering in Miramas. The news spread on the French forum – Le Forum de Gillum and about 40 people confirmed and attended. Both old and new friends attended and everyone brought a contribution which was put on show.

Bien sûr, Paul AGOSTINI était parmi nous.

Nous avons pu admirer en vraie grandeur les réalisations qui nous avaient été présentées en photos sur le forum de GILLUM.

http://forum-gillum-bambou-refendu.xooit.fr/portal.php

And of course Paul Agostini was there!!

We had the chance to admire some great works of art that we had only seen photographically on the forum.

http://forum-gillum-bambou-refendu.xooit.fr/portal.php

Cette année, Jean SANTOS nous a rejoints et a apporté un souffle d'originalité à nos retrouvailles. Jean est passionné de gravure et il a animé un petit atelier d'initiation et de découverte qui a été particulièrement apprécié.

This year, we were visited again by Jean SANTOS who brought in a breath of innovation by setting up a small demonstration on his engraving skills.

Pour la circonstance, Jean a fabriqué et gravé trois couteaux. Les manches en bambou ont été réalisés par Philippe ETIENNE (etibern)

For the occasion he made and engraved three knives. The bamboo handles were made by Philippe ETIENNE (etibern)

A midi, un repas nous a réunis dans le hall d'accueil de la Maison pour Tous. Nous avons dégusté un excellent couscous.

At midday we all met for lunch in the main hall of the recreational centre for a tasty plate of couscous .

L'organisation de telles journées d'échanges est très appréciée par tous les participants. Cependant, la difficulté majeure réside dans la mise à disposition des structures d'accueil. Celles-ci, par leur taille ou leur accès, limitent considérablement les initiatives de ce type. De plus, les moyens financiers dont disposent les petites associations et les clubs sont réduits aux cotisations de leurs membres, peu nombreux, et ne permettent pas d'envisager des regroupements de grande ampleur.

Cependant, nous n'avons pas dit notre dernier mot et il est probable qu'à l'avenir nous réussissions à organiser une manifestation plus importante. Affaire à suivre...

The organization and the exchanges that took place were much appreciated by all. The difficult part that it is difficult to find places that are big enough to hold these events. These are too small and the club finances are very small and derive from the membership fees of the few members so it is difficult to envisage bigger gatherings. But the last word hasn't been said...!

Alix Antoni

Wood Reel

Enzo Bardus

In the past, this article on building wooden reels was published in the PIPAM website—Italian Fly Fishing Portal http://www.pipam.org

We decided to publish it, with the Author's permission - whom we thank - in order to bring once again this interesting article to the attention of the rodmakers audience and also because we were urged by recurrent request from our not Italians readers.

My name is Enzo and I am passionate about the fly fishing world and I consider myself lucky to live in Friuli where there is an abundance of rivers suitable for this type of fishing.
I started fishing when I was 9 (in 1959) and I remember my first reel that was made from materials bought from my mother's, a dressmaker, haberdashery shop. The wooden spool for the sewing threads that I needed to wind up the nylon that my mother used to make necklaces, the dressmaker's pins that I used to bend and use as hooks to catch bleaks.
I started approaching fly fishing in 1975 and through the years I have tried to gain knowledge of everything concerning this sport by buying specialised magazines, catalogues, even foreign books.
In 1990 I joined a fly fishing club to exchange ideas and opinions with other fishermen and to offer my experience to the young members.
I have always preferred bamboo rods and I am fascinated by the fact that such a simple plant can give rise to such works of art.
In 1995, with the help of some members of the club, I bought the necessary material to build my first bamboo rods and naming each one. I built various bamboo rods and when I had achieved what I thought was the best result; I decided to try building wooden reels to complete the aesthetic aspect of my rods.

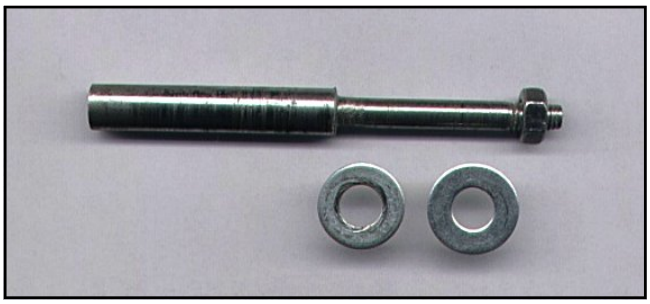
Manufacturing a reel

Choosing the wood and octagonal pre-forging

There is a multitude of wood to build a reel but it is essential that they be quite hard. The best part is the lower trunk and precisely the point where the roots are attached to the trunk. In the absence of this, the trunk will do, as long as it is cut with the right moon: the best is the August full moon which always occurs in September. In this period the plant slows down the photosynthesis keeping and fixing in time its qualities of hardness and conservation.
The trunk is cut longitudinally in planks 4cm thick, piling them horizontally in a dry airy place with wooden strips in between to improve the drying process which will last two years. I have built reels with various types of wood, for example national walnut, oak, cherry, hornbeam, etc. Olive is the one I prefer because of the contrasting grain patterns.
The contrast in the grain of the wood varies from tree to tree and depends strongly on where they grow. I noticed that a piece of olive wood from Lombardy has a smooth and uniform grain, while the olive wood from Elba Island has a deformed grain with very contrasting dark light tones. This piece of olive wood was given to me by a friend and had come from a very old tree, dead and destined to become firewood.
Once the drying process is done, with a circular saw cut the plank giving it a square shape then remove the corners and create an octagonal shape which facilitates the work at the lathe.

Pin to hold the wood

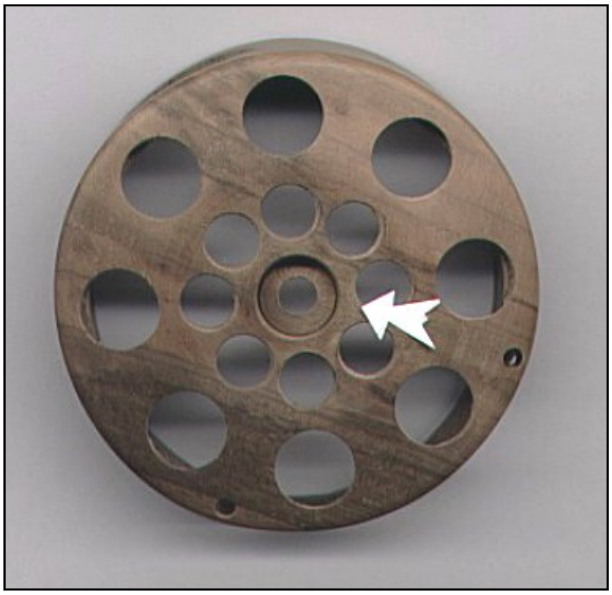
Before proceeding to the turning of the roughly squared piece of wood without corners we must build a pin at the lathe to hold it during the working (fig.1).
The measurements of the pin are: total length including the thread 10cm; diameter of the part that is inserted in the chuck of the lathe 10mm; diameter of the part that is fixed between two washers 6mm. At the top of the pin and precisely near the thread, drill a hole that will serve to insert the fixed centre of the lathe during the working of the wood.



First step

The first step is to draw a circumference with a compass on the surface of the wood slightly larger than the finished size of the reel (the piece of wood prepared for the case of the reel) with a drill press with a 6mm point for wood, make a hole at the centre of the circumference.
Insert the piece of wood on the pin (fig.1) and fix it well between the two washers. (It is advisable to use the fixed centre of the lathe to keep the pin more tightly during the working of the wood).
I used the rounded to turn the wood (34-tab.I).
After turning the surface of the circumference to get a cylinder 72mm in diameter, polish it with fine sandpaper and move on to working the right side of the cylinder getting near the locking washer with the tool; then remove the piece from the pin and the chuck, turn the jaws of the lathe upside down, (my lathe has a small chuck, so the jaws cannot grab the piece and I am forced to turn them).
Now the cylinder is not fixed on the pin, but the jaws of the chuck grab and hold the cylinder.
Block the cylinder with the side that is worked already facing the chuck and finish till the other side of the cylinder is down to the right size (about 35mm), turn the cylinder and finish the part that could not be done because the locking washer obstructed the tool.

Incision on the circumference and seat of the screw of the centre pin



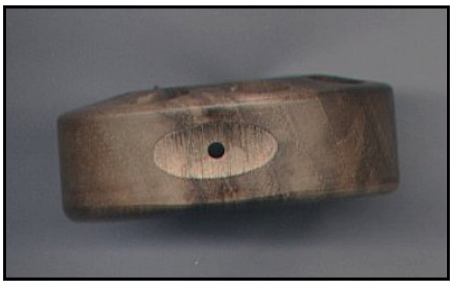
Keeping the cylinder in this position, with the tool (35 -tab.I) engrave the circumference at about 6mm of its height. This groove (5mm where a copper thread will be inserted) will help to reinforce the case of the reel from the empty side (where the reel will be inserted) This working is optional and depends on the width and the length of the lights we will engrave on the case of the reel (weakening it). Keeping the cylinder in this position with the point (28-tab.I) make the seat of the pin-blocking screw (8-tab.I) with a depth of 3mm. (eg. fig.2).
The seat of the screw of the reel cent re pin must have a diameter slightly larger than the diameter of the screw, to regulate the centre of the reel with the case of the reel later.

Peripheral measurements and designing the holes

Once this working is completed, remove the cylinder from the chuck and carry out some measurements on the surface of the circumference.
We must decide how to make the holes of the reel. We can make two holes at the sides of the reel feet or one hole perpendicular to the reel foot (round, more or less oval). See fig.3 for the side ones and fig.4 for the one perpendicular to the foot -

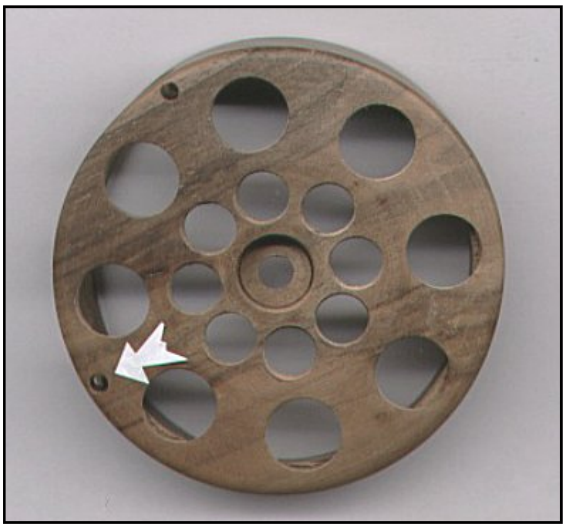
Measure where the foot of the reel will be inserted, the size of the side holes or the one opposite the foot, the two holes to insert the wearing reinforcement due to the running of the line.
At the height of the foot of the reel make a 1,5mm hole in the groove for the copper thread. (19-tab.I).

Use of the vertical drill and vice



Using a vertical drill and a good vice to block the cylinder (it is important to do this type of work with a full cylinder to block the cylinder well in the vice) drill with a 14mm point (28-tab.I) the lights of the reel.
Keeping the cylinder in the vice lightly cut the circumference with the 18mm point forming a shallow oval groove (it is important to avoid going deep thus not jeopardising the hold of the foot with the reel). See fig.5.
At the centre of the oval drill a 2,5mm hole for the screw (18-tab.I) to fix the foot.

Anti abrasion line guide



Using the vertical drill, make two holes with a 2,5mm point for wood; they must not go through the cylinder and they are drilled at about 3mm from the circumference. If the cylinder is 35mm high, the hole will be 33,5mm deep.
The two holes are drilled after the holes of the reel and they will be drilled in such a way that they will be half in the wood and half out, to expose the metal of the wearing reinforcement.
In these two holes we will insert two pieces of anodised aluminium (22-tab.I), 30mm long, glued and each covered with a top of the same type of wood (See fig.6)

External radial part of the reel

At this point we can safely drill the case of the reel in a radial design like the model in fig.2 if we desire.
Draw the pattern of the holes on a graph paper, carefully glue it on the centre and with a pointy burin press on the dots where you will drill with a point for wood (it is not necessary to drill the cylinder from side to side.

Slight conical edging of the external face of the reel

The cylinder is blocked on the chuck and the face to edge with a slight conical shape (7 degree angle) is the side with the seat for the pin blocking screw (8-tab.I).
With the tool engrave this face carefully to not more than 25mm.
The sharp corner that remains on the circumference will be rounded with a file and sandpaper to give the external face of the reel case a smooth and rounded shape.

Working the inside of the cylinder

Invert the position of the cylinder on the jaws of the lathe chuck and with the tool (32-tab.I); remove the material from inside the cylinder.
Start engraving at the centre of the cylinder and proceed with the tool to a depth of 28mm.
In this way you almost reach the circumference, leaving an edge of 5mm.
The empty part of the cylinder now measures 28mm in depth and 67mm in diameter.

Internal oil well for the foot screw

Remove the reel case and block in the vice and with a vertical drill with a point for wood (26-tab.I), the same diameter as the head of the screw (18-tab.I) from the internal part of the reel case make a 1mm seat measured from the head of the screw. This operation is essential as it prevents the reel; once it is inserted in the reel case, to hit against this screw.

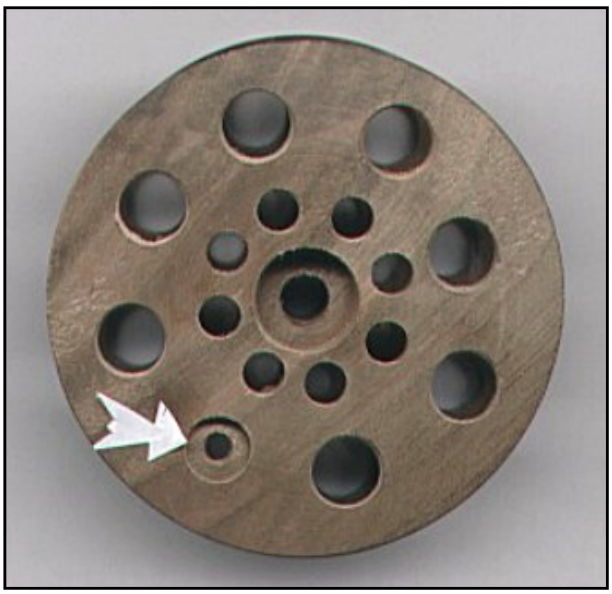
Fixing the copper thread in the groove

Take a 0.8mm copper thread slightly longer than the circumference of the reel case: insert both ends in the hole and twisting them it adheres perfectly to the groove. Solder the external part of the reel and cut of the excess inside it; if there are smears finish with a file and sandpaper. (See fig.7).

For the moment the working on the reel case are finished and we will continue later.

Preparing the reel

Follow the same process as the reel case till you reach the desired diameter of the cylinder, 6mm with a height of 32mm (inserting the reel in the reel case it must protrude 5mm).



Radial design on the cylinder of the reel

The drilling procedure on the cylinder of the reel is the same as the one on the reel case; the drilling can be done from side to side or only on the external part of the cylinder.
When drilling be careful when executing the holes near the circumference, one must be smaller than the others (2,5mm) to put the knob (see fig.8). It is important to position the knob observing the grain that from the centre moves flows outwards (less probability of breakage).

Rounding the external face of the reel

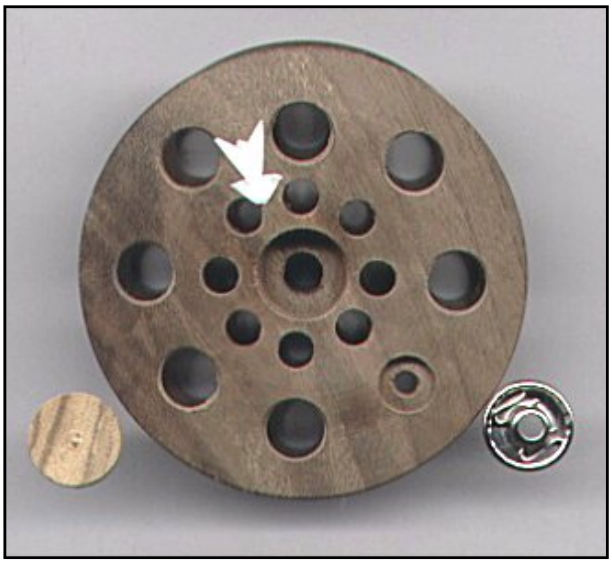
Put the frame and reel on the pin that was used for the case and fix it between the two washers, (turn the jaws of the lathe chuck) block the pin insert the fixed centre, keep the same angle of the turret (7 degrees like the reel cask), penetrate the tool 25mm removing only 1mm of material from the reel case. With a file and sandpaper take away the sharp corner of the reel case and round it; the same on the opposite side.

Flaring of the reel case hole

With the vertical drill and a 14mm point for wood flare to a depth of 1,5mm the hole for the knob.
With this operation the knob will be parallel to the axis of the reel. See fig.8.....

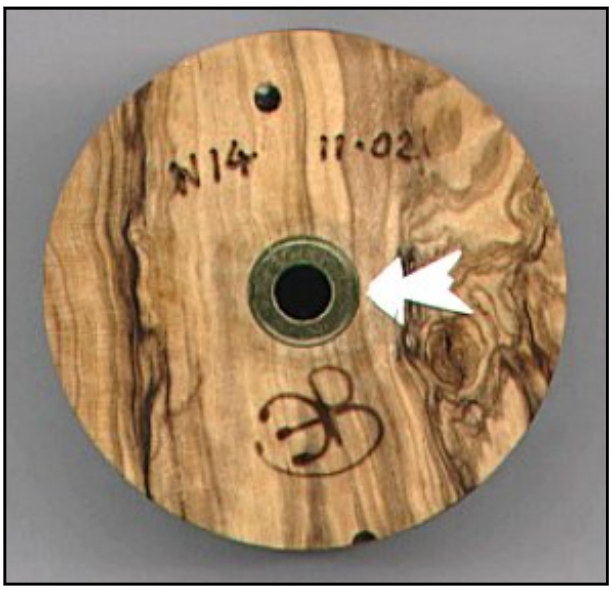
Flaring of the central hole of the reel cylinder

Take the cylinder of the reel from the pin, turn the jaws, block the cylinder in the jaws and with an 8mm point drill a hole from side to side. (In this bigger hole, we will insert the bronze bearing that has an internal diameter of 6mm and an external diameter of 8mm). With the tool (31-tab.I) work the external face of the cylinder for the seat of the female press stud (45-tab.I) and for the finishing cap to cover the stud.
The depth is 5mm and the diameter 14mm. (See fig.9).



Holes for the seats on the reel cylinder with the dead centre chuck jaw of the lathe

Turn the reel cylinder on the chuck jaw and on its internal face, make the following seats:
1) for the seal (6-tab.I) with a 9mm point for wood and a depth of 3mm
2) for the seat of the washer (9-tab.I) with a 14mm point (n° 28) and a depth of 0,5mm. (See fig.10).



Modify the central hole of the reel

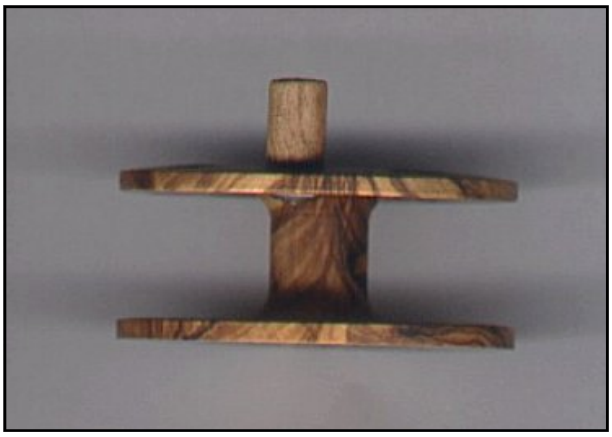
With the dead centre of the lathe insert an 8mm point for wood and drill the cylinder from side to side.

Preparation at the lathe for the internal bronze bearing

Turn the jaws of the lathe, block the brass bearing (13-tab.I) with a protrusion from the jaws of 40mm. With the tool bring the external circumference of the bearing to 8mm and with the 6mm dead centre drill the bearing.

With the cutting tool (33-tab.I), cut the future bronze bearing to measure 20mm with a protrusion from the jaws of 40mm.

Preparation of the reel

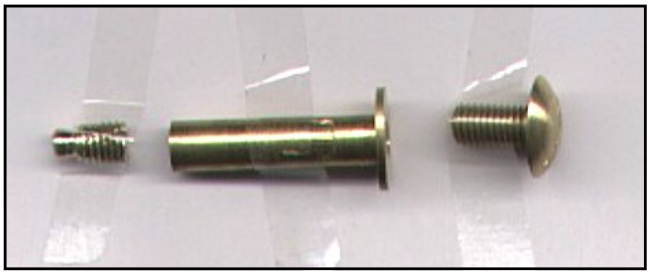


Take the pin (fig.1), block it in the chuck jaw of the lathe, insert the reel on the pin with the bronze bearing inside it (temporarily for the centring) and block it between the two washers; match the pin to the dead centre of the lathe and with the tool (34-tab.I) remove the material between the two faces of the cylinder by penetrating delicately and leaving 2,5mm for both sides of the reel and an internal diameter of the reel (where the backing will be) of 18mm. See fig.11.

Inserting the bronze bearing, the rubber seal of the button, the washer and the finishing top

Insert the rubber seal inside the reel (6-tab.I) and fix it with a few drops of super glue, fix the washer to the rubber seal, (9-tab.I).
On the opposite side insert the bronze bearing with glue; insert the female part of the press stud (4-tab.I), glue the finishing top and polish the external surface of the reel
Pin of the brass knob, washer and wooden knob
The brass pin of the knob is created from the threaded bar (14-tab.I) worked on the lathe.
The working on the lathe is carried out by fixing the piece on the chuck, leaving 30mm for the working; bring the diameter of the pin to size for its entire length to 7mm, another passage with the tool will bring the diameter of the pin to 6mm with the dead centre, thread it (the size of the threading must match the size of the screw (17-tab.I).
Once the threading has been done, with the cutting tool (33-tab.I) cut the pin of the knob on the 7mm diameter leaving a margin of 0,5mm from the 6mm diameter, thus forming a small top (which will block the knob).
On the same brass pin with the 7mm diameter we will get the “holding” washer (16-tab.I), which will be placed between the pin of the knob and the hole on the external face of the reel. The size of the washer is: 7mm diameter, 0,3mm length and 3,5mm hole.
The wooden knob is obtained on the lathe and its internal diameter will be slightly larger than the pin to have less fiction. The size is: diameter 7,5mm, 14,8mm length and internal hole 6,2mm.

Adapting the pin to the reel



Take the male press stud (obtained from the piece 11-tab.I), or weld the male stud (5-tab.I) on the piece (11-tab.I) eliminating the edge of the stud with a file bringing it to size (11-tab.I). Insert it by screwing it on the opposite side to where the screw will be inserted (8-tab.I); insert the reel until the stud snaps.
On the opposite side insert the screwdriver screwing or unscrewing the male stud to regulate the matching of the reel with the head of the pin. Once it is regulated fix the male stud with super glue to the pin of the reel.

Centring the reel and fixing the pin to the reel case

Remove the reel from the pin, place the pin in the reel case and with the screw ((8-tab.I that was previously reduced in thickness) fix the pin in the reel case. Insert the reel on the pin until it snaps and centre the reel with the reel case. Once this operation has been carried out, block the screw with super glue (8-tab.I).

Foot of the reel case

It is obtained from a piece of brass, modelled with a jagged saw (23-tab.I) and using various files (29-tab.I), to a length of 62mm and width 13mm. At the centre drill a hole with a 1,5mm point threaded the same way as the screw (18-tab.I) (external diameter 20mm internal diameter 17mm).

Duration

Once all the workings, finishing, polishing and external smoothing have been carried out, soak the reel case with a waterproof product (I use a very fluid liquid that is used in building construction as an isolator in cement). When the product has penetrated and is dry, use liquid wax to polish it. On the pin of the reel, I use grease.
Before fishing it is important to spray a water repellent product (I use the one for cloche); after fishing, I suggest you remove the line from the reel and dry it with kitchen paper. It can then be rewound but it is better to remove the reel from the reel case to eliminate any humidity faster.
In time the reel will change tone and go dark; this does not affect its qualities in any way.
The OR seal that also causes friction, in time will loosen: replace it.

LEGEND FOR TAB.I

It is important to have a small lathe for metal and a vertical drill.

1) Two pieces of wood, one for the case and another one that can be smaller for the reel.

2) Scrap wood that is used for the small knob of the reel and to cover the screws on the case and the holes of the reel press studs (4-tab.I).

3) (Mishap) to highlight the position of the rubber seal inside the reel, this rubber serves as a seal for the internal grease, to prevent the penetration of water and as fiction of the reel case.

4) Female press stud that is placed in the appropriate seat that was made with the tool 8 (32-tab 9).I on the external part of the reel “where there are the radial holes and the knob ".

5) Male stud (this stud is used as a sample to copy and reconstruct on the pin at the lathe (11-tab.I). This stud (male and female) blocks the reel with the reel case with a simple snap.

6) Rubber seal.

7) It is the pin where the reel will turn. This brass stud has an internal threading to half its length; the pin needs to be threaded for its entire length “from side to side” the internal thread is the same as the piece of threaded bar (11 -tab.I) that is brought to a final size of 15mm. On the opposite side the male stud is engraved with a cut on the head with a saw (23-tab.I). This threaded piece “that takes an alley key shape” is inserted on the pin 87-tab.I and regulated the matching of the reel to the pin when it is snapped shut. Once the regulation is finished, it is fixed with a drop of super glue.

8) This screw fixes the pin (7-tab.I) to the reel case.

9) Brass washer that is glued on the seal (3-tab.I). Its seat must be made by engraving the reel with a point (type 28-tab.) with the same external diameter of the washer or with the tool 31-tab.I.

10) Piece of brass tube that is modelled with a saw (23-tab.I) and various files (29-tab.I) that will become the foot of the reel case (size length 62mm by 13mm). At the centre of it make a hole with a 1,5mm point and thread it like the screw (18-tab.I). (Size: external diameter 20mm, internal diameter 17mm).

11) Piece of threaded brass bar (that is brought to a length of 6mm).

12) Piece of larger threaded brass bar to make the pin of the knob and relative washer (16-tab.I).

13) Brass rod to make the internal bronze bearing of the reel. The bronze bearing is placed between the rubber seal (6 -tab.I) and the stud (4-tab.I).

14) Piece of threaded bar to make the washer (9-tab.I).

15) Pin of the finished knob with an internal thread the same as the screw (17-tab.I)

16) Washer of the knob that is matched between the pin and the reel of the reel case.

17) Fixing screw of the knob with the reel. The small hole that can be seen (3-tab.I) facilitates the insertion of the screwdriver to fix the screw to the knob that is inside the reel.

18) Screw to fix the foot of the reel to the case.

19) Brass thread to reinforce the external part of the reel case (a 1,5mm hole is made near the foot at the centre groove to insert the two ends of the brass thread and after tensioning it well it is fixed with a drop of tin.

20) e 21) Fine and very fine sandpaper to smoothen the external parts of the reel case.

22) A 2,5mm knitting needle as reinforcement for the line guide. (optional)

23) Saw.

24) 2,5 point for wood to drill the reel for the knob, the foot of the reel case and to reinforce the line guide (22-tab.I)

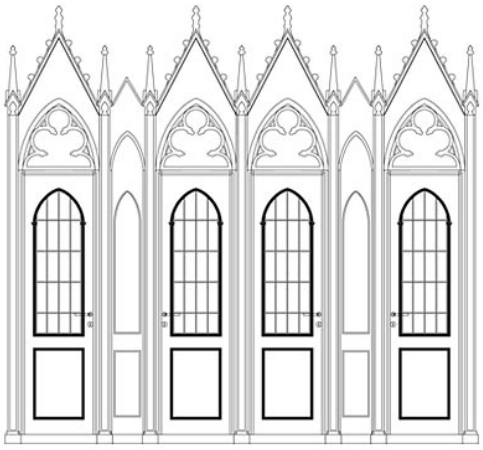
25) e 26) Points for wood to drill and form the radial holes on the reel. These holes must be drilled before forming the reel (emptying the reel, seat of the line).

27) 18mm point for wood to make the seat of the foot (it must not be very deep) and it is made before emptying the internal part of the case to have more grip. This working is carried out with a vertical drill brushing with the point the surface of the circumference from the opposite side of the two line guides.

28) 15mm point to drill the holes on the circumference of the reel case, this operation too is done with a solid wood cylinder. You can choose the size of the holes without exaggerating to risk weakening the reel case.

29) File for the various finishing touches and to eliminate the trimmings of brass and wood.

I wish you success



Gothic...Ferrules

By Moreno Borriero

I have been fascinated by the way some of my friends have been doing the points on the serrations of the ferrule for a long time now and never really found the courage to find out what the technique is. The serrations I refer to are the nice torpedo-shaped points which start off as a slow curve right from the bottom.

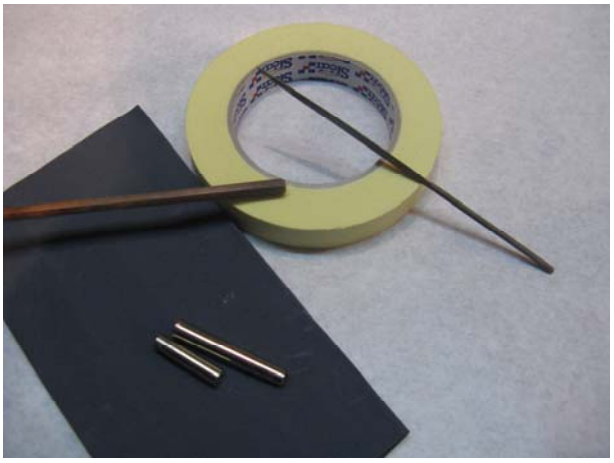
Until recently the way of dealing with the points passed through a number of different stages, as always trying to find the easy way out – or rather a method that would be simple, easy to reproduce every time and that would look good. I think that beauty is made up of many small details and the way ferrules are dealt with is part of this; unless of course you hide them under an important layer of nylon wrappings. I was actually quite shocked a few months back. I was asked by a friend to fix the wrapping on a Hardy Palakona from the early 80's. Well when I unwrapped the male ferrule I was quite surprised to find that it had not been dressed at all or worse, the serrations had simply been cut probably with a small pair of shears and they were all irregular and bent. This was probably the bad workmanship of a previous restoration job and I must say it really ruined the surprise for me.

Now, getting back to us: As I said, I tried various methods and the first one was to cut the serrations to a point with a tiny pair of shears. In theory an easy way, but in practice I had great difficulty in getting them all the same length and even centring the point was a problem.

The next method I tried and which I used for a few years with good results was even simpler. I would use a small triangular file. I'm not familiar with the size codes but hear in Italy they are called watch-makers files. Anyway to be a little more precise, they are the file my friend Alberto Poratelli suggested I use when cleaning out the inside of the bamboo ferrules after gluing. The system is quite easy. I would first of all feather the serrations on the lathe with fine grit sandpaper (600 – 800 grit). I would then simply place the file between serrations and start filing downwards. I had to be careful to hold the file straight or the point would be off centre. I would continue filing away - starting with the thinner end of the file and working gradually towards the thicker part. I have got into the habit of counting. So I would count say 5 passes on one serration, then 5 on the next and so on and slowly using the thicker part of the file. Slowly a well centred point would come out. The ferrule looked good but it still wasn't what I was looking for! The nice Gothic arch shaped ones I was seeing around which are beautiful but quite short i.e. quite a lot of material is removed from the top part of the serrations. I was looking for some really long ones like the gothic windows I saw a few years back in Cologne.

I don't remember where but I overheard someone – perhaps Daniele Giannoni – mentioning that sandpaper is used. It is inserted between the serrations and you work them to a point. Well I tried and I found I was removing too much material and the results were good but the serrations were too short.

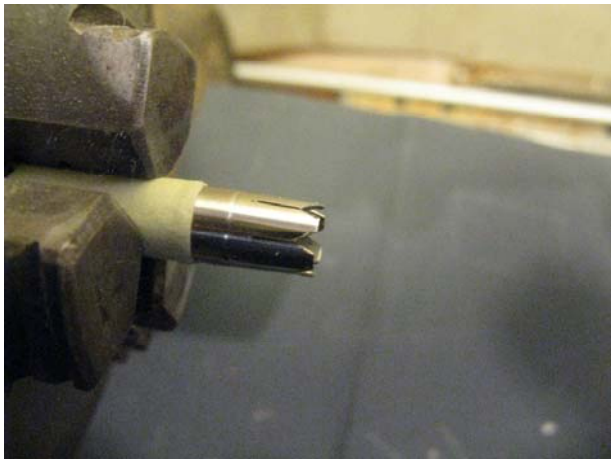
I thought about this problem in bed on a hot sleepless night and I had an idea. Why not combine two techniques i.e. file and sand paper? The next morning I tried and the results were fantastic – nice long gothic shaped serrations.



Technique

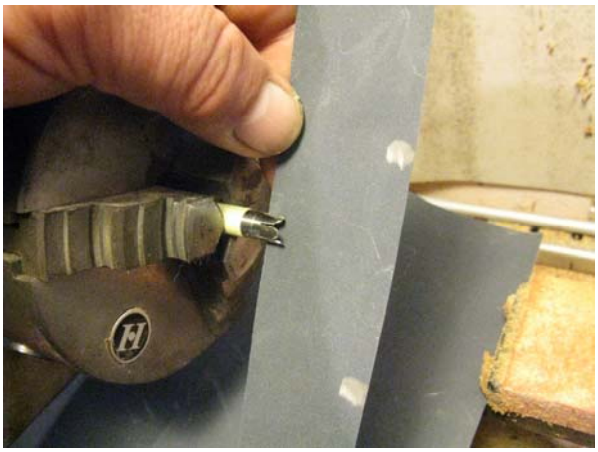
I start by feathering the serrations. I protect the ferrule with masking tape, place it in the lathe with a 600 grain followed by 800 and steel wool and feather them down so that they are as sharp as a blade.

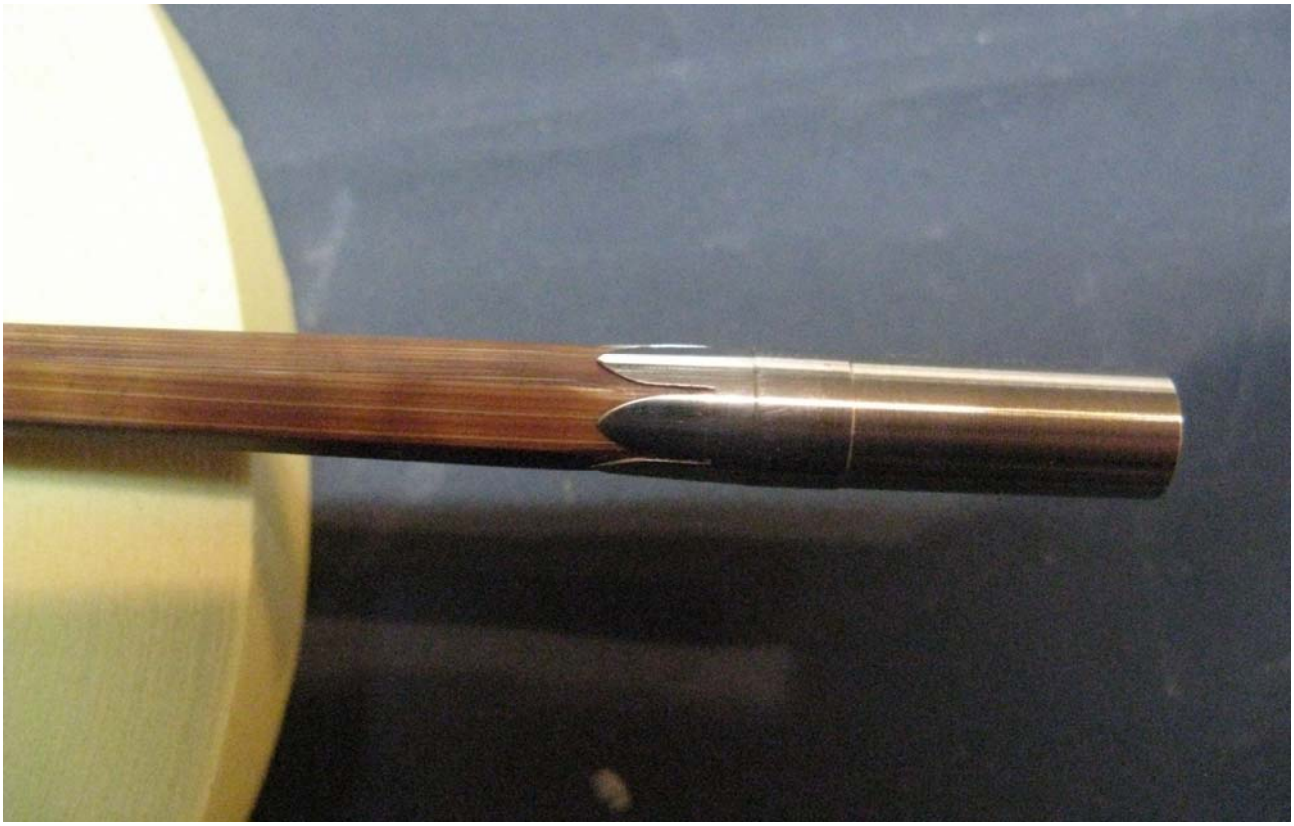
With the triangular file placed between the serrations, I file away a small V shape on each serration but I don't file them to a point or when I go to the next step I would file away too much material.



I then take 600 grain sandpaper and place it in the serrations (all the way down) in such a way to get to opposite ones. I start sanding the serration towards me by pulling the paper slightly. In a few passes the serrations are sanded to a point and the curve starts almost from the bottom. I do the same for the ones facing the other way.

I then clean away the burr, shine it up a little and.... Bob's your Uncle!





This kind of serrations looks excellent with transparent wraps, so even if I'm wrapping with Burgundy or any other colour I will wrap these with white silk thread. They look too good to be covered!

M*oreno* ***B****orriero*

ww.mbrods.it

Manufacturing a wood rod tube

By Antonio Paglia

After the article on the construction of Silver nickel ferrules, I have been given a further chance to write for the Bamboo Journal and so I am taking this opportunity to explain how to make a wooden tube worthy of holding and protecting a bamboo rod, a tube which is attractive, light and resistant.

I first experimented with tubes about seven/eight years ago when I found articles and suggestions on the internet for hexagonal tubes. I made various ones and I must say that if you choose nice wood, they are aesthetically pleasing but they have a fault: they are a bit heavy. In fact, the six pieces which make up the tube must be at least 5 millimetres thick or else the area to be glued is too small and the tube is fragile. The idea of making a circular tube came to me by chance when I was looking at a cardboard tube for carrying rolled-up drawings or posters. Why not try to make it with wood veneer, gluing various layers spiraling in opposite directions?

I quickly got going and I discovered, at a wood shop in my town, that it is possible to buy a reasonable range of wood veneers by the metre (photo 1).

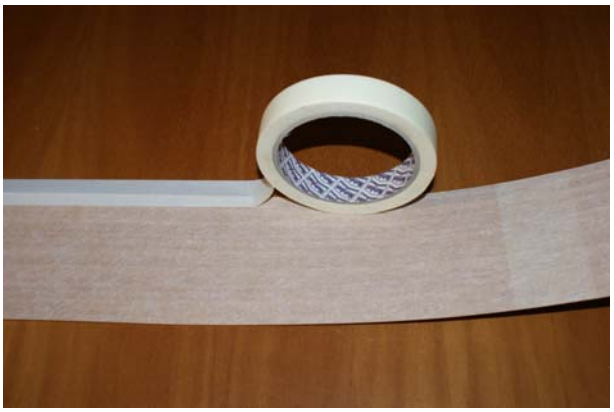
I made various attempts and in the end I developed an efficient and fairly simple procedure to construct the tube.

The equipment needed is minimal and most rod makers will already have it in their workshops. You will need:

1. A 2 inch PVC plumbers' tube, an orange or grey one, of about 1.8 metres (the standard length is longer, so cut off the excess); choose a straight one because otherwise you will have to straighten it with a hot air gun.
2. Veneer by the metre: for the under layers I used cheaper ones while for the top layer, which is seen, I chose oak, cherry, pear or walnut; it depends on what you manage to find. The width is usually 25 cm. For the length, calculate that for the spiral layers you will need 120% more than the length of the tube that you want to construct; for the outer layer with the fibres running lengthways, a piece which is slightly longer than the tube will be sufficient.
3. Glues: I used and recommend a water resistant vinyl glue; to glue the final layer still use a vinyl glue but a quick drying one; a bit of Cyanoacrylate glue may also come in useful.
4. A foam mat, such as those used in gyms.
5. Masking tape, double-sided tape.
6. Hot air gun, sandpaper, brush, sponge and cutter.

Firstly, take the veneer for the base and cut it lengthways with the cutter in roughly 8.5 centimetre strips (photo 2).

It is very important that the long sides are parallel and that the cut is exact, otherwise when you go to glue them in spirals, it will be difficult to match up the sides. On one of the long sides you need to stick a strip of sticky tape, placing only half on the veneer (photo 3).

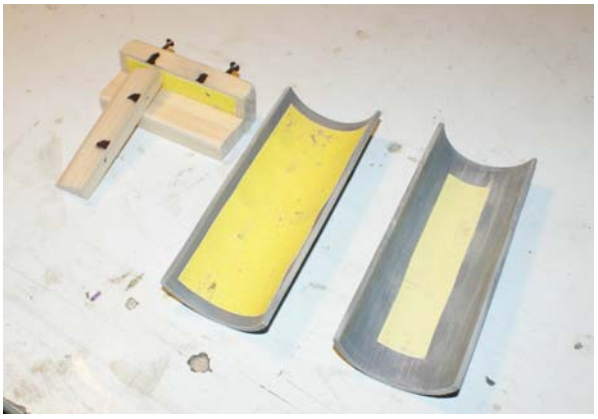


This will stop the glue from seeping through from the first layer of wood to the PVC, which will make it very difficult, if not impossible, to take away the support tube. Given that the craft glue dries quickly, it may help to get another person to assist you from this point on: they will hold one end of the PVC tube and turn it while you wind the wood.

Now you can make the first layer. Wet the veneer with a sponge or spray so that it bends and does not break when it is wound, since it is only 0.6 millimetres thick. Position the veneer so that the sticky part of the tape is at the top (photo 4).

Stick it down with tape at one end of the PVC tube and begin to wind it round, aligning the sides without overlapping them. It is better to have a small gap than an overlap; otherwise you will have to sand it down in order to have a flat surface on which to glue the subsequent layers, if the tube is not perfectly cylindrical. Once you have finished winding the veneer round, glue the end down with the sticky tape. Dilute a bit of craft glue with 20% of water and begin gluing the second layer. Spread the glue on the veneer, stick the end down with the tape at one end of the tube and wind it round in the opposite direction to the layer underneath. Be careful not to create overlaps. Let it dry and use the same process for the third layer. If you try to take it off the support you will see that it is quite solid (although not comparable to aluminium tubes or PVC tubes covered in material) and very light. Three spiral layers and one covering layer are resilient enough for a thickness of little more than 2 millimetres. It is clear that the tube will not withstand squashing but, on the other hand, a wooden tube should not be manhandled. If you want to strengthen it, you can do so by adding other spiral layers. If you want to sand between each layer, you can make little tools which imitate the curve of the tube. Take the leftover part of the PVC tube and cut it lengthways so that you have two half tubes, and then shorten them to about 15 centimetres.

Heat one of the half tubes with a hot air gun until it becomes soft, then place it on the wooden tube, make it stick and wait until it cools. Once it has hardened, take it off and stick the sandpaper on the inside with double-sided tape and use it to remove the small bumps (photo 5).



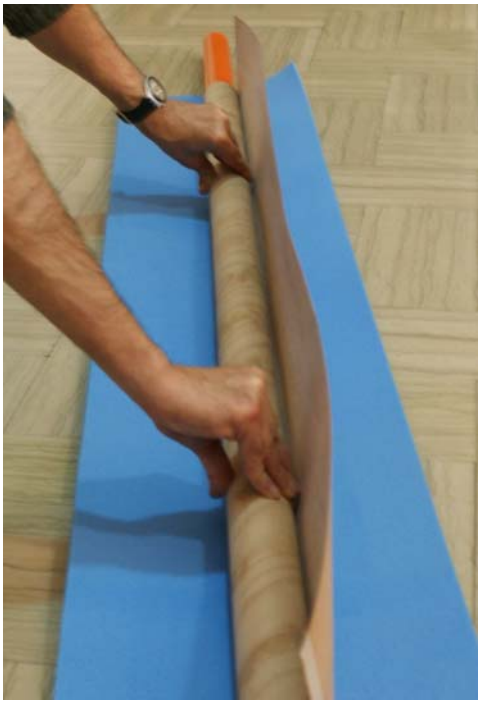
Do not use too hard a grit or press too hard. You can make four of these, one for each type of curve, in order to correct all four layers of wood.

The gluing of the last layer is the most delicate phase because it completes the external, visible part of the tube and so errors are not allowed. If you decide to glue it in a spiral it will be stronger but, in my opinion, less attractive, but this is up to you. For this, you should cut a strip of veneer of about 10 with a cutter. As I mentioned above, it is of fundamental importance that the long sides are perfectly parallel and that the cut is exact so that you have a large rectangle and not a large trapezium. Even if you are one millimetre out, you will have difficulty getting it to stick to your cylindrical tube without overlap or gaps. Glue it in the same way as the previous layers and the gluing phase will be finished. Be careful to remove the excess glue with a damp sponge immediately; if not, once it has dried, you will find it difficult to get it off without ruining the wood.

If, on the other hand, you decide to make it with the fibres parallel to the length of the tube, this is what you need to do. Measure the exact circumference of the wooden tube, then cut the usual strip of veneer calculating the width as the circumference plus 2 millimetres.

This must be done with great care. It is very difficult to glue it all at once and obtain a good result. You need to use a quick drying glue and work a section at a time, using at least four sections. Place the veneer rectangle on the tube so that the long side is parallel to the tube's axis. Try to spread it out well, and stick just the corners down with a few drops of Cyanoacrylate glue (photo 6).

Then, dilute a bit of fast-drying vinyl glue and brush it the whole length of the veneer, creating a strip of about 2/3 centimetres. Clean off the excess glue and lay the tube on the foam mat with the glued section touching the mat (photo 7).



Press down and after 7/8 minutes it will be ready. Spread a layer of glue on another strip of about 4/5 centimetres and then lie it on the mat and press down; remove any air bubbles by turning the tube (photo 8).

The diluted glue will make the veneer damp but if you get the feeling that it could break if you bend it, wet it with the sponge too. Continue like this until you have glued just over three quarters of the veneer. At this point you will need to trim the free edge so that it exactly fits with the glued edge. The extra two millimeters may seem excessive but it is better to sand it down than to have a gap.

When sanding down, do as you think best but remember that the veneer is very fragile. I made a little tool with a very narrow U section (photo 5), the veneer slides between the two wooden sections without bending dangerously. When you have finished sanding down, glue, remove the excess glue, place on the mat and press down. The sealing could also be done by overlapping the two edges, in this case you need to sand a 2 mm strip on both sides to a taper (one in the opposite direction to the other) so that when they overlap there are no bumps. I prefer the first option.

When the glue has dried you can take the support tube out, the sticky tape on the inside can be easily removed by pulling one of the ends.

You can finish off the tube with a coat of diluted wood filler paint and by lightly rubbing wire wool over it or, even better, with wax.

The lids need to be made of wood. It is useful if you have a lathe, but if you do not, do not worry as, in my opinion, you can make simple ones by hand (photo 9).

The wooden tube is now ready (photo 10) for your precious rods.

As I said at the beginning, it is attractive, light and resistant. Good luck with your work.

Antonio Paglia

(translator Heloise Kerr-Wilson)

Brief notes on the action of bamboo rods

Marco O. Giardina

A few months ago, in front of the entrance of Podere Violino in Sansepolcro – an excellent Fishing Lodge, as well as the official IBRA head office – Roberto Pragliola and other gentlemen were sitting engrossed in a conversation on the action of rods.

As soon as I was within hearing distance he asked me abruptly and curtly, as only he can do: "Marco, in your opinion is a rod a lever or a spring?". It was the latest episode of a series of conversations we have had in the last couple of years and unfortunately for me, not often enough: conversing with Roberto Pragliola is, according to me – above all as a bamboo rod builder – very stimulating and it enables one to attract new ideas.

However, the question demanded an answer.

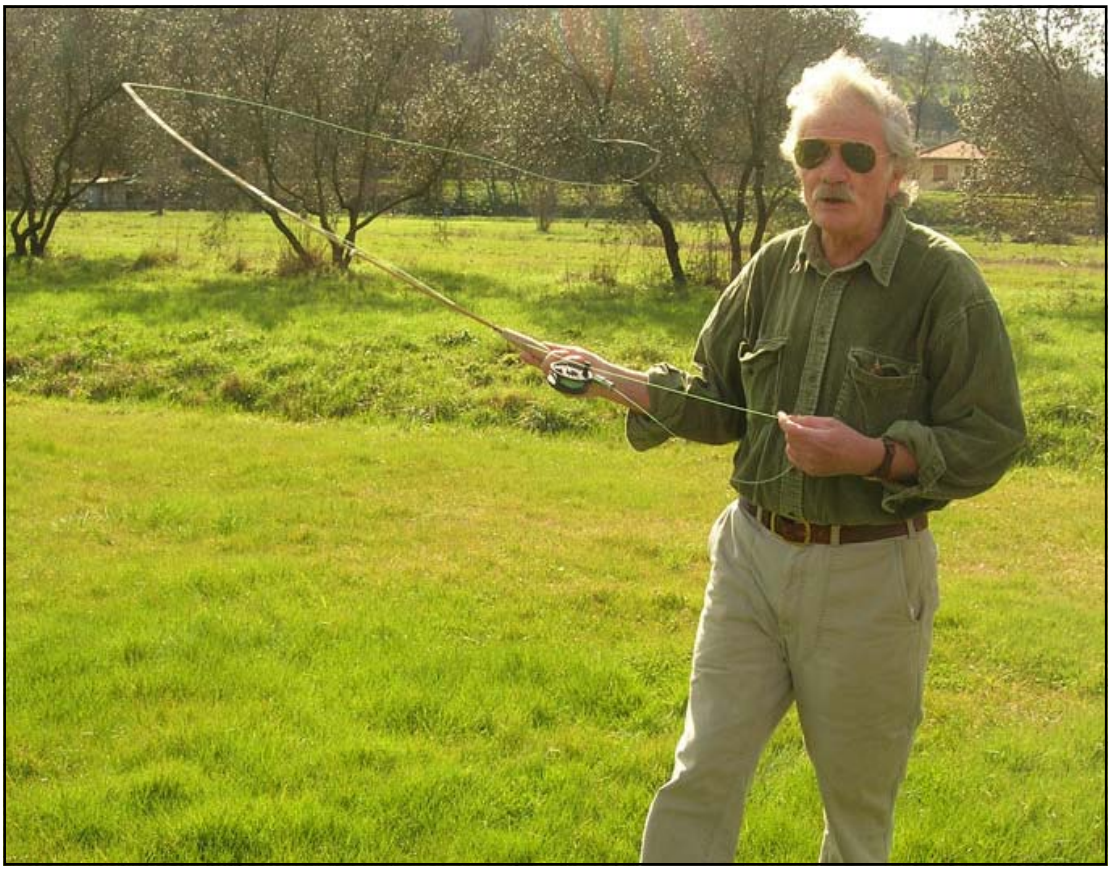
That sort of question asked by Roberto can make your knees buckle and answers like "I don't know....please repeat the question....I was absent the day they had that lesson...."

I blurted out a "...well, Roberto, I think a rod is a springlever!" and obviously Roberto launched me a colourful Tuscan epithet.

A flow of words has been written on the action of rods, a swollen Tiber full.

But Roberto Pragliola's question hid a more complex enquiry.

"What mechanical principle must a rod imply to have the most efficiency in the casting action?"



A simple definition of spring describes the spring as an elastic object used and optimised to accumulate mechanical energy. Energy, which in the case of a rod is produced by the action of the caster. The lever, in short, is a simple machine that transforms the movement.

The system arm/rod represents a third kind of lever and thus, the applied force (power) is between the fulcrum and resistant force. The third type lever is always a disadvantage.

Although, even if it is a disadvantage from a mechanical point of view, the system enables an increase in speed of the tip of the rod – that is the line – on the basis of the principles that regulate the concept of Angular Speed.

In reality, staying on the topic of the rod/lever, the rod itself – that as a lever would be a disadvantage – acquires its functional role as an element of a vector space: the rod is a vector that starts from a point 0,0 (the hand of the caster) and arrives at A (the point of the tip).

The angular action imposed on the Vector/rod, enables one to speed up the movement of the tip by giving the desired speed to the line.

Let's see how the spring action of the rod influences this system.

If the module of the average Angular Speed is defined by the ratio between the angle touched by a rotating Vector and the time it takes to complete the rotation, it is clear that the spring effect will widen the circumference section of the Vector rotation – increasing the Angular Speed – and it will shorten the Vector in its angular movement except for the mid-point and it will prolong the action of the system in time, decreasing the Angular Speed.

I think it is clear how the double combination of the lever/Vector and the spring/Vector are the elements that condition the function of a fly fishing rod.

Change of scene.

These days I have been reading with renewed pleasure the good book by William A. Harms and Tom Whittle "Split & Glued by Vincent E. Marinaro".

I had the pleasure and fortune of meeting Bill during the last WTO – Word Fly Tying Competition organised in 2007 in Sansepolcro by the Fly Fishing Club Alto Tevere.

A true gentlemen – as my mother would say "...like those of the past" – History professor in a college in Pennsylvania, great, famous bamboo rod builder and disciple of Vincent Marinaro.

Bill arrived in Sansepolcro with only one rod, which he had to give to our common friend Alberto Calzolari – bamboo rod addict and excellent tier of Full Dress Salmon Fly –

The Friday before the Gala Dinner the traditional Bamboo only Day was programmed on the Tiber Tail Water.

Bill came to the river accompanied by Gabriele Neri, expert guide and TLT caster, who decided to give Bill one of the IBRA rods in order to save Alberto's rod.

It was most certainly a fast tip rod.

Bill's experience on the river turned out to be an odyssey.

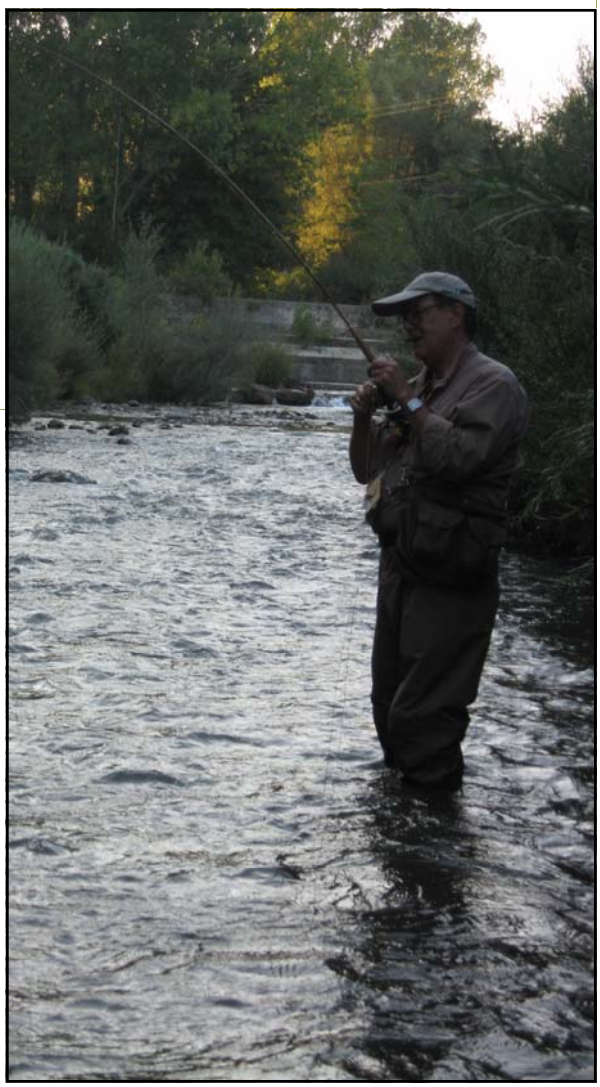
A few months later Harms wrote on the Rodmakers Mailing List a funny – as well as problematic – note on his fishing experience in the Tiber.

I just returned from a trip to Italy where I fished a couple days on the Upper Tevere (Tiber) and the Nera Rivers. The Italian rod-makers are as nutty about their craft as we are over here, but over the past 6 years or so, they've developed a very strange set of taper requirements and a very strange style of casting.

... The Italian rods are usually 7' 6" - 8' and are nearly always for a 3 wt line, but are very strong through the butt sections and very fine through the upper 18 inches. Also, they usually cast 6X tippet material that's easily 5 feet long. To get the job done and turn those leaders over, they power-up their rods just like graphite, and use a strong wrist-snap at the end of the cast.

I tried it on my first day, but the experience nearly killed me. Maybe they've developed the endurance to cast that way over the years, but for me, it seemed perfectly horrible and I thought it defeated the whole purpose in using bamboo. So back I went to my own rod and a 5wt. line. For me, any strength (mass) in a taper that's greater than the minimum required for gentle and comfortable casting is the enemy!

...The need to cast a bamboo rod as if it were graphite is just no damn fun.



This brief note from Bill Harms gave me the confirmation that the casting style – and the equipment used – are essentially a cultural factor, matured in time not only by the necessity for effective/efficiency tied to fishing but also, consequently, to a type of dominion of the technique sector.

In other words, not easy matches like "small streams, short rods, big rivers, long rods" and so on, even though there is also an ideological aspect in the development of fly fishing equipment, tied more to a philosophy of fishing than to the more or less prevailing sensation that fishing gives to the fly fisherman.

There would otherwise not be this great degree of choices that the fisherman makes when selecting the equipment for his passion, independently from the fishing territories, from the tradition of the places and the type of technique he decides to adopt.

Evidently, from this the great diversity of rod actions was born and it can be seen in the development of the bamboo rods and it reverberates even in the action of the graphite rods.

Analyzing the action of a rod was for many decades, until the publication of Everett Garrison by Hoagy B. Carmichael, done using the "blackboard" system.

In other words it was nothing more than drawing the rod's curve on a blackboard, fixing the part of the grip and placing a weight on the tip top.

With this system great rodmakers – from Ritz to Payne, to nowadays – have been able to evaluate, compare and design their rods.

Perhaps was lacking in this methodology is the possibility to predict the action of a rod.

The "blackboard" method tells us how the rod behaves under stress – even on the tip top, ma it is unlikely it can tells how the action will be modified by changing the geometry of the rod.

A step forward was not taken until 1974 with the publication of the fundamental work by Hoagy B. Carmichael "A Master's Guide to Building a Bamboo Fly Rod" that gives voice and substance to the ideas and words of Everett Garrison.

Garrison was an engineer and he pulled rodmaking out of its "intuitive" phase, the phase in which the action of the rod materialized via intuition, work experience and a pinch of luck by often ingenuous artisans.

Garrison transports the study of the rod action to a world that is maybe less poetic, ma definitely technological if not scientific.

The action of the rod is matched to physics, analytical geometry and structural calculations.

Garrison introduces the concept of "Stress" in the construction of the bamboo rod, i.e. the amount of intensity of the internal forces that develop within a deformable body.

Garrison compares the bamboo rod to an elastic beam which is hinged on one end and subject to stress, a weight, on the opposite end. A very common calculation exercise in the Strength of Materials Science.

The Stress concept pulls with it the concept of Elasticity Module: all this enables the definition of a calculation protocol that can better analyze the function of a rod and consequently the design of the rod with less approximation.

Furthermore, the Garrison method – being an analytical method – has allowed the designer to use computer calculation methods and to easily manage the graphic output, useful to "see" the behaviour expected by the calculations.

The Garrison Method obviously observes the behaviour of the rod considering a few – but fundamental – parameters.

Analysing the function of the rod on two dimensions and statistically. Under stress.

In reality the action of the rod involves a great number of parameters in its action (for example the aerodynamic aspects of its movement), it does not move only in a bi-dimensional space but vice versa it has a field of action in a tri-dimensional world and more importantly, it moves in space and time.

Garrison is far from analysing the complexities of such a universe and he could not have done so if only because he was lacking the calculation instruments.

Today the situation is no different: certainly there is the necessary calculation power.

The algorithms that have this calculation capacity can be written.

Perhaps there is no need.

I will try to explain.

The fundamental point of Garrison's method is to give the designer a simple instrument and thus not complete, to determine certain elements relative to the operative control of the design (taper). In other words, by observing the diagram of the stress relative to a taper, I have a visual element which is easy to read and will allow me to predict the action of the rod I have made.

"The map is not the territory"

But without a map we get lost.

The relation Map/Territory describes the relation between an object and the representation of the object,

This concept concerning the distinction between the model and reality was highlighted by Alfred Korzybski in his book 'Science and Sanity" (1933).

However, the model is in many cases the only instrument which can explain and interpret reality and this justifies its utility.

The Garrison Method, is in fact, a model.

Obviously there are critics of the Garrison Method.

First and foremost is Bob Milward with his "Bamboo: Fact, Fiction and Fly rods", now at its second renewed edition.

Briefly, Milward criticises the method because it does not satisfy all the possible elements that concur to the action of the rod, it does not define all the parameters and above all it does not reproduce its complexity so that it can be used for a very detailed design of a taper.

So, still according to Milward, a weak attempt to explain phenomena which Garrison was not able to grasp. Or maybe understand.

It does not concern the topic of this article, so I will not describe Milward's comments on Garrison's heat-treating methods.

According to him a complete failure.

However, without offending Milward, the instrument designed by Garrison is today the only one able to explain simply the behaviour of a rod and it enables the analytical design of new tapers, i.e. the functional modification of existing tapers.

This is proven by the comparison between the theoretical taper designed according to certain criteria to obtain a certain result in terms of action, weight of the line, etc. And the tests carried out by expert casters.

In my personal opinion, one of the best computer instruments to study tapers is the RodDNA software created by the Californian Larry Tusoni. (http://www.highsierrarods.com/roddna.html).

The software has not only included the Bockstrom Method to modify some parameters of the taper, which we can discuss in another article, it has also implemented with extreme precision the Garrison Method which allows the user to control the action parameters, its predictability, the geometric design, the stress diagram and the fundamental aspect of carrying out controlled modifications and designing original tapers.

What is the limit of this type of instrument?

The limit lies in the fact that a minority of rod makers has a precise knowledge of the elements, above all the concept of stress that enables them to use this type of software fruitfully.

Most users of the software have a database of the taper geometries in function of its enormous library of tapers.

Not unlike it in terms of function and inspiring principles is the no less great programme "Web Exrod" written by Frank Stetzer that can be used on-line from his web page (http://www.hexrod.net/).

Hexrod is a substantial advancement derived from the first stress analysis software by Wayne Cattanach in 1994/5 that was based on the stress analysis described in "A Master's Guide to Building a Bamboo Fly Rod".

Using Garrison's analytical instrument, analysing the tapers currently on the web and, fundamentally, analyzing the reactions and comments of expert casters (I would like, at this point, to propose to a panel of casters the Delphi Method to study their sensations), I think we can reasonably group the bamboo rod actions in some "macro groups".

- Tip Action
- Progressive Action "a la Garrison"
- Progressive Action "a la Dickerson"
- Parabolic Action
- English Action

Once this "arbitrary" subdivision in groups has been done according to the action of the bamboo rods, let's try to justify it with detailed definitions.

Let's not forget that these definitions relative to the action refer to the Stress concept and from the point of view of the action of a rod, the value of the stress – measured according to the English literature in Ounces per Square Inch (oz/in^2) it is inversely proportional to the "availability" of the rod to bend under stress. In other words, low stress values will mean parts of the rod which are basically rigid, high stress values will mean segments of the rod more flexible.

All this in relation to the numeric values oz/in^2.

Let's study every single type or action groups – as I like to call them – using some archetypal rods: we will use stress diagrams from RodDNA to analyse them.

Tip Action

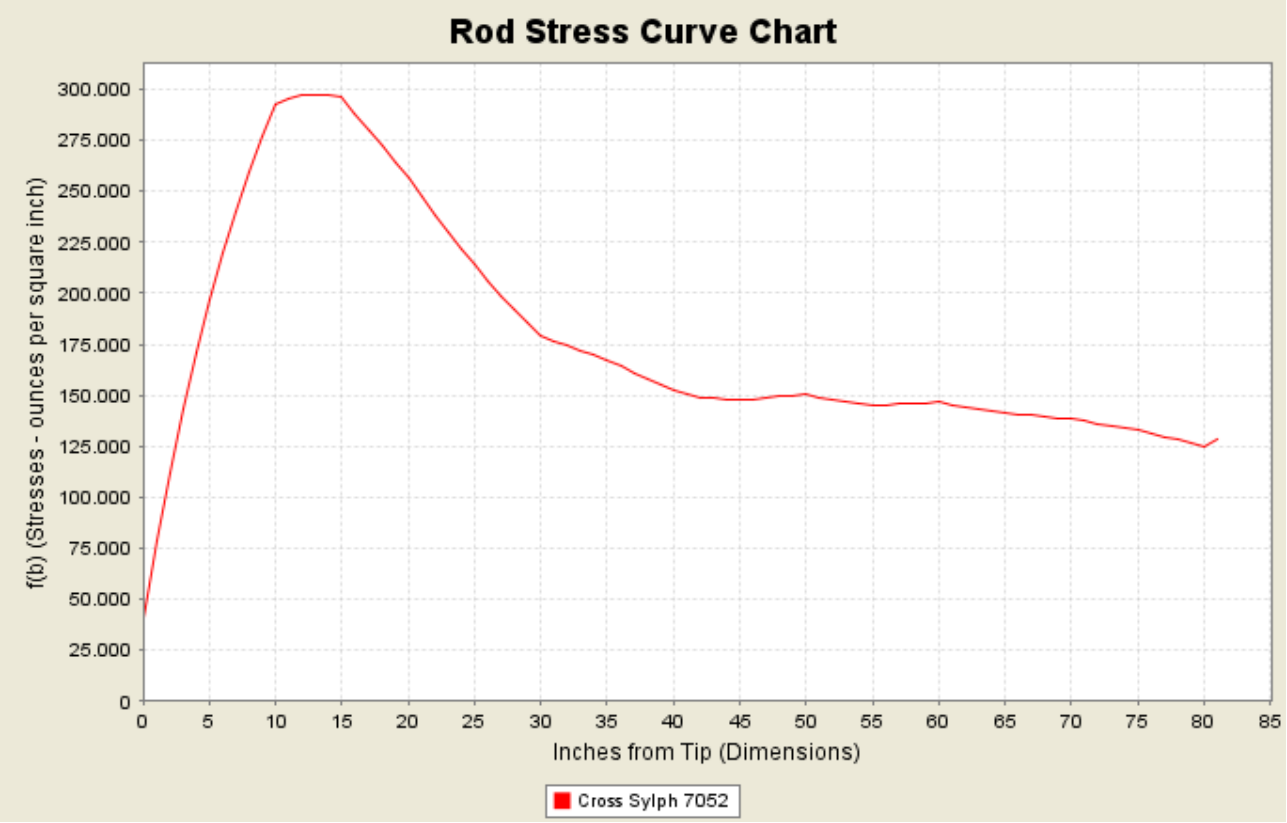
A rod designed in the 20s by Wes Jordan for Cross, for whom he worked before transferring to Orvis as head of the rods department.

It is a rod with a very modern action that debunks the belief that in those years the rods built were only long, heavy and slow.

It is a 7'rod, fast and light for a 5 line.

From the diagram you will notice how the rod has a low stress up to about 40" from the tip top with values that are not more than 150000 oz/in^2, so seemingly rigid and stiff, only to then explode in a space of only 30" at the height of 300000 oz/in^2.

Therefore a rigid rod three quarters of its length and elastic and fast at the tip: or rod with a typical tip action, or as they would say on the other side of the Atlantic, a truly Fast Dry Fly Action.



Progressive Action "a la Garrison"

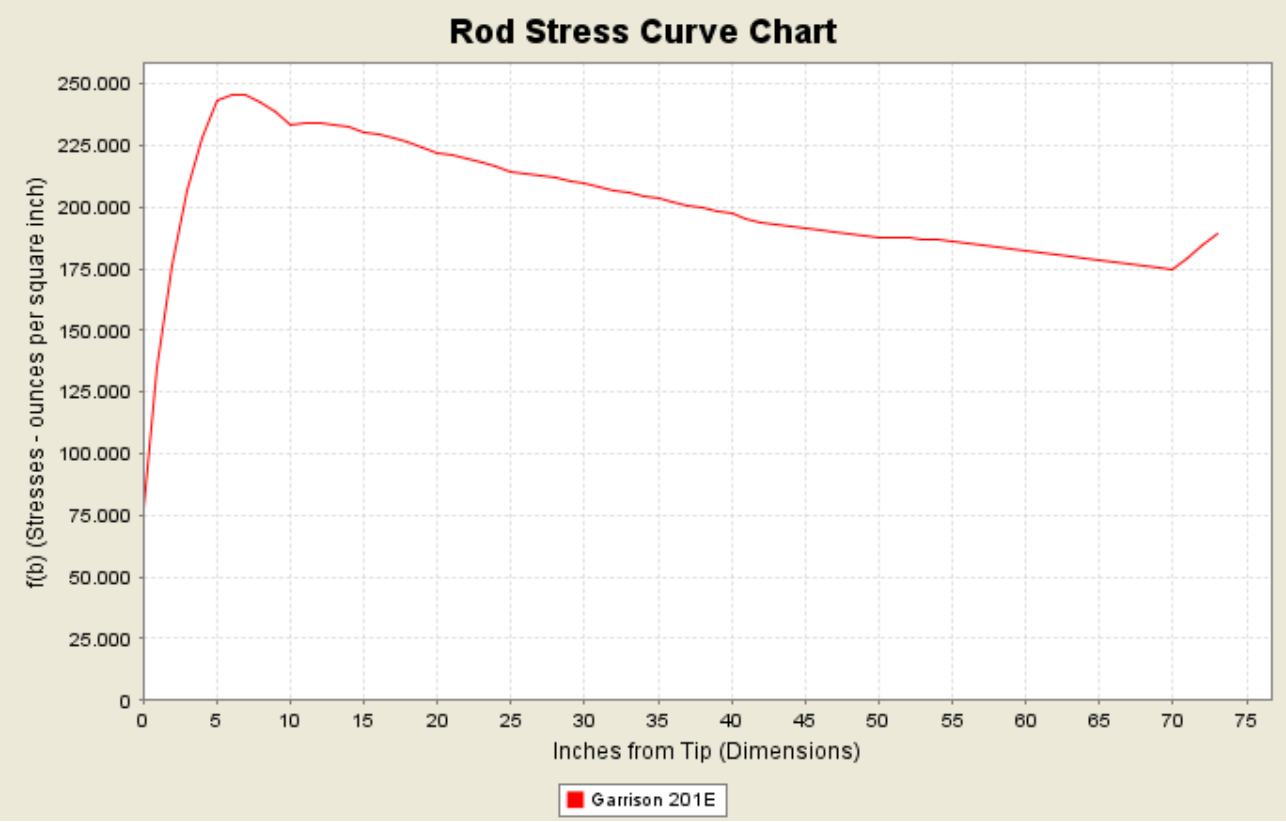
Garrison – who we repeat was the first to study the design of rods with an analytical method and by Stress analysis – believed that the most suitable and usable action in fishing was that of a rod which had a constant stress throughout it.

In this sense a typical model is the 201°.

The taper develops from 157000 oz/in^2 to 197000 oz/in^2 on a length of almost 80' with a low angle and constant of growth. These taper characteristics make it an extremely continuous rod in terms of action – maybe for some "pulpy" but not in the negative sense – pleasant to use in a meditative view of fishing where rush to perform is prohibited.

A rod that from a speed point of view, for its very nature, is among the medium, medium-slow.

It works on the whole length proportionately to the force that the line exerts on it "succumbing" progressively and harmoniously from the top to the grip.



Progressive Action "a la Dickerson"

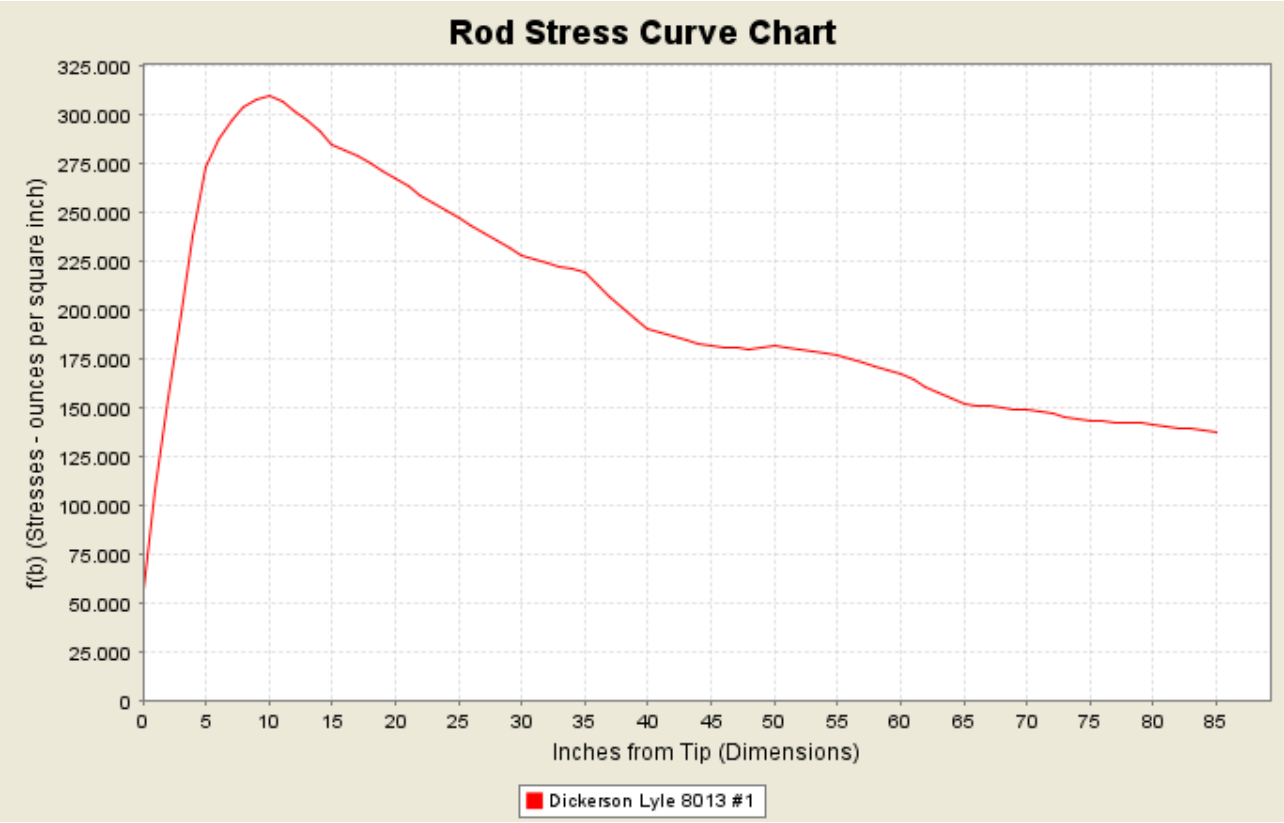
The Dickerson model 8013 is perhaps the best example of the idea of a rod, a rod for all seasons and a wide range of rivers.

The taper is very straight, similar to Garrison's one but with a substantial and relevant difference: the trend of the stress diagram is not practically straight and horizontal like those of the Master of Yonkers but straight and with a very oblique trend. This taper design leads to stress with linear growth from the butt to the tip.

In the 8012 – a two-piece rod for a 5 line – the stress values vary with a constant growth from 138000 oz/in^2 to 310000 oz/in^2 in a space from 90' and 10'.

This condition leads us to have a rod with a fast tip accompanied – unlike the "Tip Action" – by a noteworthy reserve of power due to the structure of the rod that, under stress, is still able to bend elastically and thus manage particularly long casts – with the relative increase of the mass that imposes on the tip top – and, in the fighting phase with the fish, counteracts advantageously with its reserve of distributed elasticity.

It is, in my personal opinion, not only one of the most successful Dickerson rods but one of the best made in its size.



Parabolic Action

To talk about parabolic action rods is like starting to walk on quicksand. You don't know where you will sink.

Let us try to clear the field from uncertainties and misunderstandings. The word Parabolic matched to a fishing rod is tied to the figure of Charles Ritz. I quote from the beautiful website of the Pitocco brothers – great fans of Pezon et Michel http://xoomer.virgilio.it/ppotocco/Pezon%20et%20Michel%20storia.htm - "Initially in partnership with the master of manufacture Edouard Plantet (that in turn had learnt from Garreau, owner of the abovementioned laboratory as primary supplier and then collaborator of P et M), Ritz starts to carefully study and design the profiles. Soon after the partners are joined by Pierre Creusevaut, technical consultant and esteemed tester (he was world champion in casting with a fly rod in all categories).

The collaboration between these three soon brings to the creation of the first marvel; the Parabolic action... the first prototype of a Parabolic rod is an 8' with "normal action..."

It was in 1938.

The diagram used shows the stress of one of the best interpretations of the Parabolic concept, the Young Para 14.

Young, like Paine, was very interested in the concept of a “parabolic” rod after a trip of Ritz to the USA where he had met Garrison.

The diagram shows the logic of these tapers characterised by the maximum stress in the area of the tip and the butt.

The rod in this example is 7’9” long for a 5 line and shows two heights of maximum stress with valued of 200000 oz/in^2 at the beginning of the butt and of 226000 oz/in^2 approx. 10” from the tip top. The point of least stress, 14000 oz/in^2, is at the centre of the rod.

This distribution of the stress diagram generates a rod that can bend elastically from the top even with a relatively small mass imposed on the tip top and so to fish with awareness even at close distances, to have a central resistance under stress and to transfer Energy to the butt, which submitted to a demanding force, starts to react by bending.

At this point, due to its structural nature, the rod is able to take very long lines and to execute long casts with heavy flies.

A type of rod for large rivers and large prey.

The system also exploits the fact that it is the weight itself of the bamboo in its oscillating action that puts the material under stress in the butt area forcing it to bend.

Naturally, this action structure produces a rod with a basically slow action, which defines its own speed and casting rhythm.

This “autonomy” in the casting, typical in rods with a parabolic action, makes them often unpopular to the new generation fishermen.

I hope it is clear from this brief description that the rods with a Parabolic taper have nothing in common with rods that bend with a parabolic curve and even less with the pleasure of fly fishing and with the concept of a parabolic curve in analytical geometry.

Recently someone claimed on an American forum that A truly parabolic rod would be softer in the centre and stiffer in both the butt and tip sections.

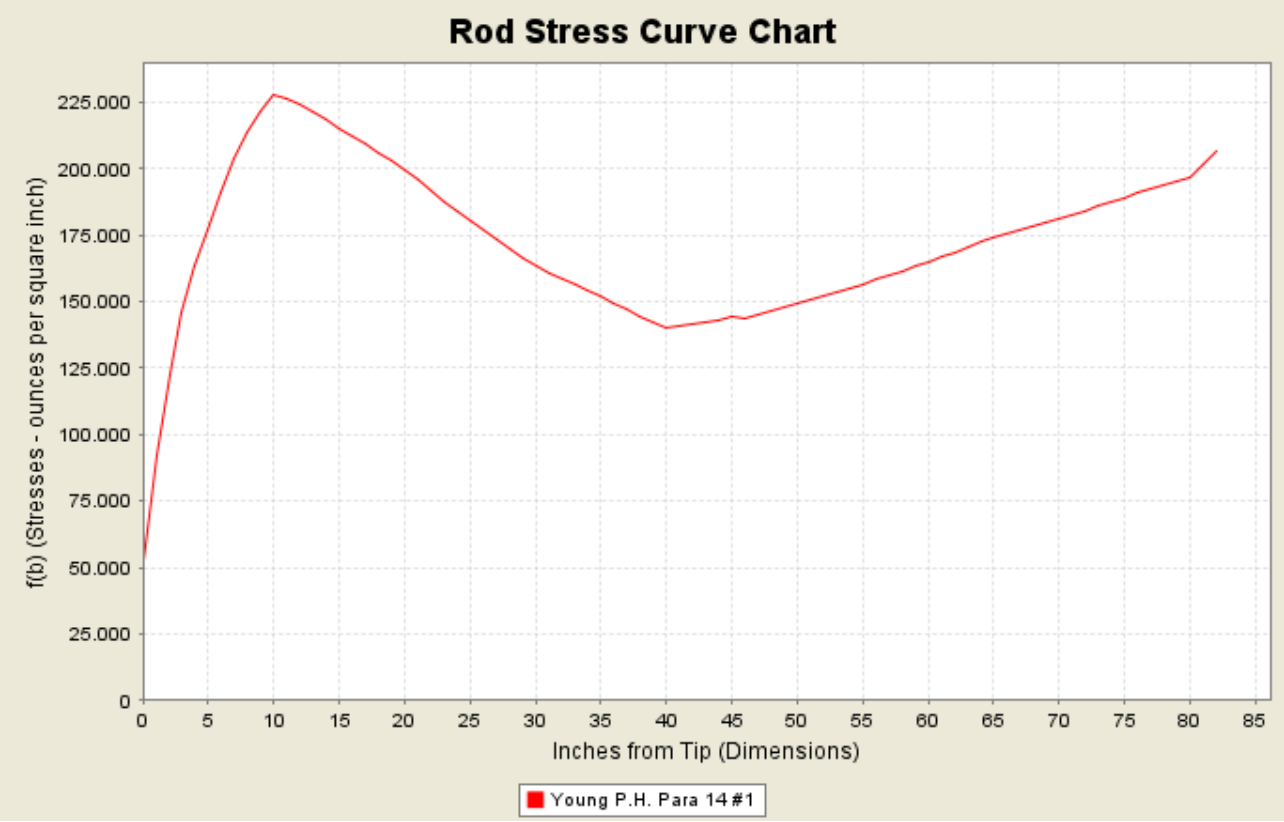
Nothing could be further from the truth.

This definition is perfect instead to describe the rods with English Action, which we will discuss later.

Certainly added to the general confusion on the concept of Parabolic Rod – which I hope is now a little clearer – there is an open debate on who was the first to use and speak about this term. Our American friends back Jim Payne, while on this side of the ocean we give merit to Ritz for inventing the name and the action of the rod.

I would like to add another witness – an important one, considering the authors – from an article in the American Sporting Collectors Handbook ed.1981 written by Len Codella and Ernest Schwiebert with the title “Collecting Split Cane Rods”: “The Parabolic Payne rods evolved from designs developed in France by Charles Ritz...”

However I feel it is not a very important discussion, even if Ritz was the first in 1937 and the others followed!



English Action

Rods with the maximum stress at the centre of the rod.

This conformation, soft at the centre and more rigid in the tip and butt areas is described well in the stress diagram of a Hardy Taupo, a three-piece rod, long and heavy, 10' for a 7 line, suitable for fishing in the British Dominions and specifically designed for the waters of New Zealand.

An extremely slow rod and certainly heavy, with the maximum stress concentrated in the central section, a heavy tip and a robust butt that cause the rod – this time definitely – to bend hard at the centre of the action.

The stress values are on average 165000 oz/in^2 for the mid, 130000 oz/in^2 for the butt and 125000 oz/in^2 for the tip.

It is not a coincidence that these rods have lead the English to adopt the casting style with a book under their arm and an immobility imposed by the action of the shoulder and upper arm.

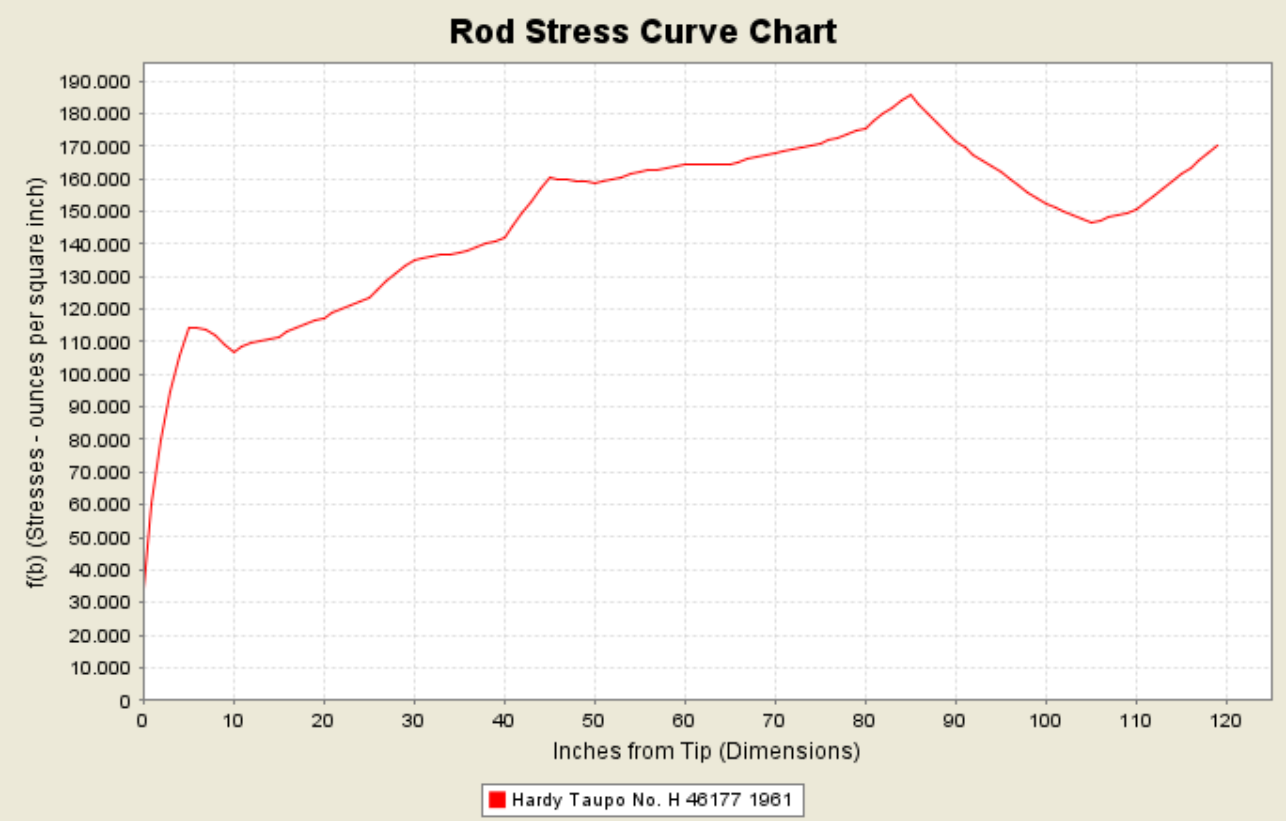
Recently, during the SIM Fly Fishing Festival in Castel di Sangro I took, for curiosity's sake, a 9'6" Hardy Houghton from the 20s that we as usual tried in front of the Maddalena Convent.

Slow and heavy.

After a few casts with "modern" arm movements, waving them about and moving the shoulder/upper arm group, I started feeling the stiffness in the shoulder and arm.

I started casting with the Old English Style, more for curiosity than anything else and magically the stiffness and effort vanished. An angular movement of the forearm concentrated only on the fold of the elbow and all the weight of the rod was released in line with the upper arm/shoulder group, that not moving was not tired.

In fact the movement of the rod was created by a small rotation angle followed by a rotation of the wrist and the whole is enhanced by the action of the rod that has a slow sway in its centre.



Heavy Plodding rod Action

A personal neologism. A perfect example of what I mean by "Heavy Plodding Rod" action rods – contrary to light stepping rods – is the Brampton Walker "Joe Frost" Tonga.

But it is certainly not the only one with this type of action. There are many examples among the rods that predate WWII, not only in Great Britain but also in the USA and even Germany.

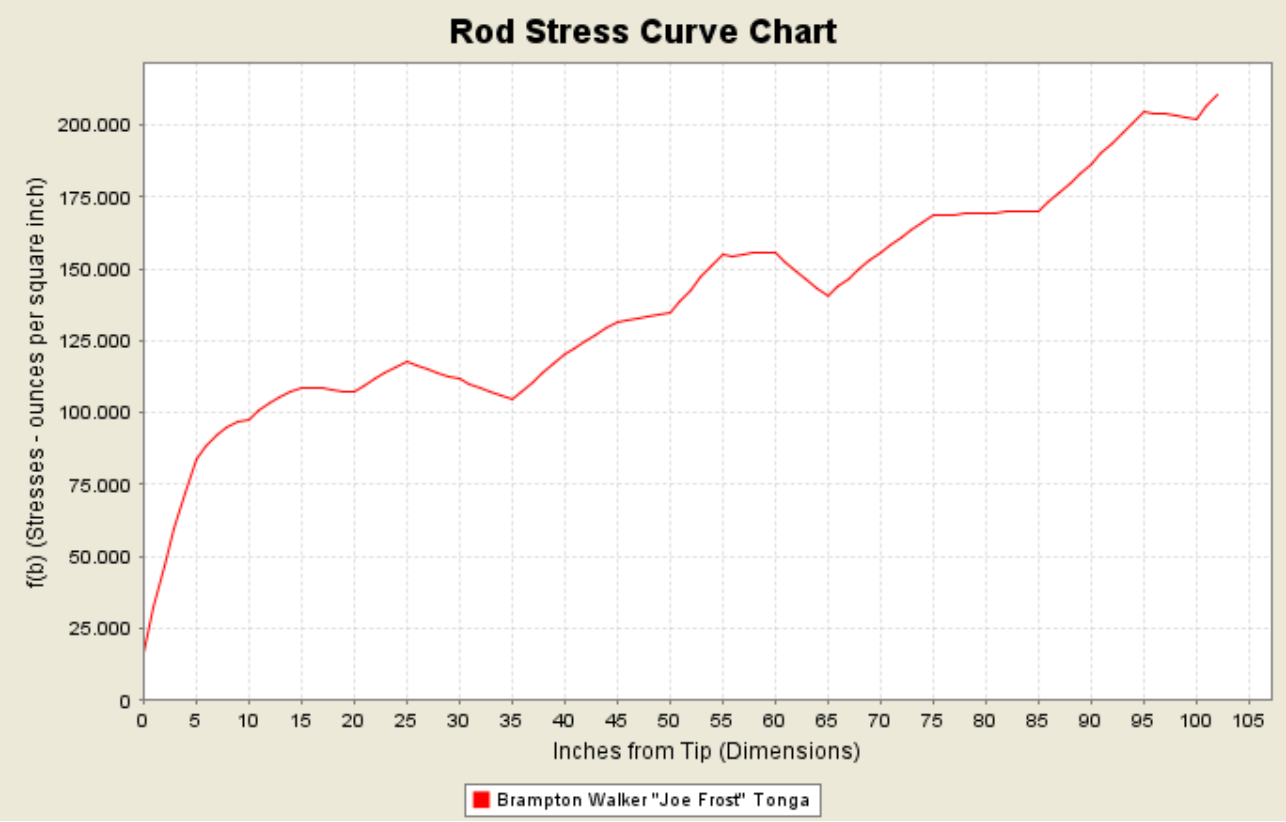
Today too there are some modern rods with this action.

Usually long, heavy rods with a lot of wood in the last 2/3 of the blank. A stress less than 100000 oz/in^2 at 5" from the tip top that becomes about 200000 oz/in^2 in front of the handle.

It looks like a reversed Dickerson taper.

The whole movement of the rod is controlled by the weight of the rod – a lot more than the English action – that moves hinged to the very high stress value (possibility to bend) of the butt.

A true torment in the cast.



All that has been described so far determines the action of the rod in part also determines the speed. The action is the function of the taper, of the "design" that was chosen for a certain rod and the speed that one wants in a certain rod – in other words the number oscillations that the rod can execute in a given unit of time – is also the function of the "design". But not in a way disconnected from some limits inherent in the type of Taper.

One of the classic ways to make a rod faster – fast, but not necessarily more pleasant – is to stiffen the heel bringing it more on the Lever side. But this is possible only for tapers with a tip action or "a la Dickerson" that for their nature are suitable for speed via this type of modification. In a small way it can also be done for a parabolic action, but actually there is a passage from the parabolic action towards a progressive action. This is what occurred to many rods defined "Semi-Parabolic", where the curve stress was modified by shifting it towards a progressive curve.

Actually the Parabolic rods – as obviously the rods built with an English action, not to mention the heavy plodding rods – are by their intrinsic design "Springs".

The same thing must be said for the rods built with the "a la Garrison" tapers. Firstly speed cannot be gained by modifying the angle of the X axis; this would bring the rod action from linear progressive to progressive with linear growth proceeding from the butt to the tip (Dickerson). Also inherent to this type of taper is Garrison's desire to see the taper as a hinged elastic structure at one point, thus an elastic structure, so more on the spring side than on the lever side.

Spring/lever. I don't think that in rod there can be a marked dichotomy. A fly fishing rod embraces both concepts. A "Springlever". Of course, according to the taper and the constructive scope we started with, there will be preponderance, more or less defined, of the lever or vice versa of the spring.

I think that one of the best fly fishing magazine – if not the best – was the Art of Angling Journal, founded and directed by Paul Schmookler and Ingrid Sils from 2003 to 2005.

Unfortunately after 9 issues the magazine closed down for various reasons, leaving an empty space. The articles of the magazine – even if the crucial point was "full dress" salmon flies – varied across the whole fly fishing world. A large space was dedicated to bamboo rods and prestigious rodmakers: Bill Harms, Rolf Baginski, Jeff Wagner, and Darryl Whitehead to quote a few.

I must say it would definitely be worth it to write an article on the events and the memories of this magazine five years from its disappearance.

But that is not what I wanted to discuss. In volume 3 Issue 1, there is an article dedicated to the House of Hardy written by Craig Shreeve, which concentrated on the figure of James Hardy, the last Hardy to work in the company. By the way, Jim Hardy is the main character of the documentary film "The Lost World of Mr. Hardy", produced by Trufflepig Films. A wonderful film that is well worth buying and watching. Some trailers can be seen on their website http://www.trufflepigfilms.com/home.html.

Well, in the article there is a photo of Jim Hardy at the head of a table at the Cook & Barker Inn in Alnwick, where Hardy is situated. Mr. Hardy is seen gesticulating, miming a cast action and the caption reads "*Here he demonstrates the Italian's casting stroke...quick, ...quick, ...quick...but the Norwegians are slow, slow, slow... with most other nations fitting somewhere between*"

I suppose James Hardy must have met Roberto Pragliola!

And we have come full circle. Bill Harms tells his dramatic experience with rods built for the "Italian casting stroke"; Jim Hardy proposes the Italian style as a technical marker, without criticism or disapproval. The point is that one casts according to one's predisposition, to how one was taught, to what one feels is better for the fishing situation. There are no "good" or "bad" casts. There could be – for casters – a pleasant or unpleasant cast.

In fact the rod is the instrument that accompanies this choice and the bamboo rod could certainly be the instrument built on the fisherman's choice, suitable for his demands and his cultural, style and technique latitudes that must be in the pleasure of fly fishing.

The pleasure of fly fishing

COMPARISON OF THE FERRULES

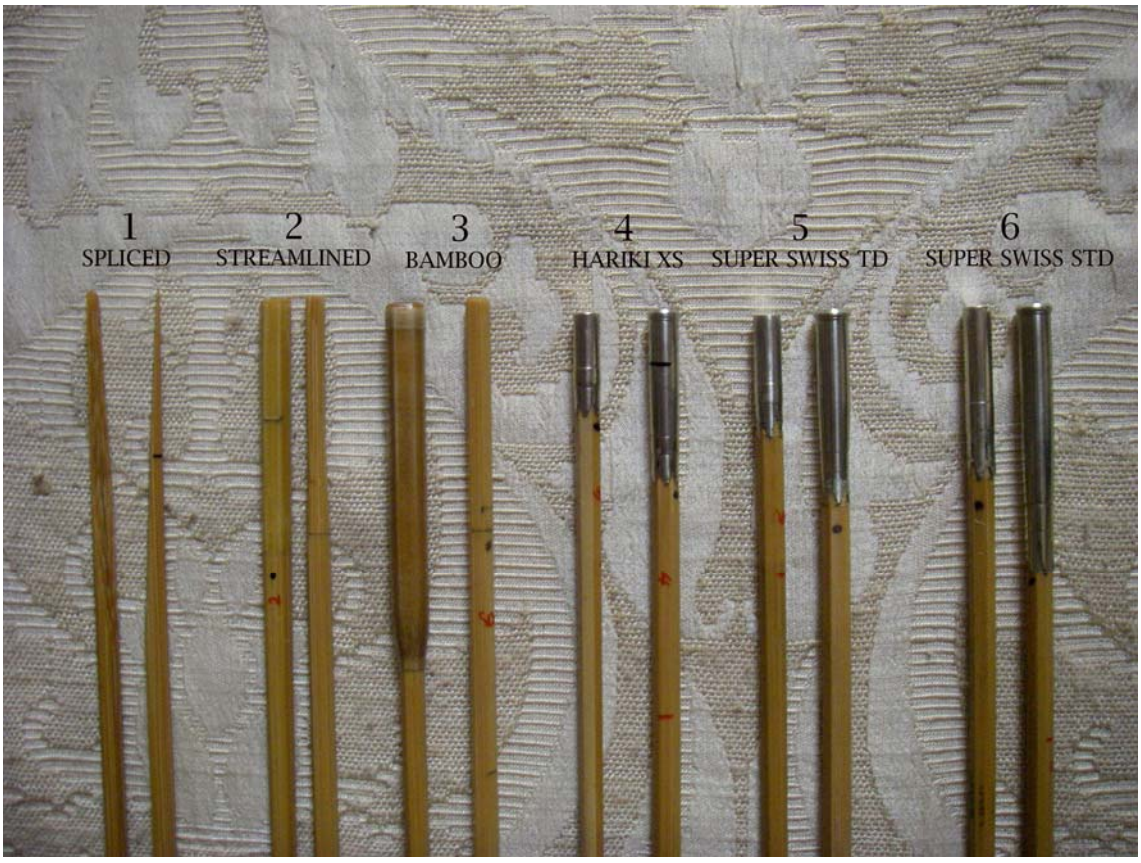
BY GABRIELE GORI

The ferrule has a rather important role in the design of the rod.

Leaving aside the aesthetic aspects, which have a primary importance in my rodmaking way of thinking, the ferrule, with its geometrical characteristics and the type of material, plays a definite role in the behaviour of the rod.

Naturally this study is not comprehensive but it was born from the necessity to evaluate how the different types of ferrule can influence the action of the rod.

The idea is this: 6 rods equipped with various types of ferrule are compared in terms of speed and the deformation under dynamic action.



In theory the rods should be identical in size, materials, glues and tempering.

The first decision was to eliminate all that wasn't strictly necessary for the test: no rings, no wrappings, no grips or reel seats, no varnish:

Thus all the possible variables are removed.

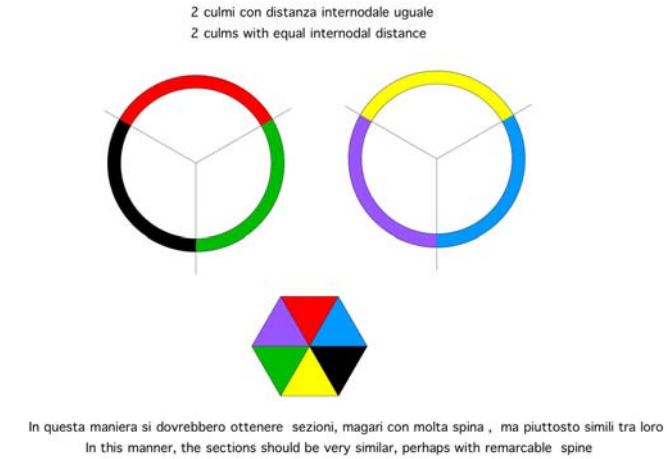
The taper must be accurate to minimize inevitable differences.

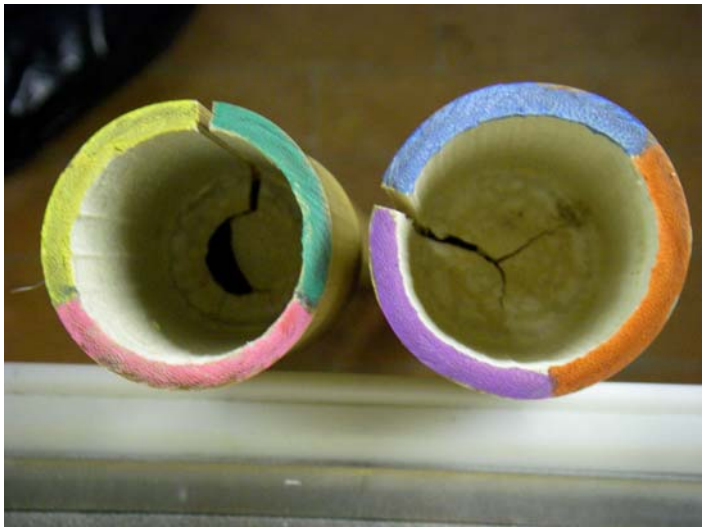
There is little to do on the bamboo, so I feel it is a lost cause at the start: even in the strips from the same culm there are marked variations in the mechanical characteristics.

In our effort to reduce the effects of inevitable non homogenous material we proceeded as follows:

We chose two culms with equal internodal distance from the same stock of bamboo,

And the strips from one culm and the other were assembled as follows:





The rest is easier to uniform:
Constructive Characteristics
Progressive type taper (Garrison type) 7" two pieces
Full hexagonal construction
staggering 3x3
tempering : Garrison type
Uhu 300 plus glue without heat treatment
Ferrule 13/64
The work group
The work was divided among the various IBRA member rodmakers that took part in the project:
Making of the strips,
node treatment,
levelling
and tempering Gabriele Gori
1-Spliced Luciano Oltolini
2-Streamlined Alberto Poratelli
3-Bamboo added on Massimo Giuliani
4-Harichi XS Marco O. Giardina
5-Super Swiss Truncated Walter Rumi
6-Super Swiss Standard Moreno Borriero
Measuring the rods
Once the rods were finished they were measured and in the chart below there are the averages of the three "diameters"
In the last column there is the taper as an average of the values from the six rods.

1	2	3	4	5	6	average
spliced	stream lined	bamboo rip	Hariki	TD	STD	
1,550	1,633	1,677	1,673	1,703	1,697	1,656
2,213	2,163	2,280	2,213	2,217	2,257	2,224
2,703	2,757	2,820	2,727	2,827	2,763	2,766
3,190	3,193	3,267	3,150	3,240	3,267	3,218
3,573	3,573	3,670	3,570	3,663	3,647	3,616
3,950	3,923	4,037	3,863	4,010	3,943	3,954
4,237	4,247	4,330	4,193	4,303	4,247	4,259
4,550	4,677	4,660	4,503	4,650	4,647	4,614
4,860	5,773	0,000	4,733	4,887	4,887	4,842
5,223	5,167	5,323	5,357	5,323	5,200	5,266
5,640	5,577	5,693	5,577	5,697	5,620	5,634
5,917	5,890	6,017	5,953	6,027	5,870	5,946
6,200	6,273	6,290	6,337	6,277	6,187	6,261
6,533	6,507	6,647	6,557	6,487	6,550	6,547
6,873	6,873	6,950	6,870	6,803	6,897	6,878
7,150	7,040	7,240	7,177	7,160	7,120	7,148

Then the difference was evaluated :

avera-	Difference from the average											
	1		2		3		4		5		6	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
1,656	-0,11	-0,004	-0,02	-0,001	0,02	0,001	0,02	0,001	0,05	0,002	0,04	0,002
2,224	-0,01	0,000	-0,06	-0,002	0,06	0,002	-0,01	0,000	-0,01	0,000	0,03	0,001
2,766	-0,06	-0,002	-0,01	0,000	0,05	0,002	-0,04	-0,002	0,06	0,002	0,00	0,000
3,218	-0,03	-0,001	-0,02	-0,001	0,05	0,002	-0,07	-0,003	0,02	0,001	0,05	0,002
3,616	-0,04	-0,002	-0,04	-0,002	0,05	0,002	-0,05	-0,002	0,05	0,002	0,03	0,001
3,954	0,00	0,000	-0,03	-0,001	0,08	0,003	-0,09	-0,004	0,06	0,002	-0,01	0,000
4,259	-0,02	-0,001	-0,01	-0,001	0,07	0,003	-0,07	-0,003	0,04	0,002	-0,01	-0,001
4,614	-0,06	-0,003	0,06	0,002	0,05	0,002	-0,11	-0,004	0,04	0,001	0,03	0,001
4,842	0,02	0,001	0,93	0,037	0,00	0,000	-0,11	-0,004	0,04	0,002	0,04	0,002
5,266	-0,04	-0,002	-0,10	-0,004	0,06	0,002	0,09	0,004	0,06	0,002	-0,07	-0,003
5,634	0,01	0,000	-0,06	-0,002	0,06	0,002	-0,06	-0,002	0,06	0,002	-0,01	-0,001
5,946	-0,03	-0,001	-0,06	-0,002	0,07	0,003	0,01	0,000	0,08	0,003	-0,08	-0,003
6,261	-0,06	-0,002	0,01	0,001	0,03	0,001	0,08	0,003	0,02	0,001	-0,07	-0,003
6,547	-0,01	-0,001	-0,04	-0,002	0,10	0,004	0,01	0,000	-0,06	-0,002	0,00	0,000
6,878	0,00	0,000	0,00	0,000	0,07	0,003	-0,01	0,000	-0,07	-0,003	0,02	0,001
7,148	0,00	0,000	-0,11	-0,004	0,09	0,004	0,03	0,001	0,01	0,000	-0,03	-0,001

Weight of the rods

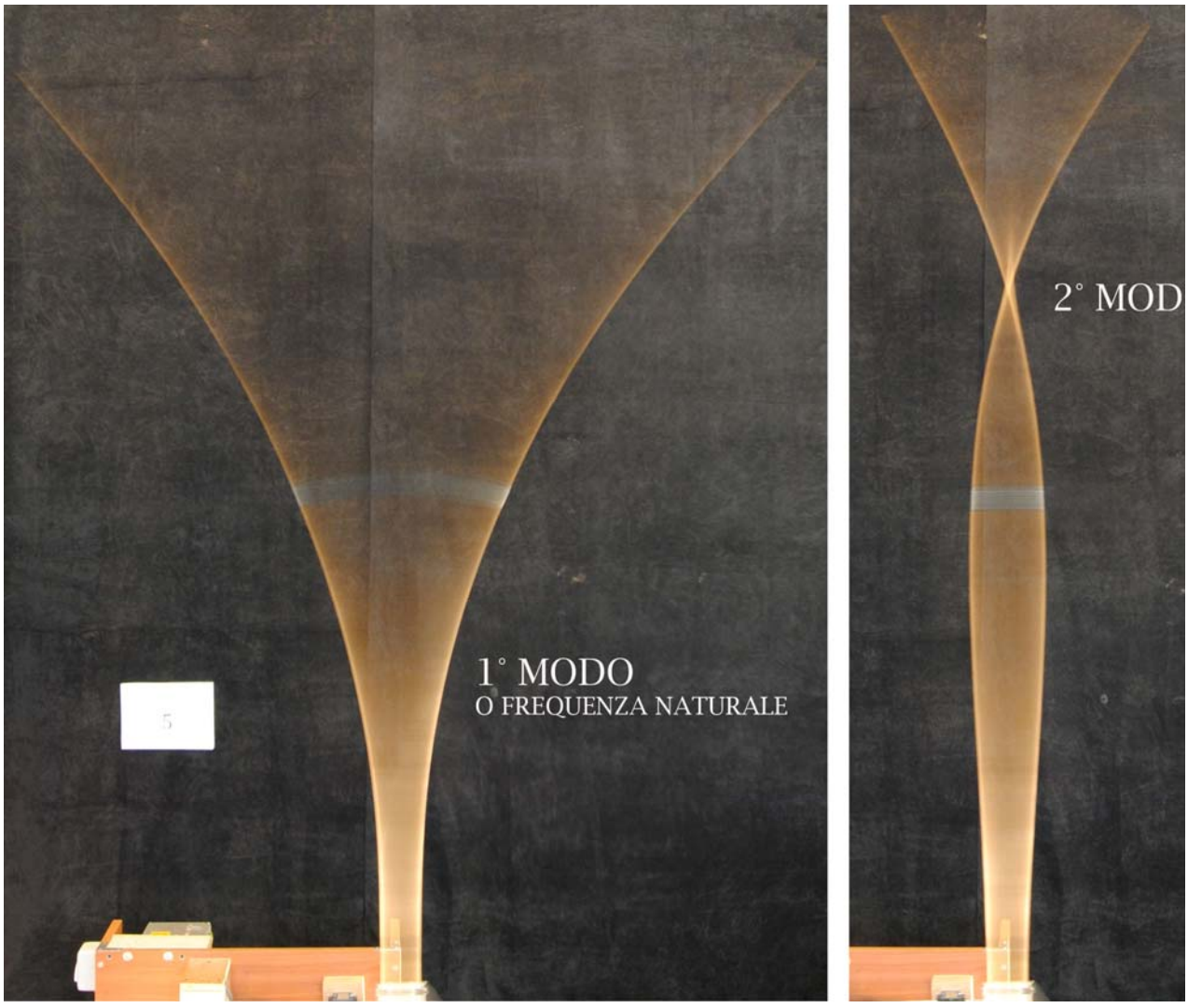
WEIGHT RODS AND FERRULES

nr	Ferrule type	Ferrule weight — gr	gross weight rough gr	bamboo weight—gr
1	Spliced	0,60	58,60	58,00
2	Streamlined	1,30	61,50	60,20
3	Bamboo rip.	3,40	64,20	60,80
4	Hariki	3,90	64,10	60,20
5	Super Swiss td	5,30	66,00	60,70
6	Super Swiss std	7,40	66,40	59,00

To evaluate the natural frequency of the rods (first way of vibrating) we used a machine with an electric motor equipped with an inverter that uses a handle to give a back and forth linear movement on a steel bar fitted on a ball recycling guide, with a support to fix the rod on the free end: the movement is fluid and constant at the various speeds.

The rods were fixed one at a time to the support according to the spine.

The natural frequency was determined to be the maximum width reached before starting the temporary regime that precedes the second way of vibrating.



first and second way of vibrating

The results are the following:

NATURAL FREQUENCIES

nr	Ferrule type	Freq. 1° wai	Fastest speed compared to the standard
1	Spliced	156,00	7,88%
2	Streamlined	156,50	8,23%
3	Bamboo rip.	155,20	7,33%
4	Hariki Xs	151,80	4,98%
5	Super Swiss td	150,00	3,73%
6	Super Swiss std	144,60	0,00%

Comments

The results were coherent with the expectations.

The standard ferrule mass makes the nr. 6 rod slower than the others and its natural frequency deforms more than the others.

The rods turned out to be faster as the weight of the ferrules decreased.

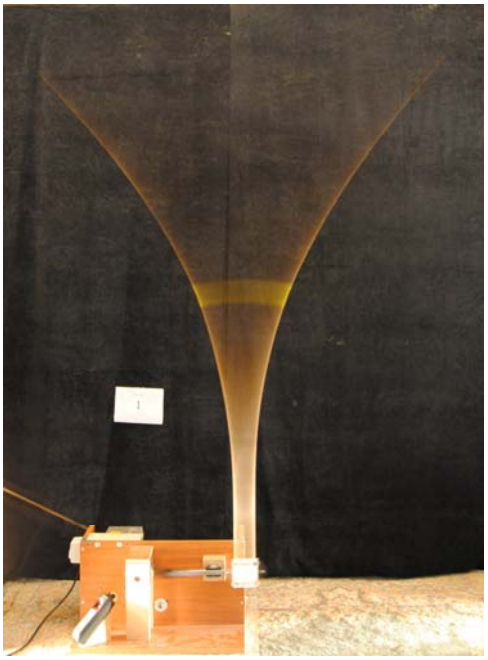
The bamboo ferrules add about 8% of speed to a rod compared to the same rod mounted with the standard nickel silver ferrules.

The only anomaly was that the streamlined was a little faster than the spliced that also has a lighter ferrule (adhesive strip). We will come back to this point which was explained by Per Brandin during the 6th Italian gathering.

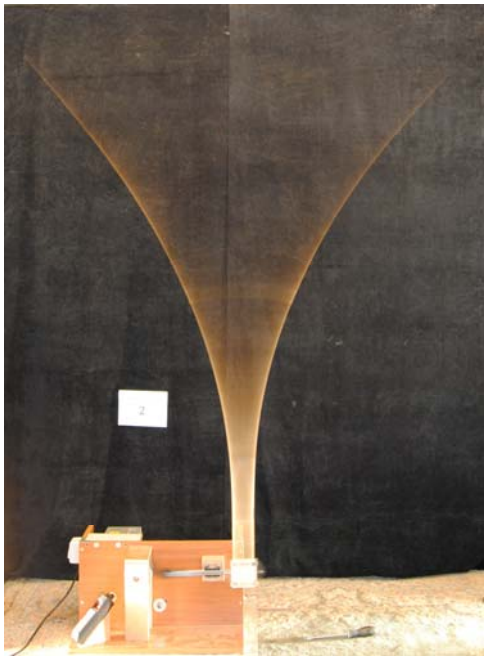
Deformation of the rods

Photos were taken during the measuring of the natural to observe.

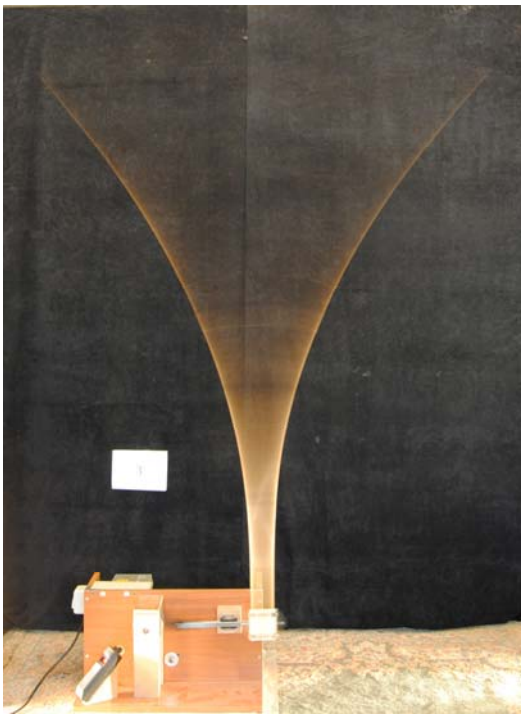
Here are the photos



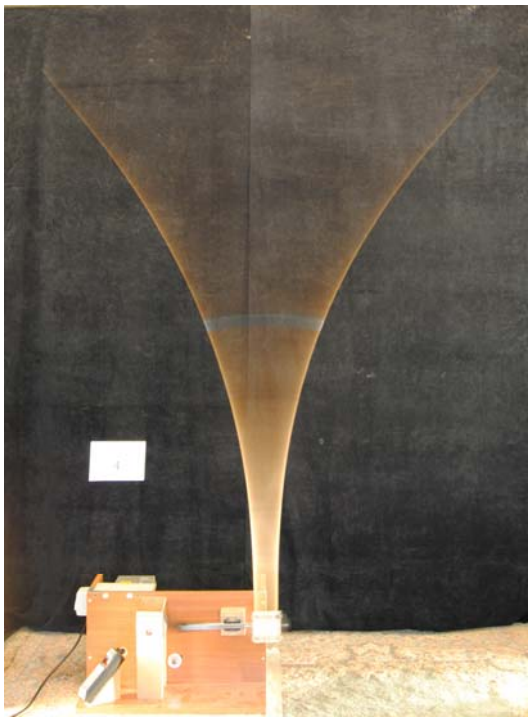
Spliced



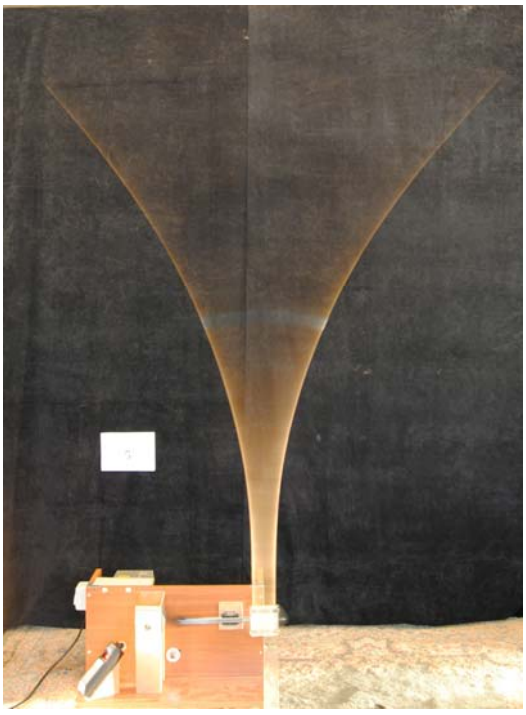
Streamlined



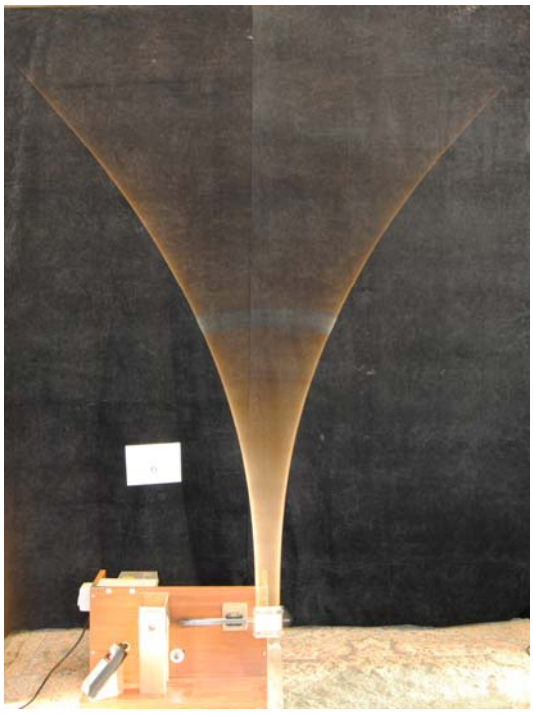
added on bamboo ferrule



Hariki xs



Super Swiss Truncated

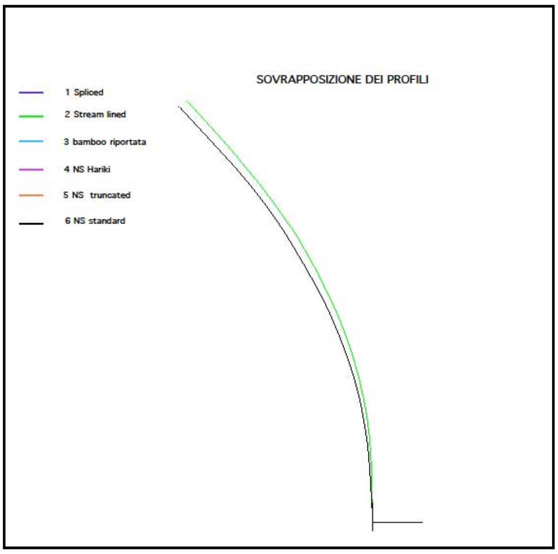


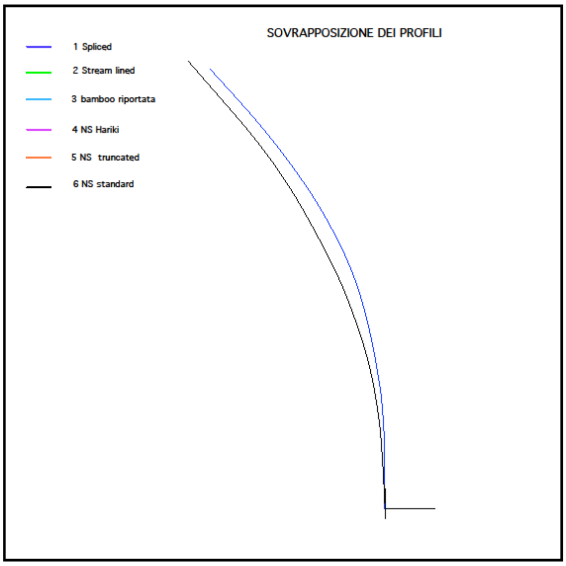
Super Swiss Standard

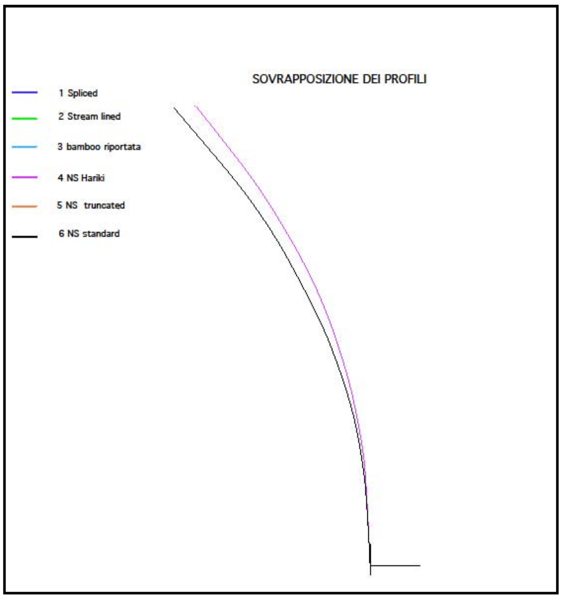
Then for every rod we traced a profile that would show the deformation of the rod at its natural frequency.

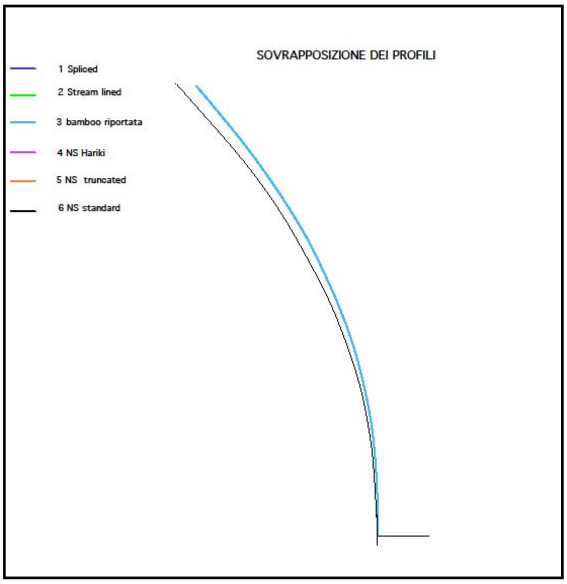
Once we had the profiles of the rods, we can compare them to evaluate how they deform in relation the various types of ferrule.

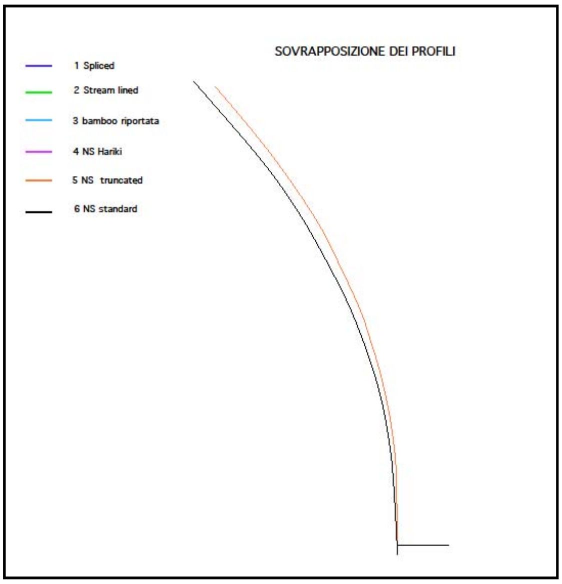
The following are a series of images that compare rod 6 with each of the other rods.











The results confirmed what was to be expected: a larger the oscillation means a slower action and we confirm that the standard ferrule is the one that produces a slower action with wider oscillations.

The speed increases and the deformation reduces as the mass of the ferrule gets smaller.

There is still the anomaly of the spliced ferrule which should be the fastest one and also have less oscillations since the ferrule has a reduced mass.

This study was presented during the 6th Italian Bamboo Rodmakers' gathering in May 2010.

Per Brandin, our special guest at the gathering explained that contrarily to the one we experimented with, spliced ferrules usually have a thickening in correspondence to the connection to compensate for lesser rigidity, and this is probably caused by the impossibility to totally prevent the reciprocal sliding that takes place between the two splines.

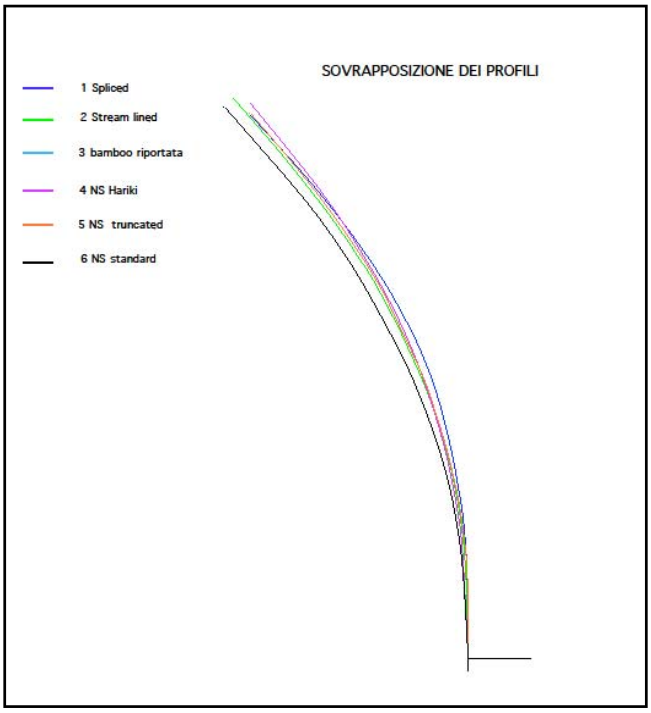
This aspect was unknown to me since I have never made spliced rods.

In fact, if we examine the profile of the spliced rod, you can note that there is a weak spot corresponding to the ferrule i.e. in that position the deformation shows a "peak" given by a greater radius in the curve. If we examine the graph with the profiles, we see that the butt is displaced completely to the right until the ferrule, then after the pea in the curve" the rest of the graph coincides with the rest of the rods. If we imagine that we eliminate this peak, the tip part would also move to the right and in this case it would be the one with least amplitude of all the rods tested.

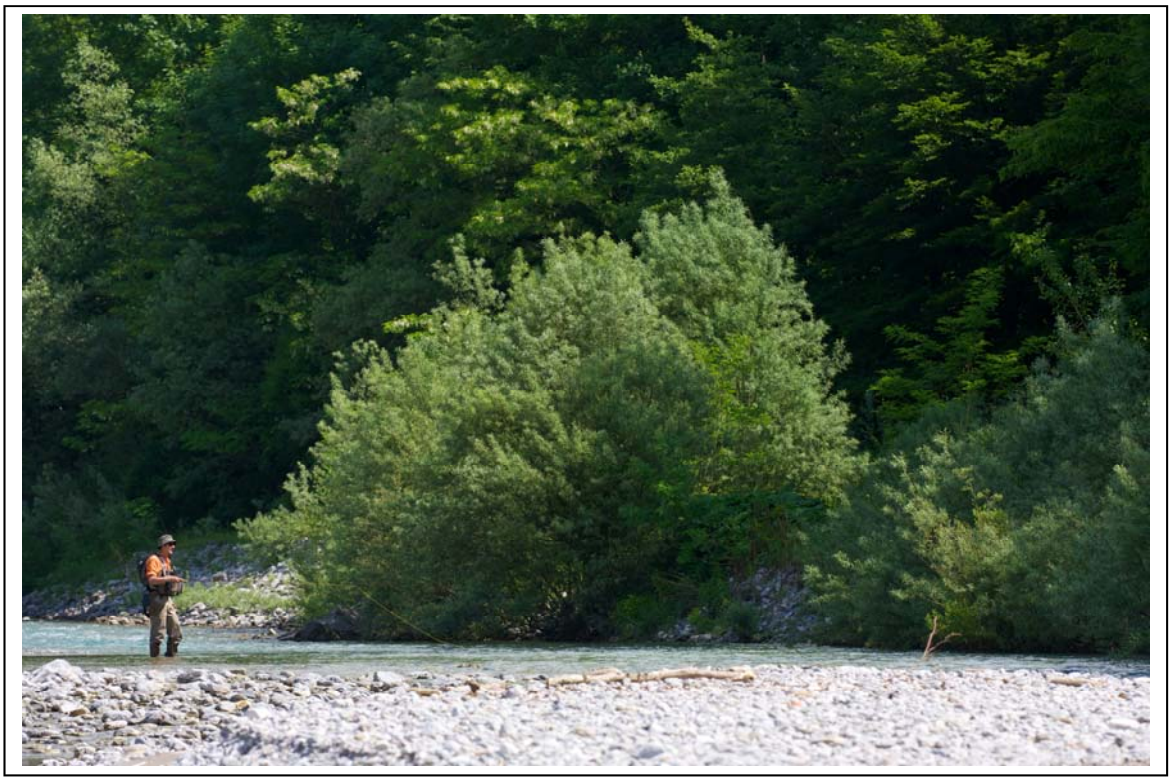
I therefore thank Per Brandin for his contribution which helped me to understand an aspect that otherwise would have remained unsolved.

Finally I would like to thank the IBRA members who diligently and passionately collaborated in this study: Moreno Borriero, Marco Giardina, Massimo Giuliani, Luciano Oltolini, Alberto Poratelli, Walter Rumi.

Gabriele Gori



The following is the graph of the al 6 rods together.



THE BAMBOO FERRULES

By Alberto Poratelli

Chapter 3

Designing a "Streamlined" bamboo ferrule

In this chapter we will discuss "Streamlined" Ferrules.

This type of ferrule was devised by me and Gabriele Gori in order to make the connection as small as possible and which would be made exclusively in bamboo and that above all would guarantee strength and resistance.

When I made it for the first time in 2008 and after its presentation, it drew a lot of interest from the rodmaking community and in these three years many have tried their hand at it.

I received many opinions from rodmakers al lover the world but in particolar I was pleased with the one by Bjarne Fries – Inventor of the Bamboo Ferrule.

This is what Bjarne Fries, wrote:

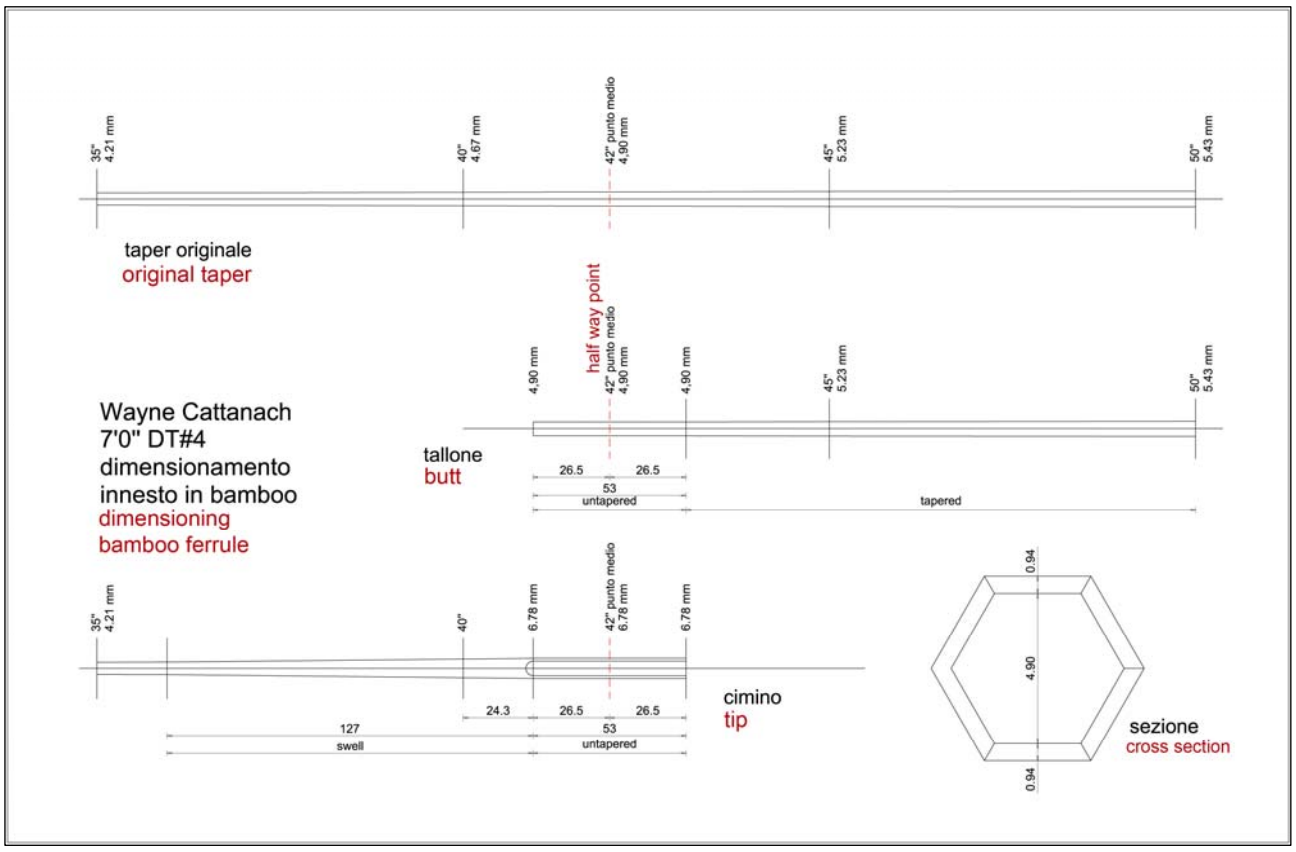
"Alberto, congratulation on your clever idea!! I think you really made a very nice improvement of the Bamboo ferrule, and I look forward to hear about the results of the testing of this pleasing design."

Much has been said about bamboo ferule and so I will not discuss why they have this shape nore how they are made as we have discussed this amply in previous occasions. In this article I will discuss how to design them.

In practice: "What must be done if we want to design a streamlined ferrule?"

In order to design a streamlined, you must start from the design of a "normal" bamboo ferrule and proceed in transforming it.

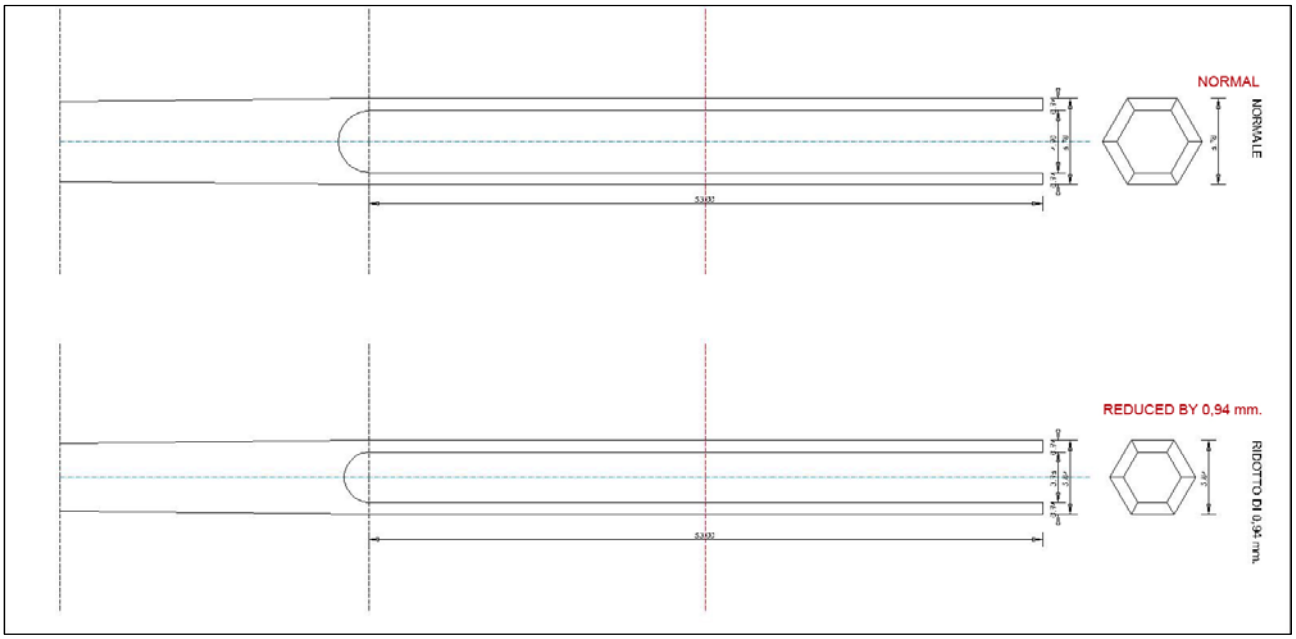
As an example let's examine the ferrule designed in Chapter 2 (Bamboo Journal N. 4), using a 7'0'' DT4 Wayne Cattanach taper. (fig. 1)

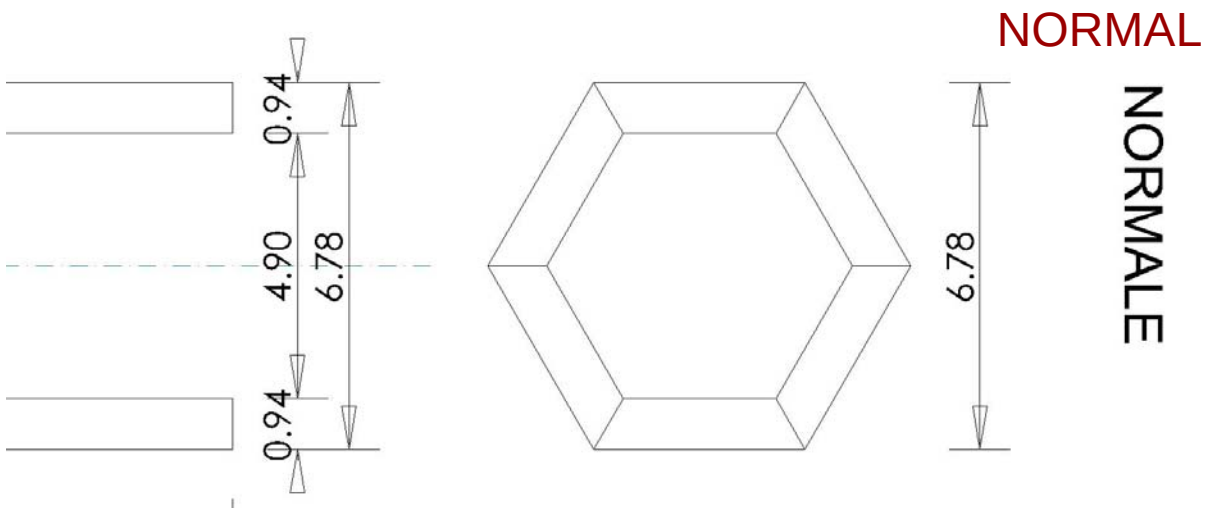


To transform this ferrule into a Streamlines, you need to reduce the dimensions of the male by the thickness of the wall in the female part. In this case 0,96 mm.

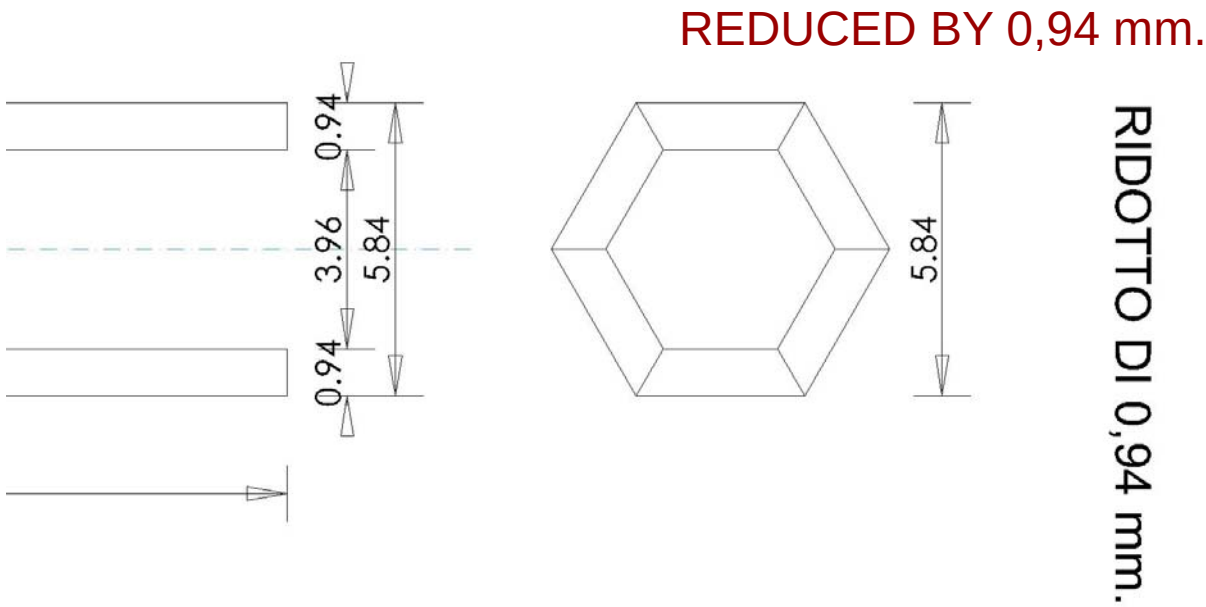
Let's see how in practice:

Step 1 - *designing the female part of the ferrule reduced by the thickness of the wall.*





Dettaglio innesto "normale"

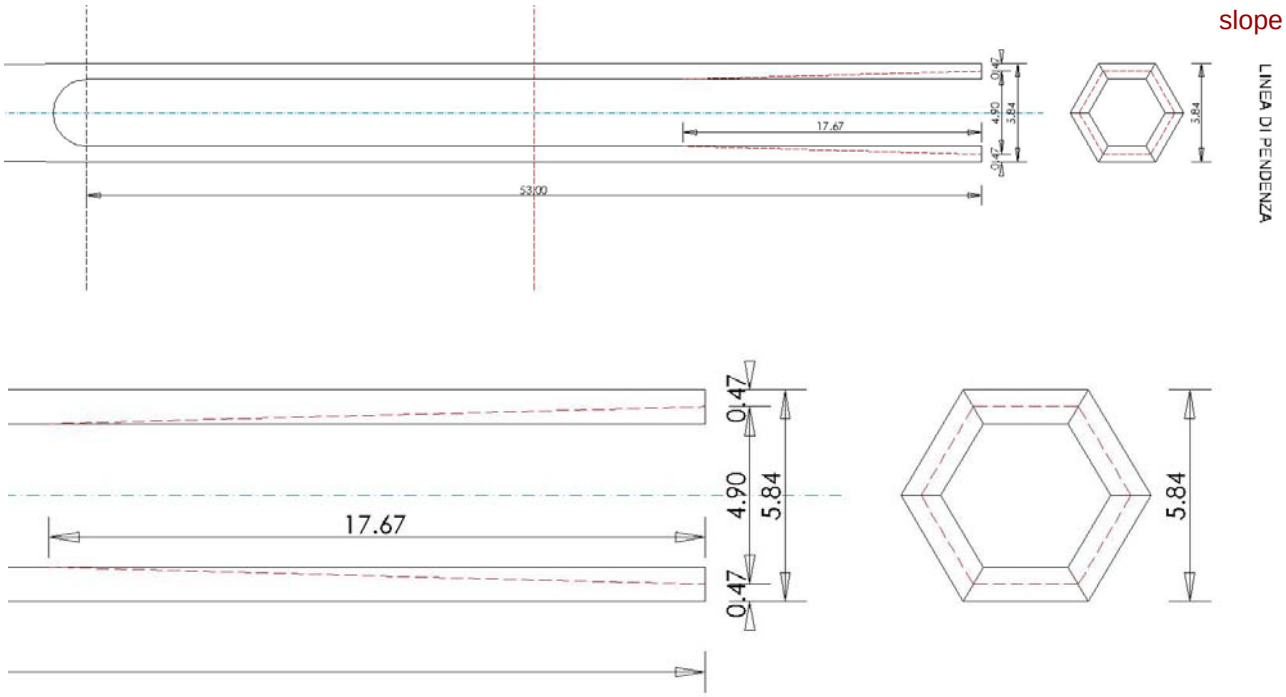


Close up of the "reduced" ferrule

The next step looks at the connecting slope, i.e.:

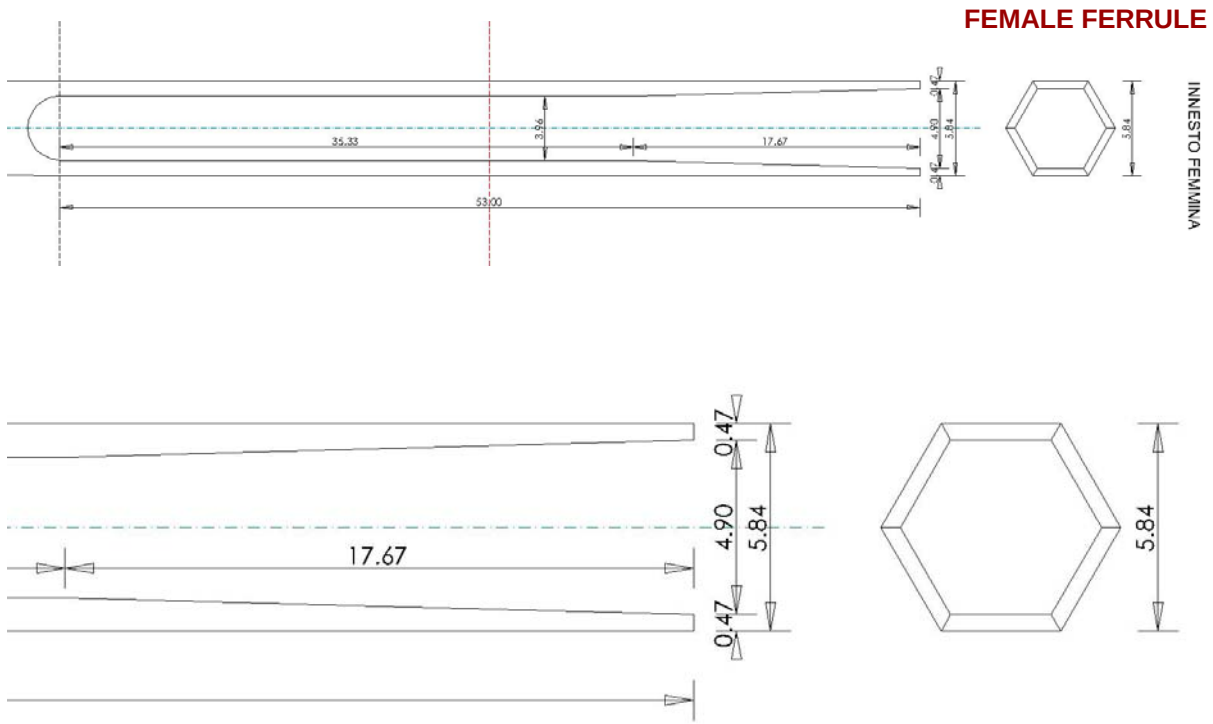
Step 2 – *designing the slope that guarantees strength in the ferrule.*

This slope is determined by the line that unites a point 1/3 of the depth of the ferrule with a median point within the thickness of the wall of the female.



Close up of the slope

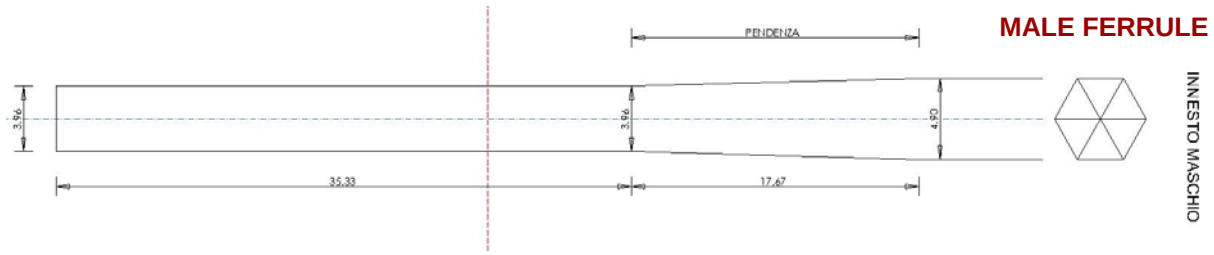
At this point we have designed the female ferrule:

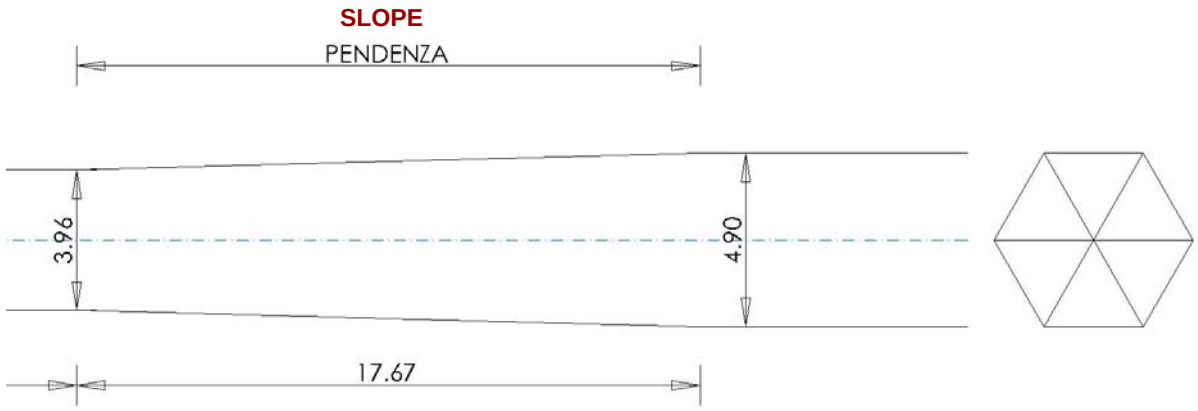


Close up of the female ferrule

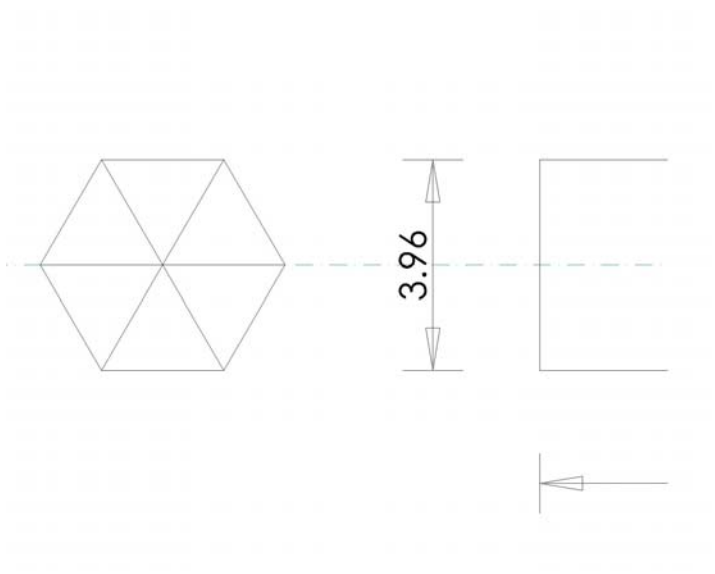
Now you need to design the male part of the ferrule which is exactly the opposite and must have the same slope as the female part.

Step 3 – designing the male ferrule





Close up of the male ferrule



Close up of the male ferrule

The streamlined ferrule is quite easy to design. All that is needed, is to bear three parameters in mind:

1. Reduce the dimensions of the female by the thickness of the wall in the femal part.
2. The length of the slope must be 1/3 the depth of the ferrule
3. Thickness of the wall at the opening = ½ the thickness at the closed end

I believe that these parameters must be considered as indicative and every rodmaker must adapt them to suit the type rod, its length and the taper he is making and also the use he will make of the rod or... to his personal taste because in my opinion there is nothing written in stone.

Alberto **P**oratelli
www.aprods.it

Fernando Biondani

"Nano"

fly fisherman and photographer

A Passion for Nature.

The "simple complexity" of its universe and the immense merit for surviving continuous ugliness.

Ugliness which cannot remove the will to give us splendid emotions. All you need to do is look closely.

Fly Fishing is a splendid attraction. Its movements, its mysteries, its art but above all the great possibility to redeem the nature which hosts us.

Photography is sharing. Sharing emotions which nature and fly fishing continuously give us. Fotographs that help our minds to remember.

Oh yes I was forgetting …. I'm Fernando Biondani, I'm 44 years and I live in Verona (Italy)

:-)

www.nanophoto.it

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