



# BAMBOO JOURNAL

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ITALIAN BAMBOO RODMAKERS ASSOCIATION

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**Bamboo Journal n. 15 - ottobre 2015**

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Photo on page 2:	Image by a bamboo day
Photo on page 102:	The Gesso River in the reserve "Il Gesso della Regina"

# EDITORIAL

At last here is the Bamboo Journal N. 15, that is the 16th issue of the newsletter if we count issue N. zero. And we know that 16, at least here in Italy means good luck! Perhaps you've had to wait for it a little longer, but you will see that it was worth it. This is a particularly rich issue. Certainly for the number of pages.....

To break the ice, let's start as usual by speaking about the weather: we've just had the hottest summer since 1880; in our entire hemisphere it seems. Not because 1880 was particularly hot, but only because it is from that date that the scientific community has documented climatic data. It is certain that in Italy we had temperatures way above the seasonal averages and with a relative humidity that made the "perceived" temperatures rise to tropical levels. And we did not even renounce to drought. Given the heat and drought, our annual gathering in Sansepolcro at the end of May was disturbed by the rain, lots of rain.

Our friend Paolo Zetti submitted a nice travel diary. The new thing for this 2015 edition was the "Big Shop" which was a great success and involved directly on both sides of the benches many rodmakers and newbies.

It is with great sadness that we inform you about the recent passing of Andy Royer who was our most welcomed guest at the May gathering. IBRA had a very special relationship with Andy and our President has found beautifully touching words to commemorate him.

Let me continue with the list of articles in order: Angelo Droetto with his Free Thoughts writes about significant people in our noble sport. In a trellis of his personal experiences as a flyfisherman. Roberto Pragliola, who is most certainly a great friend of IBRA (he wrote an article for the BJ in the mythical Issue N. zero), granted us an interview. In fact it started as an interview but then became a memoir that spaces from TLT to the philosophy of casting, the characteristics of rods and flyfishing in general. Roberto is an extraordinary man and has given us a lot of very interesting material. Giorgio Grondona follows with his amiable series on "reflections" which began in the previous issue. Here the main character is a culm of bamboo: an ugly duckling which at the end reveals its true qualities. And now it is the turn of a rodmaker from the extreme north of Europe, Anders Hedin. He introduces us to the extraordinary story of his beginnings as a rodmaker and to a small but useful instrument that can help us to rapidly improve our planing technique.

I have a desperate need for this (to improve my technique of course) – and so I am already making one on my plane. I will keep you informed. Daniel Le Breton sent a small fascinating article on "self deceleration mechanism", i.e. that hidden physical mechanism in the system rod-line where he explains a particular aspect of the function. Is this the magic of a flyrod? Another long time friend of IBRA, Tapani Salmi; proposes a new reflection on a theme that he has already written about and that created some discussion. He discusses the physical characteristics that derive from the geometry of the rod sections and in particular of triangular rods with respect to hexagonal rods. I'm sure many of you will already have their own ideas about this...

And "last but not least", Marzio Giglio gives us the second part on the theme that he already introduced in issue N. 13 of the BJ: the Former Beam Method. With the usual scientific severity, Marzio has revisited it here in a form that is quite simplified and at the same time very efficient and particularly good for making quad rods with a minimum of tools.

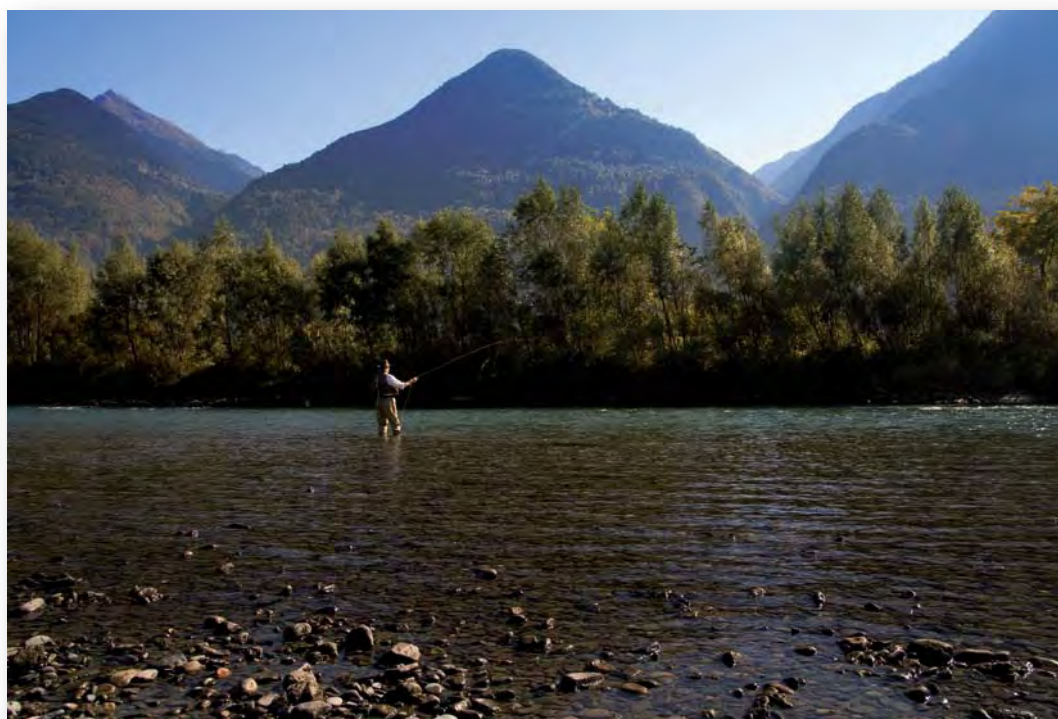
This article brings us to the end of the issue and therefore I thank all the authors and also Giorgio Fattori who sent us the beautiful photos among the articles.

To close I repeat the same words I used in the previous issue: any comment, suggestion or criticism useful to improve the magazine is more than welcome. Write to me at: [editor@rodmakers.it](mailto:editor@rodmakers.it), also to express your opinion. Above all write to me to propose new articles for the next issue.

The Bamboo Journal needs all of you!

Maurizio Cardamone





*Adda River at Berbenno di Valtellina*

## ANDY ROYER ... ONE OF US



Dear Andy,

The news about your passing struck us like lightning on a clear day even though it was not unexpected.

I simply want to thank you on behalf of all the IBRA members for all you have done for us. In these ten years you were a certainty for us which went further than a simple commercial aspect and you proved to be a great friend and supporter. Your presence at the many gatherings in Italy and Europe which started thanks to our will, demonstrates that you were comfortable with us Italian and European Rodmakers. Like in a big family.

These words come spontaneously : "Andy ... one of us".

I wish to thank you for the words that struck all those present at the last gathering and that made us understand that you were strong and determined in your battle against the illness that eventually took you away.

I want to thank you for the smile that you always had in spite of everything.

I want to thank you for the last word that you said after the gathering. We were in my shop and in front of many rodmakers you said that IBRA was not only a good customer but your best customer.

I want to thank you for the indelible memory that you have left in our hearts.

Alberto Poratelli  
*IBRA President*



*Sesia River*

# IBRA 2015 Gathering

## The Travel Diary of an Apprentice Rodmaker

by Paolo Zetti



### Thursday 21 May 2015:

Here we are again. The long-awaited IBRA gathering was held, as usual, in the historical clubhouse at Podere Violino on the banks of the Tevere tailwaters. Against all odds, here I am finally on my way. I managed to steal four days from work and family. I'm travelling alone because my travelling companion in this adventure got caught up in his commitments and he will join me tomorrow for the Bamboo Day. This is my third gathering and I'm already thinking about those people who over the years have contributed to making these meetings extremely pleasant and interesting. They have taken me by the hand with notions and tricks that are almost impossible to learn any other way if not through infinite loss of time. Things that have happened to many of them during their beginnings and thanks to the lack of information at the time. Most of the guests will arrive this evening. I see familiar faces and I meet new ones. Great thing, the gathering!

### Friday 22 May:

This is the Bamboo Day, a wonderful opportunity to fish the Tevere tailwaters with our friends rigorously made in bamboo. In my case, they were slumbering since the last season in their special little closet. This year I decided not to fish with the other IBRA makers' rods (which is among other things, appreciable), but I will use the latest arrival of my small collection: a Pezon and Michel PPP Featherweight - Glenn Clark. The rod gave me great satisfaction. During the morning only a few adventured fishing, since it was raining. In the afternoon, the weather improves and we go fishing until the evening with numerous fish caught. The Tevere tailwaters tried to make things difficult this year, but it is always a pleasure fishing these waters. During the evening we finally have the honour to meet Mauro Raspini (I am the happy owner of all his books), an eclectic, skilled and charming person.



## Saturday 23 May:

The real gathering begins with an epic change strongly supported by our new president, Alberto Poratelli,

### the BIG SHOP.

The real gathering begins with an epic change strongly supported by our new president, Alberto Poratelli, the BIG SHOP. The serious, academic presentations in front of a screen are abandoned to be replaced by numerous benches where in turns various demonstrations are held simultaneously. Everyone can choose what to follow according to his interests and without the fear of missing something because the demonstrations will be repeated in the afternoon. So, not only theory and videos, but practical demonstrations and direct questions, making everything simple to understand. In my personal opinion, a real success, thanks also to the knowledge of the various speakers. The list of the speakers can be found on the official programme. The exhibition is also worth mentioning, because of the high level of the rods, both new generation and vintage. The day ends with the traditional dinner during which the representatives of the various nations: Gabriele Gori for Italy, Alix Antoni for France, Bjarne Fries for Denmark, Philipp Sicher for Switzerland, briefly describe the history and evolution of rodmaking in their countries. The last to be mentioned are Andy Royer and his pregnant wife, bearers of news none of us ever want to hear ...





## Sunday 24 May:

The star performer of the day is definitely Roberto Pragliola! I finally have the pleasure of meeting him and we exchange a few words on the concept of flyfishing, which for him is tied to the twirls of the fly and I agree. But his thought would make an article. One of the things he repeats during the day, and I hope I did not misunderstand him, is "IBRA and its members do not only contribute to the conservation of the values of flyfishing, but also to innovate this tradition". Naturally he held a demonstration about his ability in casting....

At the end the traditional lottery took place. It was a great success with many satisfied winners. This was not my case but at the end of the fair, I have already won my lottery since I was able to be here for all three days of the meeting.

Thank you and see you again in 2016!





ITALIAN BAMBOO RODMAKERS ASSOCIATION



*Sforzesco Canal*



by Angelo Droetto

## FREE THOUGHTS... OF AN OLD FISHERMAN

Alfred W. Miller (1892-1983) was a well-known American angler. Better known by his pen name Sparse Grey Hackle, he wrote a famous book published in 1954 for the members of the Anglers' Club of New York titled *Fishless Days*, printed again by Crown in 1971 with the title *Fishless Days Angling Nights*.

He was a journalist: He worked at the Wall Street Journal as a financial reporter. His articles also appeared on the New York Times, New York Herald Tribune and on Sports Illustrated and Outdoor Life. He was also the subject of many pieces written on fishing magazines by Red Smith and others. After his death, the book *An Honest Angler; the Best of Sparse Grey Hackle* was published. A collection of his articles in magazines and newspapers and letters from friends, put together by his daughter Patricia Miller Sherwood.



I wanted to remember this famous American angler because one day, while sitting in the lounge of the Anglers' Club of New York, he answered a question from his friends who asked why he continued to fish only with bamboo rods, with a statement that for lovers of refendu and the population of rodbuilders, can be considered policy statement: "I will continue using bamboo rods until the day a violinist will play at Carnegie Hall with a plastic violin".

I started flyfishing in 1968, obviously with a bamboo rod, a Pezon & Michel Parabolic Special Normale, 8'6". In those days, there was nothing else, fiberglass was just emerging, steel rods were a failed attempt, I remember the Truetemper. Then I used graphite rods, but I always came back to bamboo. A little for tradition, a little for snobbishness and, above all, because I had not found a rod to satisfy my fishing abilities and mediocre casting. And last but not least, the beauty and the warmth of a bamboo rod and the subtle, mildly perverse pleasure to maintain our tools in winter, cleaning, shining, admiring them and appreciating the work of the builder even by looking for defects.

This I think is the answer, the only one I know, to the standard question: "Why insist on using these rods?" Pleasure, pure pleasure, fishing must be a pleasure, otherwise it would become work and hardly ever is work pleasure.

I borrow a phrase I read on the bathroom door of a golf club in Massachusetts: "The worst day fishing is better than the best day at work". It included a comic strip with players who broke their golf clubs and threw them in the pond .....

The second question, "Why build your own bamboo rod?" This time we wander into an elite topic that involves the human intellect and allow me to say a little perversion and a pinch of masochism.

I find it difficult to answer, while it would be easy for you and so you must help me. My interest in the topic started in 1977 when, while reading Flyfisherman, I saw the advert of Garrison e Carmichael's book and I went ahead and bought it. It was not easy then; I wrote to the magazine, they printed my letter and a correspondence began with many people, from Carmichael to Poul Jorgensen, Jim Shaaf, Walt Carpenter, Bob Summers, Preben Torp Jacobsen, George Grant, Craig Mathews and many others. My rhythm was at least a letter a day.

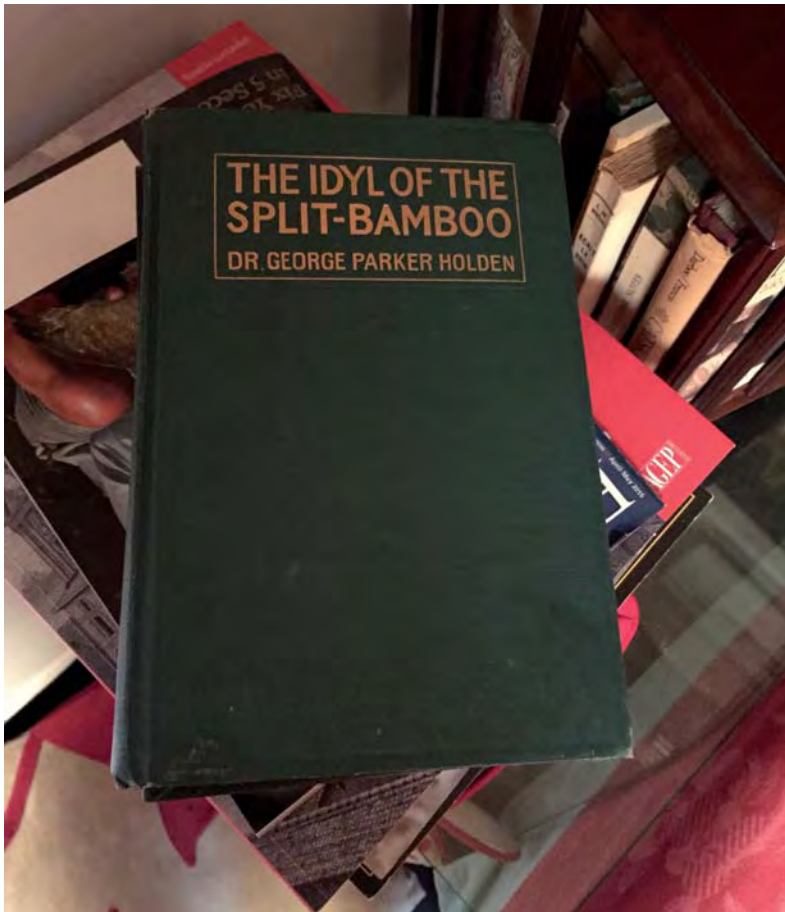
I am compulsive, so I began to collect everything I could on rodbuilding, with the help of two great American collectors, Jim Shaaf also a rodbuilder, owner of the Dickerson brand and equipment, and Arthur Frey. T

here was not much then: from The Idyll of Split Bamboo (1927) by doctor George Parker Holden, Garrison's mentor, La Canne a Truite, Object d'Art (1946) by Joannes Robin and the one by Barnes; I succeeded in getting a copy of Garrison's film.

My correspondence with these builders and collectors was very helpful in enriching my knowledge in this mysterious world. I helped a friend from Genoa to become a rod builder, but for me, everything remained theoretical. I was contacted by a few people for information, some real enthusiasts, others not. Don't ask me anymore. I then neglected this aspect for years, yet still used the rods. In the meantime I owned and handled tens of rods of all builders, a little for fishing and plenty for collection, I found my rod and never let it go, the Salza of Walter Brunner, a 2,10.

I followed the advice of a friend: "if you find something that satisfies you completely, buy many pieces: they will stop making it!"

I add: or the builder will die. So I possess 4 Salzas, 2 2-pieces and 2 3-pieces.



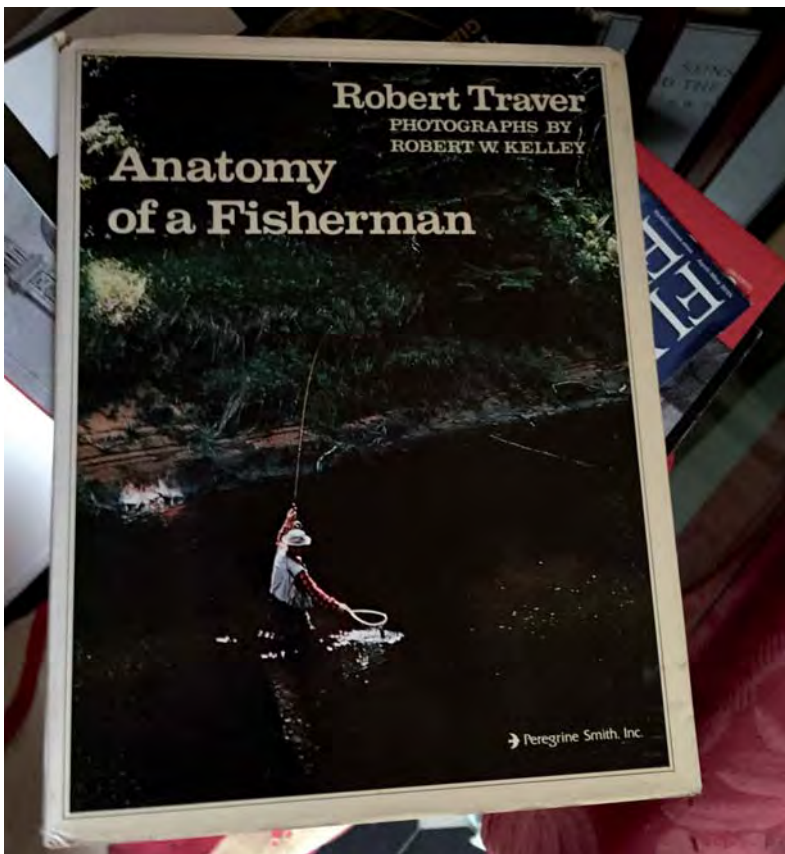
In 2010 I moved to graphite, by chance, and here too found the rod made for me and I bought 4 pieces. Obviously, the production was stopped!

Here I end what was not meant to be more than a chat with the most beautiful sentence I have ever read on fishing.

I LOVE FISHING NOT BECAUSE IT IS VERY IMPORTANT, BUT BECAUSE MANY THINGS THAT ARE CONSIDERED IMPORTANT BY MAN ARE EQUALLY UNIMPORTANT, BUT NOT AS MUCH FUN.

It was taken by the book Anatomy of a Fisherman, from a brief elegy entitled Testament of a Fisherman. The author is Robert Voelker, better known by his pen name Robert Traver. The public remembers him for the book Anatomy of a Murder, which the director Otto Preminger turned into a film with James Stewart. The film starts with the scene where James Stewart comes home and puts his fishing rod down.

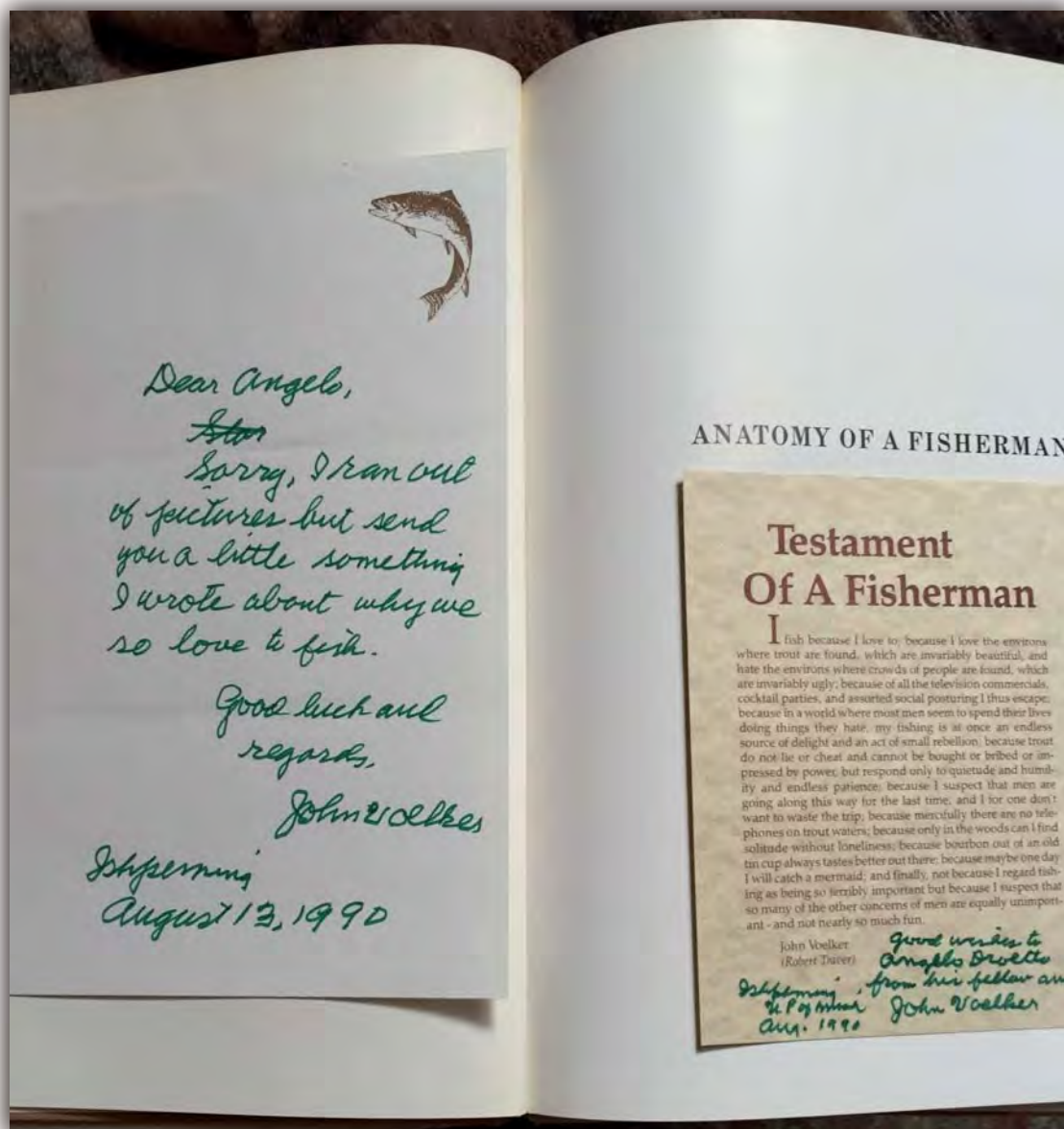
John Voelker was a lawyer, then judge at the Supreme Court in Michigan. After the success of his book, he abandoned his career and dedicated his time to writing and fishing. I translated Testament of a Fisherman from his book Anatomy of a Fisherman, which was published on Flyline. Unfortunately, in the paging, it was not given the importance I thought it deserved; indeed if you look for it in the old copies, you will struggle to find and so I include it to this article, hoping that someone will really appreciate it.



### Testament of a Fisherman

"I fish because I love to; because I love the environs that trout are found, which are invariably beautiful, and hate the environs where crowds of people are found, which are invariably ugly; because of all the television commercials, cocktail parties and assorted social posturing I thus escape; because, in a world where most men spend their lives doing things they hate, my fishing is at once an endless source of delight and an act of small rebellion; because trout do not lie or cheat and cannot be bought or bribed or impressed by power, but respond only to quietude and humility and endless patience; because I suspect that men are going along this way for the last time, and I for one don't want to waste the trip; because mercifully there are no telephones on fishing waters; because only in the woods can I find solitude without loneliness; because bourbon out of an old tin cup tastes better out there; because maybe someday I will catch a mermaid; and, finally, not because I regard fishing as being so terribly important but because I suspect that so many other concerns of men are equally unimportant -- and not nearly so much fun"

Robert Traver (John Voelker)

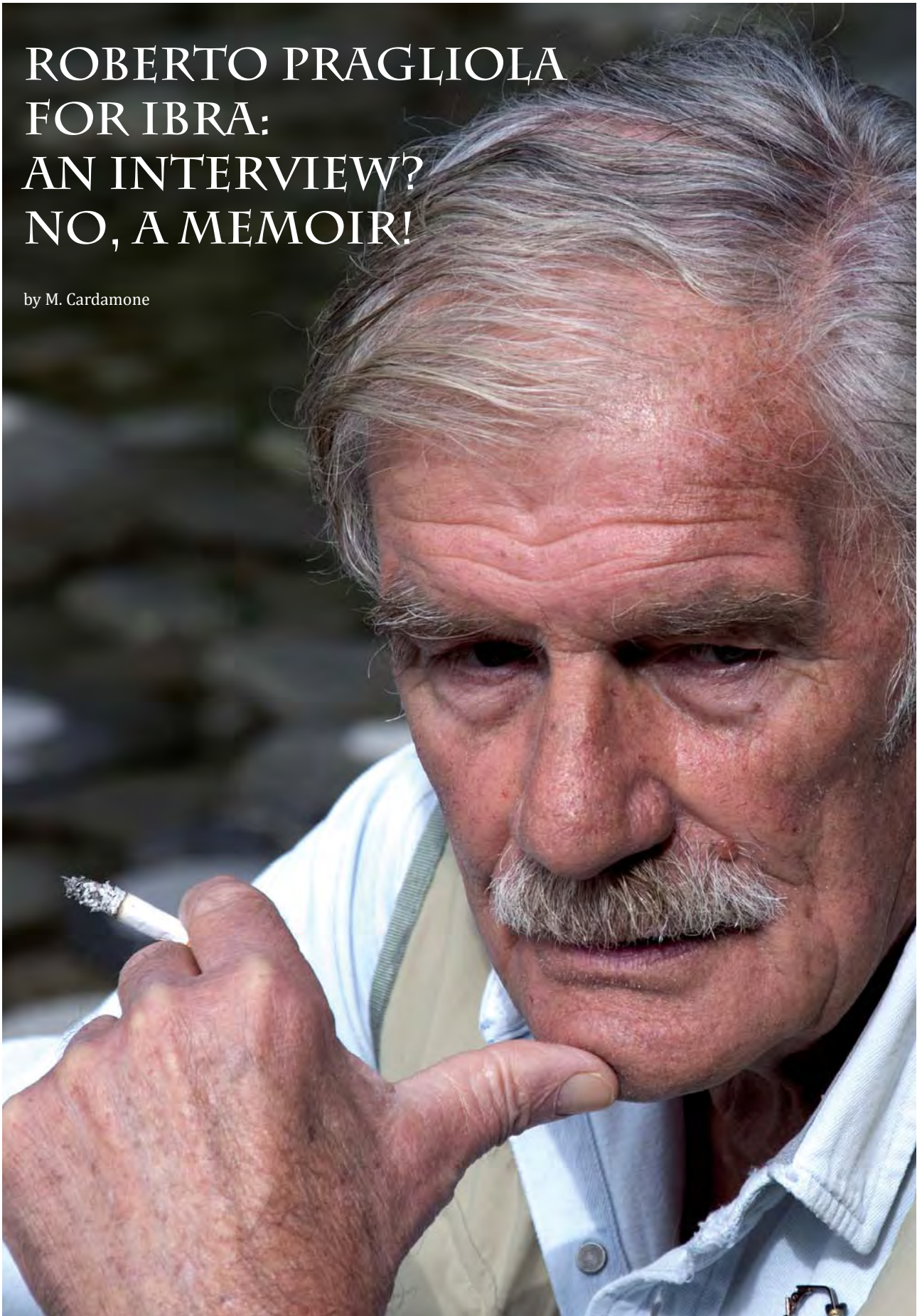




*Sforzesco Canal*

# ROBERTO PRAGLIOLA FOR IBRA: AN INTERVIEW? NO, A MEMOIR!

by M. Cardamone





*Q: Roberto, you are an icon of Italian flyfishing and not only. Your fame is tied, above all to the development of a casting technique which is innovative compared to the classic standards: the Technique of the Total Cast (TLT). I think that you and your long history of successes are known in the Italian bamboo rodmakers community. But I would like you to tell me briefly about your life as a caster and fly fisherman*

Maurizio, it is difficult to summarize a topic as complex and ample as the TLT. It might create misunderstandings. In fact, the concept of rod, the cast (its aim for fishing purposes), the approach to fishing itself and much more. However, I will try



*Angled Cast, the basic cast of the TLT. This technique was officially born in 1976 (date of the first article published in the Italian magazine Pescare). Nonetheless, it is still considered "new". But if it is new nowadays, what was it then?*

*Q: Start by summarizing the true essence of the TLT dynamic, for the bamboo rodmaker and fishermen who will read us from other countries.*

TLT uses specific 7'6" rods and three weight lines projected at very high and very low velocities. Its dynamic is based on three points:

- 1) TLT has abolished the stops substituting them with no-stops. This is based on the principle of Constant Continuous Tensions. The result is a very fast line and always very taut.
- 2) The cast is not perpendicular as in the common techniques, but with the rod inclined at 45 degrees.



*This three quarters position is more natural compared to the rigid frontal position of the common techniques. And natural things are more functional.*

- 3) The entire movement is almost 180 degrees. It starts at ten/eleven o'clock and ends just after two o'clock
- 4) The wrist is not always rigid, but it flexes, bends, etc. according to the specific dynamic



*Position of the rod at the end of the back cast.  
The position of the rod so far back is facilitated by bending the wrist.*

- 5) The grip is different too. And the same applies to the position and pressure of the fingers on the cork



*The wrap around TLT grip, i.e. The rationalization of the use of the muscles. At the start of the back cast, the reel is in the fist and so the muscles are semi-relaxed. The back push moment is nervous and involves mostly the middle and index fingers that press the cork. Then the muscles relax again. Except for the thumb, that tenses to contrast and control the backwards movement of the rod.*

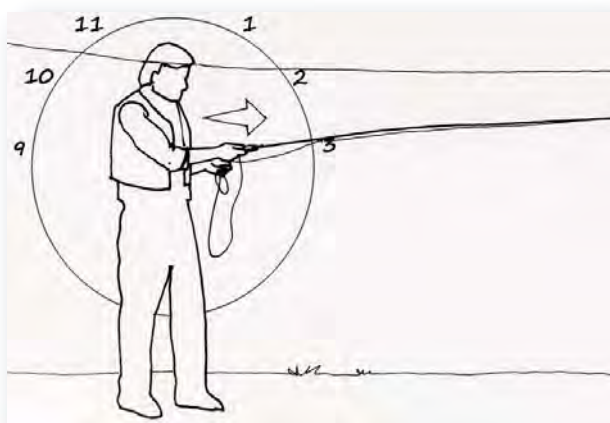
*With the start of the forwards cast (acceleration), the thumb plays a fundamental role, by pressing the cork more and more. It is important to respect this development. The apex of this pressure must coincide with the push moment.*



*The "out of focus" shows the intensity of the apex of the acceleration in the forwards cast.*

*A simple way to test if we have used our hand muscles correctly is to make some false casts while squeezing the grip and checking the "redness": the sign of how and where we have applied force. The intensity of the colour shows the points where the force was greater.*

6) Finally the push moment, the center of the cast, where all the movements of the line originate. The action is explosive and must only involve the tip, not the body of the rod. This movement consists in contracting the muscles to the maximum very quickly, in a very small space and thrust very far (about two o'clock, depending on the specific dynamic). Immediately the grip is loosened and absorbed. This maneuver is used for the back push moment as well as the forwards one and it consists of moving the hand forwards or backwards about ten centimetres or much more. This also depends on the specific dynamic. The difference between the back push moment and the forwards one is that in the back cast the velocity is usually progressive (but only in medium long distances), while in the forwards one it is explosive.



*General indication of one of many push moments in TLT. These movements are directly connected to the specific dynamic. The different trajectories (the various routes of the line in the air) arise from these movements, which in turn are connected to the settling and presentation of the fly. This is the reason the push moment in TLT are so many. They are small, often minute variations of the same gesture, but at certain levels a grain of sand has the same consequences of a boulder. (Drawing taken from *Magia sull'Acqua* by R. Pragliola ed, Hoepli, Milano)*

*During the forward acceleration, the velocity increases to its maximum. Only at this point of the hand muscles contract and this makes the push moment explode, thus transforming velocity into power. This movement, just like Kime in Japanese martial arts, can be defined as the focus of the maximum explosive power of the gesture. Like the arrival point of the fly, the tip (or part of it) in the water corresponds to that of the start when the hand releases the action (push moment).*



*Kime, similarities. Is there a connection between cast and personality? And then: is there a link between soul and gesture? And finally: can the beauty of a gesture be nullified by the result?*



*Back push moment. The action consists of a very fast but progressive movement in minimal space as seen in the photo. In the forward push moment the time and space are even less.*

*From the description it would seem that the manoeuvre (push moment + absorption) is composed of two distinct gestures. It is not so. They are simultaneous, as far as two opposite movements with opposite objectives can be. The push moment is very fast and charged with energy. On the contrary, the absorption is just as fast, but slowed down: its task is to dissipate energy and discipline it. The former produces oscillations on the tip (bounce), the latter annuls or reduces them to a minimum.*



*General indication of absorption in the back cast. The "out of focus" highlights the manoeuvre. These movements (absorptions) too, vary in extension according to the specific dynamic.*



<https://youtu.be/XJyHeECnq98>

*link to the video (website of the academy)  
"The angled cast".*

*General indication of absorption  
in the forward cast.*



*The result of a TLT cast.*

*Q: After the brief description of the dynamic of your cast, could you summarize its peculiarities.*

TLT is not a technical truth, which can often be debatable, it is the reality of fishing: an objective fact. The condition it is based on is that the energy that a fisherman can produce, and before that, the energy that a regular fishing rod can transmit, are relative. Or at least, limited. And if we don't measure the centimeters, we have already reached these limits (distance). Thus I don't believe that for the little we have not scraped from the bottom of the barrel, the solution is looking for ever more powerful equipment burdened by high weights like we do nowadays, but rather, exploit (and conserve) better the energy produce Q: a path I think has never been considered and that TLT has instead made its own for almost forty years. To take advantage of this principal means a better result, even by using traditional equipment and weights, bamboo included.

The fact that TLT casts light lines must not surprise, the contrary should baffle us. It is amazing how to cover the short distances of a normal fishing cast, the usual techniques need such heavy lines (relatively speaking).

When we hear three weights, we immediately think of lines at the mercy of the slightest breeze, relative distances, floppy lines, wide and loose loops, inability to cast flies over a certain size and the difficulty to keep a sizable fish on the rod: i.e. the opposite of efficient equipment. To claim the contrary can cause perplexity, disbelief. Reasonable doubts, naturally, but they have the fault of referring to a cast with traditional equipment, a slender rod that moves the line slowly and loosely and not to a tough tool that casts tight and very fast like the TLT.



*Far cast with parallel lines (to the surface of the water). TLT does not mean force, a barbaric concept, it means lightness and speed. Pure technique.*

TLT uses seven and a half foot rods or little more with three weight double taper lines. With this equipment, this technique can obtain the same performance (fishing distance, keeping the fish, etc.) as tools of eight or nine feet and more that cast five or even six weight lines. TLT is a new way to approach the rod, the cast and fishing itself.



*We must always listen to the traditional fly because it is the "Fly".  
It's a pity a err so often.  
(photo by Vincenzo Penteriani)*

In fact the following are different:

- 1) the tool: light, manageable and quick
- 2) the cast, a complex and refined dynamic expression
- 3) the concept of the rod, no longer weak but definitely stronger than the traditional ones of the same length
- 4) the way to approach the tip (no longer considered an accessory) to which we have assigned a specific task
- 5) the objective of the dynamic of the cast for fishing purposes (another specific task) and much more

First of all, these peculiarities are possible due to the speed of the TLT cast, much higher than that of the usual techniques. In fact speed creates tension and it is the latter that allows us to use light lines, as well as to control the line and so the results of our actions.



*A casting technique based on excessive weight, insufficient speed and elliptical movements is a technical blunder, if not a constriction.*



From these peculiarities, together with an angled trajectory (angled towards the surface of the water), all the problems tied to fishing like precision, presentation, a gentle and quiet line and leader laid on the water etc. correspond to the intentions of the cast.

These are prerogatives that are linked to the dynamics of the cast and not to the equipment as most traditional techniques sustain.



*The angled trajectory, the origin of almost all the fishing problems.*

Consequently TLT resolves all the tactical problems without resorting to any particular instrument according to the fishing conditions (rods for flat waters, for larger rivers, for delicate presentations and so on), by taking advantage of the dynamics of the cast. The latter can be ignored (problems of fishing delegated to the instrument like in traditions techniques) or it can be exploited (solution of the problems using the dynamics like in TLT). So it can be hostile or favourable. It can be estranged from fishing or finalized to it. The casting technique will orientate you in one or the other direction. Otherwise what's the use?



New things scare mediocre people, men that instead of considering diversity a richness, see it as a danger. And the older the mediocre person is and the harder the war. And when the new thing is technically advanced the louder the war drums will be deafening.

But that's not all. This technique allows everyone and not only a few experts, to use any rod (little changes whether graphite or bamboo) with a line weight that is 3 or more times inferior to that declared by the manufacturer. For example a nine foot rod that cast a 7#, can be used with a 5#. Just as a 12 # can be used with a 9# or even less.

It is an error to consider TLT as a technique that is specific for light lines. And why so? A casting technique selects, codifies the rules of a succession of actions that have as the end result to project a line and to control its flight in the air. The equipment used to carry it out and the entity of the weight projected is something different and autonomous with respect to the technique used. This is even obvious. Even the old English casting technique, which was dynamically not excellent was able to cast both light lines as heavier ones. Therefore we do not understand why, for some unknown reason, the identical criteria should not be applicable to TLT. On the other hand, the latter has been defined by some as a technique which is suitable only for light lines. How can this mix up be possible – if it is really a mix up?

*Q: On various occasions, you claimed that with TLT you wish to push the use of new materials – essentially carbon fiber – that traditional techniques could not exploit to their full extent. Today we have seen the revival of materials from the “past”: not only bamboo, which find a reason to exist not only in certain characteristics tied to the action during casting but also in the pleasure to own a hand made item as an expression of extreme “artistic” excellence. Glass rods have reappeared quite powerfully and this takes us back to rods with very slow actions and therefore with actions quite similar to that of bamboo towards the middle of the last century and with very traditional casting techniques. How do you judge this apparent involution of the market? DO you think it can be defined as a marketing strategy to give a breath of fresh air to a rather slow and stifled market, or do you see deeper reasons perhaps tied to a process of maturation of the the flyfisherman?*

In my way of thinking a rod is the rifle of the fisherman and from both these instruments we must expect only performance and not misunderstood emotions. If a rifle or a fishing rod have not been chosen for their performance, there is something deeply wrong. In other words, the discerning person looks ahead, and those that do not know look at the past – including the market.

*Q: But what was the stimulus that lead to TLT?*

I confess that in the beginning I did not have very clear ideas. This might be surprising, but in those days I was not a student of casting and even today I do not consider myself as such. I just used to cast and that's all. I was in that passive mental state that is typical of when the instinctive chaos has not yet led to rationalization. To the point that no dynamic had ever surprised me nor affected me. I found them all normal. I might add natural. The maneuvers overlapped one after the other. Every fishing outing was enriched by something. It was a thrilling moment albeit confusing. In that moment I did not realize it but I was follow the same route taken over time by materials and equipment – both tending towards the research for a greater efficiency but not in the casting technique. When casting does not evolve together with the structure of the rods all ends by force into the arms of weight. Of an excess of weight. Not only to achieve distance, but even to approach a modest cast just is is demonstrated by the traditional casting techniques. On the contrary, when the equipment evolves together with the dynamics of casting, the results can only lead to the projection of light weight at high speed.

I have been fishing for almost 70 years. I began in Fiumablo, a small village in the Modenese area. It is here that I enjoyed my first trout at an age when it is still difficult to stand up. I fished with all techniques – bait (other times), spinning. A long and hard but fundamental apprenticeship.

I started fly fishing in 1967 after having attended a class in Florence even though prior to that I had tries with uncertain results. As with all fishermen of my generation, I began casting following the traditional English style and with bamboo rods, even glass rods that were very slow that cast relatively heavy lines (DT # 5/6). But this did not last long. Just the time to look around.

In those days, flyfishing was considers a very nice technique but full of limits: limited to a few months a year and only in wide open spaces. This was the most insidious limit because it excluded many waters. For example the smaller streams that were erroneously considered impracticable for fly fishing. This undermined the fundamentals of the system. What struck you immediately was the abyss between theory and practice.



*Areas covered with vegetation: places believed to be impracticable for flyfishing (Photo by Sergio Mastriforti)*

Hours and hours of practice to learn to stop the rod on the vertical, keeping the wrist completely rigid, the elbow kept close to the waist and so on (these were the rules dictated at the time in our country but even elsewhere) to then to be forced to do exactly the opposite once on the river. It was disconcerting to discover that one of the major obstacles for the diffusion of flyfishing, derived from casting, from a dynamic that hindered fishing by limiting its efficiency and therefore of the competence of the system without which it is impossible to practice this form of fishing. The contrast between the rigidity of the rules which concerned casting and the flexibility of the different situations and the consequent discomfort in facing them, could not be ascribed to personal gaps in casting. It was a paradox: man had created rules that instead of making things easy, created obstacles.



*Hours and hours of practice to respect the rules and to then to be forced to do the exact opposite once on the river.*

The result is easy to see: respecting the rules was a heavy price to pay to fishing since there was a drastic reduction of the places and situations to fish, while if you break the rules, you risk being pointed at. It was not a thing to be taken lightly. In those days there was almost an acquiescence with respect to the directives: a fact which derived from respect for the older fellows and to the bearers of the “conscience” in general.

As I said the contrast with the orthodoxy was even too evident – going down to the river with open eyes. While this assumed a dimension that was almost insane, it was in the small streams that TLT was born and developed. Never as in these places, did the rules of the English style with relative rods and actions give me the impression of a partial technique. As soon as it was taken out of context in which it was born, it seem appropriate only to hinder the casting. It was the negation of casting intended as an instrument to efficiently achieve any action in all places.

Notwithstanding this, it continued to be taught for many years to come. So very soon I found myself in contrast with the “word” and I was forced to throw away everything I knew. A little confused in the beginning, I took another direction: a process that led me to use lighter lines and to cast them progressively faster and faster and after the arrival of carbon fiber rods I move to shorter and shorter rods. This was the first step.

The second and determining step, is also conducive to graphite – faster rods. Naturally inclined towards line speed, I was ill at ease with bamboo rods and glass rods and later also with the first graphite rods which, in brackets, were very lacking.

Another reason for discomfort was the weight of the line to be cast. I found it excessive almost like ballast. But before that, albeit a little hazily, I considered it a handicap with regards to the cast. On top of it all, the graphite rods in those days cast lines that bent them until they “knelt” down. A characteristic still present in many American rods: excessive line weight, lacking velocity – two consequent factors that invariably led to the birth of TLT.

Once I had taken this path, I stopped having conflicts with the “creed”. On one hand I had pushed to far ahead, I was practically without hope of redemption. On the other hand, the more I ventured into the profane, the more I felt like someone that had discovered that hell does not exist. I stopped considering things true or false. No fact was consecrated. I lived as if for all I had learned there was non conscience, just like what happens in nature, only what is about to arrive is sacred. There can be no prudence in this phase. Not only because prudence can create subtraction and this is not part of my character, but also because a pioneer cannot be prudent. It is a contradiction in terms. These statements today may seem disconcerting – even excessive. And so I repeat: in this days there was almost an acquiescence regarding the directives. Having said this I had not yet reached the conclusion that the traditional technique was not valid. I believed that is was so in certain places. I believed that it was not in others. Thus the confusion I mentioned.



*The cast from hence the logo of TLT. In the day, this cast created sensation.*

*At the beginning of the 70's it seemed impossible to cast a line so straight and taught. And it was carried out with a bamboo rod. To be exact a 7'6" by Pezon et Michel, the Vario Power, with a bamboo tip and a glass butt.*

This my evolution, was even more difficult in those days also because in our country there was only a sketchy knowledge of casting and as is usually the case when ignorance dominates, the various opinions multiply like rabbits and everything and the opposite of everything is mixed in a large cauldron in which everyone can take handfuls with fear of contradiction. At the same time and consequently, the more the ideas are mixed up, the more we tend to create rigid rules and to dilate their importance abnormally. In other words – chaos.

They were times when the fishing line had to move through the air charmingly and they even boasted about it. Lazy lines, sleepy rhythms. Loops that trudge on pitifully. Tailing loops. Minds that were closed and apathetic. Thus hostility, almost ferocity towards something new,; towards something different. In fact I paid the price. There is no harder skin than the one we are born with or that conditions you like the milk from the breast that we feed on. It was surprising to listen to so many discussions even about insignificant things without anyone ever questioning fundamental issues. For example the excessive line weight.

*Another reason for discomfort was the line weight.  
I considered it to be excessive. And even harmful in  
shallow waters.*

*(Photo by Sergio Mastriforti)*



The “discovery” of high speed, I mean the way to produce it, was the fil rouge of the entire process. Although the first attempts were made with bamboo rods, the significant moment was determined by the appearance of graphite. Contrarily to what happened with the traditional techniques in which the appearance of graphite (with respect to speed), in my opinion passed on without significant changes, for TLT, the contribution given by this material made it literally explode. Velocity gave it completeness and meaning. I dare say it gave it legitimacy. Without this velocity, TLT could not have expressed its true dimension nor the same efficiency.



*An angled cast carried out at high velocity. If the projection of the fly without weight allows the cast to express its maximum technical level, line weight, friction condition it drastically precluding whatsoever significant evolution.*

*Q: These are the origins, now explain briefly what the practical value of TLT is.*

There is no sport in which evolution did not coincide with lightness and velocity. Consequently the opposite – weight and low velocity, two peculiarities of the traditional cast, can be considered limitations and symptomatic of a stage of a system that has evolved little.

Although the classical equipment is non very functional and verges on the paradox, new ones are continuously manufactured. It is evident that they are conscious of the advantages of using light lines. It is not coincidental a light line is considered ideal for the more difficult conditions like slow and shallow waters. Unfortunately as long as the traditional lightweight equipment is conceived with the current criteria, the “real fishing equipment” will continue to be the kind that projects lines that are more or less heavy. Looking at this situation, this more than a choice seem like a constriction.



*It is completely useless to look for solutions that the equipment will never give. The instrument is only a means that can give any result and in fact it depends on how you use it. Or better on the casting technique used.*

This technique resolves all the tactical problems in your approach and presentation of the fly non through the use of particular instruments different according to the situation but through the dynamic of the cast. The pivot that can rationally and efficiently set up the “fly fishing system”. Therefore a drastic limitation in the number of possible instruments.

The TLT rod is an instrument 7' 6" or slightly longer. It is a thin rod but at the same time fast and strong. It looks like a twig while in reality it is a stiletto. It can cast efficiently and tame even big fish. And it can do both these things with deadly efficiency. So much so that TLT is the most efficient instrument for flyfishing.

Thanks to TLT, the light equipment is no longer a whim, to show of now and then for fun. It is not even integrative, in the sense that it is used only when approaching conditions that are particularly difficult, especially if the yard stick used to evaluate the things is the result.

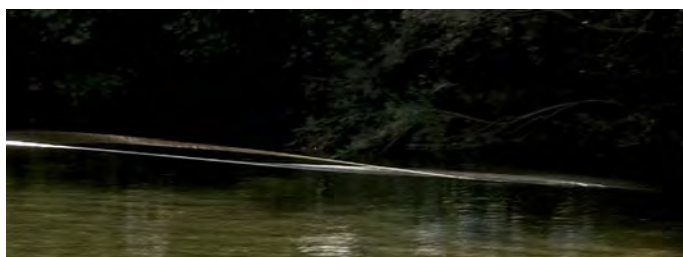
With TLT, the reason for which heavy lines (quantity of weight) were indispensable no longer exists. In order to verify this, ask yourself which is the process, if it exists, of the role of weight in a usual cast. For example, let's begin by asking if there is a proportion between the entity of the weight and distance during a cast. One needs to inquire whether the negative side that weight determines justifies the result. These questions can be synthesized in only one: : do the usual techniques that usually use the quantity of weight which is necessary for the intention (distance and not only) have a limitation of the effective utility? I would say no and I believe that TLT demonstrates this.



*Those who know about casting , cast. Those with less ability just talk about it. Those who have even less ability, destroy the cast with an infinity of structures. Those that cannot cast only criticize*

Using the quantity of necessary weight is fundamental. Also because the remaining part is only useless ballast Using a surplus of weight demonstrates that the effective necessary quantity is unknown. Thus the proof of the absence of a rational fundamental capacity to identify with precision the effective necessary quantity. In two words, the traditional cast is not guided by by a logic and in fact it uses weight indiscriminately. There is a big difference in weight, in handling and so in the results, between a tool consisting of a seven and a half foot rod with a number three line and a traditional eight or nine foot that casts a much greater weight. The weight (rod + line) is the handling's worst enemy. Weight, handling and results are essential and inseparable elements.

Lastly, the most common objection towards light lines: the wind. Undoubtedly a heavy line penetrates the wind better. Unfortunately it is not the case for the leader which remains behind, nullifying the role of the weight, emphasizing its limits and at the same time, the advantages of the speed. On the contrary, a very fast, taut leader, will succeed where slack projections fail.



*The very fast lop of TLT, the creator of many of the advantages of this technique, including that to make the leader pierce the wind more efficiently than heavier lines expressed at lower speeds.*

The overwhelming novelty of TLT, gave rise to a scandal like a blasphemy in the mouth of a child. And my first two book did not calm the controversy. In fact the second book, "Trota e mosche in acque veloci" (Editors note . Trout and flies in fast waters), only contributed to heat up the criticism. The many casting demonstrations did not help: not even the evidence of the facts helped. It is not easy to bring forward your ideas in solitary. In certain European countries, on the other hand; baptized the TLT immediately as "The Italian style".



*The usual techniques represent part of the dynamic expressions of this system of fishing, TLT the totality.*

The trajectories are the “instruments” that allow you to present your fly in many ways in the most efficient way to resolve every single situation. Projecting the line in parallel lines, equals using one single trajectory, thus only one presentation or almost: always the same even in the great variety of situations.

A trajectory is none other than the “line” traced by the line in the air in whatever form and velocity as long as it maintains tension in its whole length and for the whole trajectory. The trajectories that are finalized for fishing are theoretically two: the parallel and the angled casts. In reality the first one is unequivocal and has uncertain and approximative results. The second one is the exact opposite.

There are no limits to the range of presentations, unfortunately they are written on water and not easy to see if our eyes and minds are completely occupied in scrutinizing the slight differences in colour between two flies in a vise like most fishermen do. If in our fly boxes we had a few model less and in our casting a few more types of presentation, we would have better results in fishing.



*There is not one “truth”, not even the most consecrated. Only facts exist.*



Dynamic elasticity, the peculiarity that allows TLT to mold the cast to the fishing requirements. For example the silence of the presentation of the fly or the thousands of ways to present it: that world that in its vastness I have defined “The universe of presentations of the fly”. One of the strong points of this technique.

Knowing how to read the different velocities of the currents and to interpret them correctly is fundamental for choosing the most ideal cast to combat drag. Reading the ideal and correct interpretation of the surface movements of water is important, as is equally important choosing the correct presentation.



*It is not important that the fly travel great distances. In fact it makes no sense. What is fundamental is that it behaves well during a brief specific drift (rise, hot spot).*

On the crest of many of these water movements, there is often the answer to many questions that are sought at the tying vise. Here is hidden the cause for many inexplicable lost battles that are often attributed to that rare feather or whatever else. Here is hidden part of that mystery that fascinates us from our first catch or miss: for what reason does a trout reject a fly and instead takes a second one which is almost the same as the first one? A question that spaces in many directions, that has been researched in many famous alchemies but never within the folds of the surface. Are you sure that things are really like that? That the torment of a new material, a new feather etc., this authentic paranoia is not just the demonstration of the oldest flaws of a fisherman: the knowledge of the surfaces. Too often, in fishing something new corresponds to knowledge of the old.



*One of the many maneuvers of TLT: the fly is placed before the tip. This part of the leader will prevent drag.*

In any case, do not ask why a trout has rejected a fly to then take another similar to the previous one but rather ask for what reason a trout has rejected a fly to take another that “according to you” is similar to the previous one. Otherwise it's like saying that what is different for us, not only is different for the fish but also that the evaluation of these differences are the same for both: this is quite frankly an astonishing albeit dominant consideration.

In past times, there were few fishermen and the flies were very dissimilar to the natural ones. This macroscopic difference was therefor the primary cause of the mistrust. As the flies improved, to the trout they appeared very similar to the real ones and the trout had more difficulty in distinguishing the two so they had to resort to other tricks to discover the hoax. The trout discovered well before the fisherman, what can be considered his greatest flaw: that is the way in which a fly is presented and the so called “drift” which has remained unchanged over time. The fish has therefore changed its attention to the way the fly behaves on the water, to its presentation and to everything that precedes its appearance and everything that happens around it. These are elements that are part of the universe of the presentation of the artificial fly and therefore of the cast.



*The “superimposed” cast, which is one the most interesting maneuvers of TLT serves to present the fly under overhanging vegetation and in other versions to contrast drag. In the circle – the fly.*



*It is more probable that a fish accepts a dodgy fly with respect to the natural but that is fitting, I would dare say in symbiosis with the fishing spot than the contrary. Every fishing spot leads a fish, or rather forces it to “different times of reaction” in accordance to its characteristics. Faster reaction times in covered spots (the fish has partial vision of the situation) and slower reaction times in open spaces ( the opposite). In the first case the trout attacks the fly rather taking it. It is an instinctive fact and therefore carried out much quicker than when it can ponder things when it sees the fly from a distance.*

*(Photo by Sergio Mastriforti)*

Environmental distractions and the needs of the trout find their best solutions in the dynamics of casting i.e. that can be considered our most efficient “fly”. The main creator of these results is the Angular trajectory – the basic cast in TLT. This trajectory is the dynamic solution of almost all the fishing problems. It creates a connection between the plane in which the fisherman operates and the surface of the water - starting with precision. It is also what separates and distinguishes TLT from the traditional techniques. Its opposite, the projection that gives us inversely opposite results is the parallel trajectory - the basic cast of the usual techniques. The angular trajectory is equivalent to a variable inclined plane on which you slide now slowly and then rapidly or even very rapidly our flies in order to present them to the fish in the best possible way according to the situation. It is also what we base many of the anti drag maneuvers.



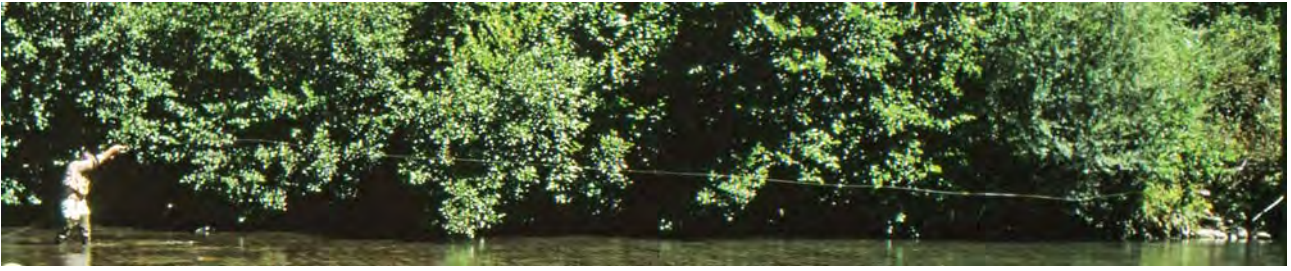
*The angular trajectory give you a direct visual of your target. On the other hand, the other or parallel trajectory forces the fisherman to transfer his objective (the rise) from the water (the plane on which the fishing action develops) and to focus the objective onto a vague place in space. A complex procedure in which the result does not depend on the dynamic of the casting technique but rather on the ability of the person and in spite of the technique. Unfortunately and contrarily to a finalized dynamic, ability is not an absolute fact. It always encounters a certain number of errors.*

If velocity is opposed and at the same time and contrarily, the fast materials ( high modulus, lines that are structurally fast etc) are well regarded, it is evident that the problem is not given by the velocity, but by its use which can be re conducted to lacking casting techniques of the person. It is therefore a personal problem. Where does velocity come into the picture?

Maintaining that TLT projects very taught lines both at high velocity and also in the opposite way, as indicated earlier, would seem a contradiction. Let's clarify immediately.

Let's see the relationship between tension and velocity – two things that are closely correlated. Let's make an example: Take a pole and at one end attach a thin strip of sufficiently long textile. Something that is vaguely similar to our rod and line. If we move it to and fro simulating when we cast a fly with traditional methods, including the stops, the strip of material will straighten out. If you slowly reduce the velocity of the movement, the tension will diminish until it stops and the material will sag. On the other hand, at low or even lower velocity, there should be no tension and therefore no “control”. In reality, things are quite different.

Let's repeat the experiment by moving the pole without the two stops, i.e. with continuous motion just as we do in TLT. We even moving the the pole at low velocity, the material straightens out. Perhaps little but it does not sag. We can therefore say that a certain level of tension exists even a low or very low velocities on condition that there is a Constant Continuous Tension: the so stop criterion on which TLT is based.



*Line tension in a long cast. A result which is achieved by very high velocity. However it is not sufficient to know how to produce velocity; this must be kept for the whole distance of the cast. AN the long it is, the more difficulty there is.*



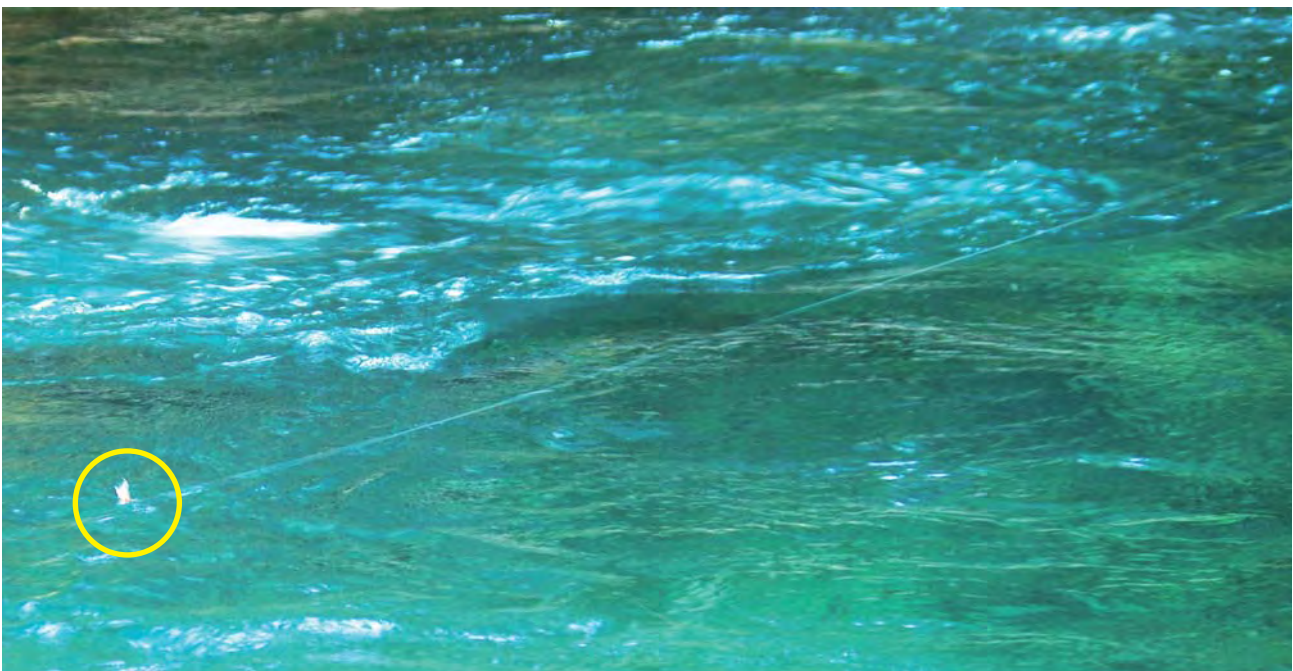
*Progressive Velocity. This is typical of a traditional cast.*



*The look of explosive velocity in TLT.*



*In the collective imagination of the fisherman, the softness in placing a fly (but also silence of the line), has always been associated with a fly that fluctuates sweetly down and therefor with a line that has had a parallel projection. Vice versa a very fast fly directed toward the surface is synonymous with violence both for the fly ( that pierces the water brutally) as for the line (noise on impact). Consequently velocity and angulation are considered negatively. Nothing could be more wrong. It is difficult to contrast ideas that are so well set.*



*Limits? There are no limits. We create our own limits. The great tension created during a very high velocity cast. Even so the presentation of the fly is perfect. But this also demonstrates what we have affirmed earlier when we said that a very taught nylon will penetrate the wind better than one that sags and projected with heavier lines.*



*The under the tip TLT cast. It doesn't serve much to know the scientific explanations of how to achieve the maximum velocity in casting just as it serves little to know which maneuvers and muscles are used to achieve it. Because the velocity does not lie in the muscles but in the mind. And if we don't train our minds beforehand, it is impossible to make your muscles react.*



*Detail of the loop in the previous maneuver.*

*Q: The whole world uses lines that you consider heavy. Even so no one seems to complain. Does this not frighten you a little? What can you tell us about this?*

A rod is just an tool to carry out a specific activity. Whichever tool, from a hammer to a scalpel, whatever use it is destined for, if it has to be functional must necessarily answer to a specific primary requirement: it must be manageable. This it must be light. The contrary would lead to the conditioning of a certain type of movement and this in proportion would affect the result. Consequently it will not be an efficient performer of our will. The same happens with a fishing rod. But in this case to what weight am I referring to?

The tool to play tennis is a racket and for golf it is the club. To evaluate their weight I presume it is sufficient to place them on a scale. Vice versa when we are talking about fishing, the weight in question cannot only be that of the rod i.e. it will be the weight of the rod plus that of the line. More the latter than the former and certain not a static evaluation, or on a scale but during casting. Because it is the weight of the line, which is displaced above and so far from our hand that affect most and that conditions our movements by rendering the tool so little manageable.

It is a little like in fencing. One thing is managing the foil, another the sword. In the first case in virtue of a very light weight, the point of the foil, just like that of a TLT rod, does exactly what we want and immediately responds to our impulses. In the sword, the weight conditions the movements reducing the velocity and the number of possible maneuvers. The difference between a foil and a sword, lies in the fact that the first one offers velocity in execution so so it is manageable but not powerful. For the sword is is mostly the opposite. Furthermore the weight determines that these two arms (foil and swords) be maneuvered with different techniques. More refined the first, rudimentary the second. Not by chance, the great fencing artist who was Giulio Gaudini, perhaps the best Italian fencer, considered the sword to be too easy. Characterized in fact by rudimentary maneuvers. Between foil and sword, you have the same differences that you have between TLT (foil) and the traditional technique (sword). With one difference. Based on its characteristics a TLT rod e at the same time light, maneuverable, quick and powerful. It is at the same time a foil and a sword.



*By virtue of a reduced weight, the point of the foil does exactly what we want and instantly responds to which impulse we apply to it.*

Weight is at the origin of other problems with the accomplice of the way certain tools are conceived. Because it is the flexure, the degree and intensity with which the rod flexes that more than one problems arise. In fact the more the rod flexes, the more the fisherman needs to go along with it, moving the rod not like he would want, or better in the way that the fishing situation would require, but according to the action of the rod. When a rod forces us to adapt to the way it flexes, it is no longer some that is at our service and even less the executor of our will.

I repeat a rod is only an instrument that must execute what is necessary in the best possible way: an objective that can be obtained only if the instrument does not hinder our operations. There is no sector from wrought iron to music, in which the result does not depend from the instrument. And there is no blacksmith nor musician that is not prepared to choose the most appropriate instrument. It is surprising that in fly fishing, the opposite is the case.. However if we express a rough and approximate dynamic along parallel lines, the excess in weight will not count much. Even a drum makes a noise but between this and affirming that it is music there is a big distance.

*Q: Why do you give so much importance to the casting?*

Fishing is an instinct, observation and reasoning. The first of the three things can be sufficient but no one can do without casting.

For me the rod and the casting are important. You rodmakers only to the rod. Or at least so it seems. Casting has always been underestimated, at least for a certain period. It is fair that it assumes the role that competes it. I think I can attribute this to me. At least in this country.

The path that the fly travels from the moment it is placed on the water until it reaches the spot where the fish is can be divided into two parts. The first one consists in the space that goes from when it lands on the water until just before it is seen by the fish. The second part is from when the fish rises to take it. This second part is a very limited time and can be effectively considered the "personal space" of a fly, in which its capacity to catch, whichever they are have the possibility to show what it is worth.



*Long rod or short rod? Light weight or heavy weight? In whichever way you think about this, there is a difference between these two concepts and it is symptomatic. Behind the choice of a short fast rod that casts light weights, a part from the elegance and beauty of the action, there is also sportsmanship. In the other only opportunity a lacking casting techniques.*

But the point is not even this. The way in which the fly is presented in the visual cone of the fish is the last ring of a chain in which casting consists in the summit. In fact:

- 1) the manner in which the fly is presented to the visual cone of the fish depends (can depend) from the way the fly drifted in the first part of its journey.
- 2) this way, in turn, is the consequence (can be the consequence) of the way it was laid in the water.
- 3) this last quality finally derives (can derive) from the way the line was projected and therefore on the cast. In fact it is sufficient (it can be sufficient) to execute a wrong cast to lay it badly and let it reach the fish even worse.



*Everything is written on water; all that is needed is to know how to read it. In these motions there is the answer to whichever fishing problem. Those who fish in rivers with few fish know all about it especially if the fish have a great fishing pressure. Fishermen have stopped concentrating exclusively on the fly because not only what happens in an area of 2 meters around the fly is important, more often it is the most important thing, more important than the fly but even more often there can be more differences in a square meter of surface than between fly and another fly.*

*(Photo by Vincenzo Penteriani)*

It seems evident to me that the catching capabilities of that fly to which we have dedicated maniacal attention, depend on the casting. These capabilities can be undermined even before they have had the possibility to come into play, so much so that whatever happens to the fly before meeting the fish can invalidate even the best flies. It is not always like that naturally. There are times when a clumsy cast has no negative consequences. Or more in general, in waters where casting has less importance. But these are exceptions. That is why I sustain the fact that casting the link between the binomial fish-environment and the actions that a fisherman carries out to approach both in the best possible way. It is the “natural” issue, the rational issue on which TLT is based. A way of looking at fishing that has deep roots in the water.

If “reading the velocity of the currents” is fundamental to fight drag, “reading the surfaces” is just as important with respect to the best presentation of the flies. This last choice in fact depends also on the character of the surface in the fishing spot. Therefore even the presentation of the fly is born from the water. Any casting manifestation is the consequence of the movement of the water.

*Q: You have said many times that the traditional techniques invalidate ability. A strong comment. What does it mean exactly?*

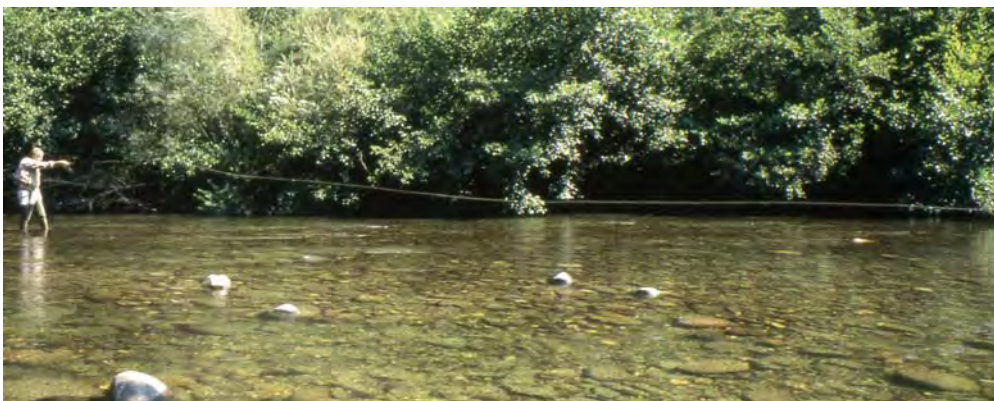
TLT is speed, light lines and angulation. What do you need velocity for? What do you need angulation for? Why light lines? These would seem like many questions but in reality it is only one question. Without velocity (consequently without tension) there can be no angulation. Without angulation, goodbye trajectories. Then all is left is the parallel trajectory. The usual one. So almost only one way to present your fly. This is very trivial and inefficient.

All fishermen agree on the importance of ability. Just think about how the fly land and is presented. In my days, but probably even today, these factors were considered so difficult that it could take years of experience. And so the question is: which role does ability play and in what does it consist if we abandon the fly to its own means in the air at the mercy of fate like happens in the traditional techniques? What difference in results can there be between an expert and a novice since they both place their flies in the same way. They both project the lines in the same way, lines leader fly are placed on the water in the same way. Both dynamics are equal and identical and therefore so are the results. Based on which assumption can we say that the presentation of the expert is better than that of the novice? What changes is the experience in fishing and the choice of flies, naturally between an expert and a novice there is a chasm. The movement of the line in the air varies. One is fluid the other is clumsy. Variations. But that's all and it could be no different. Is this the much praised presentation for which you need years of experience. Is this the ability to cast what many fishermen brag about? Is this the source of so many catches as was sustained years ago, but even today?

What role does ability play in the traditional cast? How do you make it stand out? What can be done so that it will give the fruits we expect and rightly demand? Unfortunately these techniques leave no space to ability and even less to fantasy. Some people can have fantastic talent but without the right instruments which are light lines and velocity they will always express mediocrity.



*Paraphrasing the great mathematician Hoyle, we can only say:  
"If within a traditional casting technique that sustains orthodoxy,  
there was not the immense pressure of conformism and  
marketing, we would be almost blind if we did not see the  
misinterpretation of weight".*



*The majority;  
the most uncompromising dictatorship.*

There are fishermen who instinctively know from how a trout moves from the hunting spot it has chosen, how to give the best presentation to tackle it. Pity that these good fishermen are forced to tackle these fish all in the same way. Or to renounce too many opportunities because their technique does not offer the correct instruments. There are others that handle a rod with mastery but their ability is mortified by their technique. Casting is not a primitive instrument that emits a single sound (ie the parallel trajectory or little more) but it is a symphony with a thousand sounds. A rod is not the bottom of a glass with flat reflexes. It is a diamonds. Light explodes. It radiates subtle iridescence.

Pity that these fishermen are forced to use it in one tone. Pity that these talented fishermen and casters see their ability compressed – at times humiliated. Without doubt you can catch fish even with a traditional technique. If you are happy with the result it is OK. Just as there are waters in which just a few different casts are necessary. Even just a few presentations.

From here, for some and for those who cultivate mediocrity – the partial importance of casting. How many lost opportunities! How many satisfactions thrown to the wind! How much beauty lost! Pity! Pity cultivating only the slack and repetitive straightening of the line to and fro. Renouncing to new emotions, banning the infinite horizons. Is there a worse humiliation to find that you are old and done nothing else but repeat the same gestures? And then we say that fly fishing is an art. But in which art can there be this repetition? Art is inventive. Fantasy. Nothing to share with a line and a leader that are placed always in the same way, of a fly that is always placed at the same level and in the same way. This is not art ma rather a tedious boring bureaucratic and challenging job. At these levels and in this guise, I consider casting tedious and boring.

On the other hand TLT exalts ability and at the same time its merciless objectiveness is pitiless towards mediocrity. And mediocrity is always evident in the traditional technique and ability can be admired in all its beauty in TLT. TLT never knows any moments of sadness and melancholy. No day passes in which the past and the present are confused because they represent the same gestures repeated infinitely: all so similar and sad. With the ability that is expressed with lines that are cast at high speed, there are no goal nor limits, but rather a series of peaks, each one more difficult than the previous one and many more still be discovered and conquered. At the same time the souls and the minds of those that do not settle for second best, stuck in sagging and tedious parallels, can finally ride endless grasslands of their fantasy. - the exhilarating emotions of infinite adventures.



*TLT: we can know it because we have heard of it. Or know it and reject it. In both cases contrast it. Even insult it. But we can evaluate it without prejudice and pass from insult to respect.*

*Q: In your opinion what are the basic assumptions in the conception of a rod?*

A rod is only an instrument that must execute what we require in the best possible way. In order to carry out this role, the instrument must necessarily be made with a specific visual of casting in mind. In the past it was so, today I don't think so.

For the traditional techniques, casting has always been considered a direct emanation of the tool. Rather an irrational visual than a curious one.

That rods have always been controversial tools is undoubted. To realize this, just look at any catalogue, even those that boast antique origins, legendary traditions – in other words the “official fly fishing”. Paging through these authentic bibles, you find a philosophy of some that is to create rods that fish remarkably well. Why not! Others declare their rods as reactive, powerful and mellow. And little matters evidently if between mellowness and reactivity there is an abyss. Others define their rods as powerful, very fast, accurate and delicate – and if this is not magic...

Others boast that their rods load easily to get delicate presentations at short distances but also capable to cast with millimetric precision at great distances more than 30 meters. Really? And rods and then more rods. Infinite rods. Of all types, all lengths that cats different weights. For short casts, long casts for various kinds of waters, the most fantastic maneuvers and so on. Rods that give exceptional results however they are used. Science at its highest? No, the maximum of witchery I think.



*In TLT the speed of the line derives mainly from the dynamic of the cast and only in a minor way from the rod.*

There are three controversial aspects that in a different way govern a rod:

1. distance, the long cast
2. the length of the rod
3. its power, the weight it can cast

Let's examine one at a time starting from distance. A controversial and misleading aspect. When we generically speak about distance, the risk is to place this goal among those indefinite issues designated to the most varied interpretations. Vice versa if we consider it in its true dimension which is fishing, then to answer this question, it suffices to determine which is the rule and what you mean by length. An average fishing cast (the rule) is rather modest – 16 meters or a little more, while the exception will use this distance as a starting point to cast further.

So for what arcane motive should a rod not adapt and even be in symbiosis with this measurement? Why should it not be designed to give its best within this distance if this is true? Instead it is curious that rods are designed for longer casts.

Whatever you may think, a rod must give its best performance within this distance. On the contrary I find it surprising and counterproductive. A rod is studied to obtain the maximum distance and by force of things is lacking at shorter distances – just where its best performance would be necessary. It does the first thing well and is lacking in the second. On top of it all distance is not a specific fishing objective as is precision, presentation etc. but it is a generic objective. And when an objective is generic it is abstract, the rods is also abstract. Any non specific outlook is approximate.

Another controversial aspect of the length of the rod. A part from particular cases, and excluding lock fishing etc, what does a long rod serve for? Between a 7'6" and a 9', the length of most rods, there is no significant difference, no relevant performance to justify its use. For sure it does not guarantee a better cast. What does this quality have anything to do with the length ! Finally, this length does not even guarantee a greater distance (a controversial quality) unless it is used with a heavier line.



*The casting dynamics at the same time flexibility of interpretation, and extreme rigor in respecting the rules on which each part lies.*

TLT has a completely opposite visual to most of the current “all round” rods or to the “series” that are so common in the US. Any non specific visual is approximative

I will end by saying that in my day, a good fisherman was one that had a lot of knowledge and few objects. And the greater his knowledge, the less objects he owned. Today it is the opposite to the point that the true dimension of the rod should not be sought on the rivers but in the fisherman's mind. The more he totters internally, the more he need to base his rickety frame on shiny trinkets. With the last model, a great number of tools – surrogates of ability.

*Q: It is quite evident that you do not have much sympathy for rods that flex in the mid section. I can deduce that your rod behaves differently. More tippy. Is that so?*

For TLT the main function of the rod, the only one in fact, is to cast. Anything extra (the so called pleasantness in use) without going against its finality (efficiency) is an optional. Anything that subtracts (slowness, conditioning etc) are handicaps. The TLT rod was designed to suit the cast, just like the bodywork of a racing car is by the wind. An instrument, therefore that was conceived to answer certain requirements of fishing and it is at the fisherman's service. Casting, rod and fishing are one. The cannot be considered alone.

Other than what has been said, the most evident difference that separates a traditional rod from a TtLT rod is that the former in order to do its job must be relatively flexible while the latter to do the same thing must be rigid – it must have a fixed velocity that among other things derives from the material and its structure. In order to take advantage of different velocities, we must revert to instruments that are structurally different. Vice versa the TLT rod, for the fact that it is rigid does not have a built in velocity and neither a fixed one. Its velocity derives from the manner it is maneuvered and therefore it is variable. That is why contrarily to what you may think, light lines are cast with more efficiency with stiff rods rather than with flexible ones. And finally the lighter the line, the less you feel it loading (weight that flexes the rod). But the faster this line moves, the more you feel its weight even if it is light. The role carried on in the past by the weight is now substituted by “tension” which is a consequence of velocity which in turn is in close relationship with the no-stop: the TLT no-stop.



The in-congruency of traditional techniques is that they try to resolve fishing problems with the instruments. At the same time these instruments are not designed for these requirements. TLT uses the dynamics of casting the role that traditional techniques have delegated to the instruments – thus reducing this to a mere medium. In practice an instrument that is the docile executor of our will – therefore neutral. When an instrument interferes with our actions, it conditions the result to a certain extent and the user is forced to compensate with his personal ability. And ability, contrarily to the dynamic where cause and effect are interdependent is not an absolute fact.

*Q: If the leader and tip are fundamental elements to fight drag and for presentation of the fly, the tip of the rod is equally indispensable so that the first two can execute their respective roles.*

Maurizio, you have supposed well. It is so. For the only finalities that have been discussed, a rod can be divided into two parts: the body and the tip. The body is the rudimentary part of the instrument. It can be good to achieve distance or at most to achieve it better or more easily.

A TLT instrument in the contrary works with the tip. It is here that all the maneuvers originate and that the other cannot do: movement of the line that do not derive from a more or less uniform pressure of the hand on the grip (with all due respect the equivalent to using a club) but rather from the pressure of the thumb on the section of the tip that we wish to use from time to time.

It is this different pressure of the thumb as it acts on the tip of the rod instead of small sections of the tip, especially on its sensitive extremity, that gives you the beauty of the gesture and the result. From this range of actions, the thousands of ways to place your tippet in the water that I can say that the universe of presentations comes from.



*It is the tip that determines those deadly bolts of lightning and the most delicate presentations.*

The more things are important, the more they are overlooked. Sometimes they are like bright stars in the sky and in others like fireflies that disappear into the night. The more you try to make them concrete, the more they tend to vanish. Just like trying to hold a handful of water: only a few drops remain.

Our thumb is the most important lever we own. This finger can be like a mallet or like a feather. The traditional techniques tend to modulate the pressure of the thumb. It is used in a constant way – monotonously. At most according to the distance of the cast, it will mean more force. The longer the cast, the more this force is applied. This is almost a brutality. For sure very rough. TLT uses no force and without any sophistication. Force only knows force. Vice versa the sophistication has the same importance that chiaroscuro has in drawing.

The traditional techniques carry out the thrust more or less in the same place and unless the distance does not change even with the same intensity or almost. Vice versa in TLT this maneuver varies greatly because when faced with so many different dynamics and variables according to which part of the rod tip you are actioning, by force there will be consequential movements. The world of TLT is the thrusting moment. A world that is unknown or almost in other techniques. It is what this technique gets its magnification, its great versatility and its elastic versatility. It is the triumph of technique, of the technical rigor, of efficiency, elegance and beauty of the movement. It is without doubt that a beautiful thing works better than an ugly one.

In TLT the thrust moment has no limits, for its energy that spaces from the smallest to the largest, for its velocity – which is also characterized both by fast and slower lines. No limits even with regards to the gestures from the tighter ones to the more plastic ones.

Among these extremes, there are many movements that only a refined technique like TLT can express. The vigor of certain thrusting moments are equivalent to a stab but never as brutal as that action. In other cases, the hand is lighter than when you stroke a child or a light gust of wind. In this gesture there is the same rigor, elegance and geometry and deadly efficiency that you find in martial arts. From a strictly technical point of view, the study of the thrusting moment, a world of many movements, is equivalent to studying TLT in its totality.



*The first requisite of an efficient instrument is that it is "neutral". Just like the steering wheel in a race car. Why? It is unthinkable that for every movement the driver makes on the wheel, you do not have a corresponding and consequent movement at the wheels. It is rigorously dependent. For neutral instrument we mean any instrument that does not hinder our will. More or less the opposite happens in traditional casting that force you to adapt to the rod flexing. Why is fly fishing an exception? For which remote reason is it so different in such a clamorous manner to a rule that in any other sector would be considered as basic?*

*When an instrument is not neutral, it does not permit movements like those in the Photo, for example.*

*Q: Now let's speak more about fishing. I seem to understand that there is a close relationship between your casting technique and fishing.*

Fishing is not a limited and definite world but rather a world in continuous mutation. There is a continuous mutation that revolutionizes everything – environment and fish. Everything is apparently old and similar and at the same time everything is different and new. Consequently there are no absolute truths but only temporary ones. Because every moment in time has its truths. You never stop learning but not because any thing cannot be learned completely but because this mutation creates new problems. So the only truth that exists in fishing is "mutation of the truth with time". That is why the game is endless.

The principle of TLT find its place in its genesis: it was born from the water in function of fishing. Everything begins from the conformation of the environment the mother of all things. It is the beginning of a chain in which the last link is represented by the fish that lives in it. In fact the conformation of the environment determines the type, the amount of flow in the river the amount of food, the regularity and the forms. The relationship between the environmental conformation where the river flows and its character, is the key to decipher every river system, the fish that live in it and consequently our behaviour. To the point that by observing a certain place you can figure out the other. This is the reality we need to confront.

Consequently:

1. the conformation models the characteristics of a river system
2. these peculiarities determine the conformation of the pools, the quantity and regularity with which food is generated etc.
3. the sum of these specificities, mold (even psychologically the behaviour of the fish
4. these characteristics are the basic knowledge that determine the behaviour of the fisherman in his approach to a certain environment (technical profile) and the fish (his knowledge). This is the beginning of the circle, the center point of the circle, the place in which our actions are born (casting, presentation etc) and also the thrusting moment – the origin of all the movements of our line.

This is true for everyone, independently from the rod used – Bamboo included. Also because these rods are not designed to cast heavy nymphs or the current plastic abominations that are hypocritically called flies and they are not.

There is little to say about fishing. You are right when you say that there is a close relationship between TLT and my vision of fishing. In fact as a fisherman I evolved step by step with my technique.

The one is connected to the other. You can say that after the many modifications to my technique my casting which at first was stiff was molded on the waters in which I was forced to fish. So, if before problems that seemed without solution (drag especially in faster waters), a price to pay, were solved easily. Trout that lay in positions that resembled impregnable fortresses like deep down behind bushes, capitulated with surprising ease. I had finally become conscious of the importance of a “dynamic that was finalized to the requirements of fishing” which TLT exactly is. Even those casts that are used in the different situations were born instinctively. Naturally. Just like water comes out of the ground. As I started along this path, my casting technique become more efficient.

In short I had solved most of the problems that conditioned my fishing. This is how I discovered a new world. A world that forced me to put my previous behaviour into discussion and that obliged me to look at the same problems under a different light. For this reason, today I catch a lot more than in the past and my casting is a lot better. Isn't that fishing?



*It is not blasphemy to declare that a fishing outing is not the desperate search for some trout to add to others? And bigger ones too? That a river is not a battle ground to travel on mercilessly? That a fly is not a bullet to be shot to the surface in a somber mood, fierce look, greedy heart? With respect to 30 years ago, there is a lot more technical knowledge and even better skill. But what does this serve for if they are not both held up by ethics?*



*We are Italian, extremes by definition.*

**Q: You always mention casting and presentation but never about the importance of the fly. Do you consider them less important? Every fisherman has a considerable number of flies in his vest.**

This is the most difficult question to answer synthetically because it involves various aspects of the system. In my book *Magia sull'Acqua*, for example, the matter occupies various pages.

PI presume that this question is in relation to my previous answer, where I declare that there are no limits to the range of presentations. Unfortunately they are written on water and they are not easy to see if our eyes and minds are occupied on the subtle difference in colour between two flies placed on a vise like for most fishermen. I added that if in our fly boxes we had a few models less and our cast some other presentations, we would have better results.

This said does not imply that I neglect the flies. I just meant that most fishermen attribute too much importance to them - in my opinion. Perhaps even disproportionate. For these a catch lies exclusively in these few feathers. One thing is the importance of the fly, another is its proliferation.

The first thing is substantially simple. The other is a tangle worse than a tangled leader.

Taking for granted that a fisherman is able to choose the right fly, this dilemma rides a tight line between rationality and illogicality. The first one (experience) subtracts; the other (the contrary) increases it. Personal insecurity that can include experience can even multiply it. The number of flies is subjective and has nothing to do with this question.

There is another worrying aspect. For too many fishermen, flyfishing has become a totem: the fly fishing totem - a dribbling Moloch. It devours everything. It has destroyed casting (anyway I still catch fish). It has swept away the quality of the presentation of the fly (anyway only the fly counts). In a few words it has trivialized and even impoverished the system. Without solving any problems. This said we continue to produce "new" models one after the other. More than the stars in the heavens. An incredible mush-mash. I do not know of any sector in which too often, the "nothing" is filled with such meticulous care. Despite this the problem remains. The mystery now reigns supreme. Breathe a sigh of relief, we can still make many new splendid unique patterns.

**Q: Even though your casting technique requires a very fast rod, characteristic that are not so common in bamboo (even though there are tapers that we can define "fast", like the famous IRP in two pieces that you developed in collaboration with IBRA), you have always shown great liking to our association and you are often at our gatherings like this year in Sanssepelcro. What really associates Roberto Pragliola with IBRA?**

There is a close relationship between casting and the flexibility of the rod, between the ability in casting and speed of the rod. TO the point that the more the average level in casting ability evolves, the more you will consider flexible what before you considered stiff. The day in which a certain ability will be common, not only will the evaluations vary with regards to the two terms, functionality will leave space and the two terms of confrontation will disappear. A ruling that only has one measure and evaluates velocity for its objective comparison. Just like what has happened to English rods and then the French ones and so forth.

The IBRA/Pragliola rod when used with a traditional technique, with difficulty can be defined as a fast rod, at least according to my parameters. On the contrary if it is used with the TLT method, the term can be evaluated again. The maneuver to make it so is an old one and I've called it "stretching the rod": a movement that is closely related to the thrusting moment and to the differences that this gesture gives when you vary the entity (force expressed in a short space) and the point (with respect to the whole rod length and in particular the tip) in which it is carried out. Funnily also this depends on the thumb that acts on the tip.

To understand this better, let's take the face of a clock. When you activate the thrust movement in traditional cast and the rod held almost vertically, the rod flexes more or less according to its characteristics. In any case this position contributes to act on the middle of the rods – this is the origin of many problems. Velocity being the first one. ma.

Vice versa if after having started the acceleration you start a rotation of the wrist so the the tip passes ahead and so the instrument advances very inclined forwards and at the same time you carry out the thrusting movement at a later stage (around 2-3 o' clock – it depends; additionally by pushing the the tip of the rod forwards (almost linearly), this position prevents the involvement of most of the body of the rod which is its "softer" part which is the origin of many issues.



*This rotation of the wrist is the most important one; destined to make the tip of the rods traveled inclined forwards.*

*General indication of the thrusting movement to "stretch" the rod with a graphite rod.*

*The fingers of the holding hand open and the thumb contributes its part to maintain tension: a remarkable contribution to favour the maneuver. The movement only involves the tip.*



Technically is is a great advantage. It is like using the rods in "sections". Rather like using different rods and not only one. The possibility of using in a more complete and diverse way of taking advantage of the rod; it allows otherwise impossible performances that involve the cats, the presentation of the fly.

A rod is not a rudimentary instrument that emits only one sound (parallel trajectory). A one string instrument that buries the fantasy of even the most excellent talent a deep cloud of mediocrity. A rod is an orchestra. It can emit a thousand sounds, a thousand tonalities, a myriad of subtle nuances like in the most beautiful harmonies. Unfortunately this is the sad destiny of those who use an excess of weight and that cast in parallel lines and that perform always and only this movement.

In the old days when bamboo was king, the makers were capable of acts of love and knew how to make rods with their hearts. It was always disconcerting by the gap between the attention that was applied in making the rod and the way it was then used. Is is the same gap that you find between this great passion, this splendid ability and the monotonous and repetitive, trivial way that these rods were used. It was the worst insult that you could send these men.

L'IBRA is an oasis, fortunately and unfortunately at the same time. Fly fishing has had sublime actors, poets, beautiful. These are the type of people that have made IBRA great and that today we are destroying and we have no right to do so. Graphite rods may even be cold, heartless but they are capable of a deadly efficiency. Unfortunately most of today's fishermen do know neither the one nor the other. The modern individuals are squalid, mediocre. Incapable to carry out sublime actions. These characters, after a catch have sacrificed everything to the most modern, ramshackle barbarian of the gods. There is no space for poetry, for a beautiful technical action from which you fulfilled and that cannot be measured by the size of the fish or the number of fish caught; the only way that is used to evaluate fish today.

Above all there is no space for beauty so that all is left is catching. Big, always bigger. Shown of to the four winds. Externalization instead of interiority. And finally the rush, the disease of this century which is elevated to the highest alters. Incensed with the most venomous and garish poisons. Praised with the most deafening clamors. Vulgar. And haste, its close relative. This haste that closes minds and hearts. That has devoured this world with the fury of those that hate beauty. Nothing is done for the pleasure or the pride to do something beautiful per se. This is what I breath in IBRA and I cannot find any other association where I can find this. That is why I am always happy to attend your gathers.



*Alberto Poratelli current IBRA President with Roberto Pragliola signing his IRP7232*

To cap it all, I am pleased to see that the best bamboo rods that I have seen at your gatherings are better than the industrial ones built in my day. Even of the most prestigious names.

We all know that the limits of bamboo are speed and length. While the former is considered essential, the latter (the length) and its most acclaimed advantages are only marketing strategies with respect to trout and grayling. I think we can correct the first issue at least to a certain length. I mean that there is space to make faster rods than the IBRA / Pragliola. To me this seems a road that is worth traveling on. In IBRA I know capable people. All you need is the will.

And now a series of photos; the barriers between what is in the reach of bamboo and what unfortunately is not.



*These technical action is impossible without a very fast rod and of a specific TLT graphite rod.*

*Impossible for bamboo.*



*Completely turning over a leader that is so long, which is invisible for its entire length because of such a short line is possible with bamboo. In this case velocity is not necessary – in fact it is counterproductive. The action consists in a great rotation of the rod (better if the maneuver with the rod held perpendicularly) of the tip until the thrust movement paying attention to give a low progressive velocity. Is the leader too long? Probably. All depends on how you conceive fishing. Normally TLT uses tapered leaders that are about twice as long as the rod.*

The length of the leader is subjective. A leader that may be considered too long for some can be easily turned over by others. So what do you do? A rule exists and it is: use a leader that is just too long for you to turn over completely. This criterion is different from person to person but everyone has his own length. The same reasoning is valid for the tippet.



*This maneuver ( the TLT tangent to the water cast), corresponds to a line that travels in the air very close to the water surface. This cast is obviously based on high velocity. It serves to place your fly under the vegetation. This maneuver is impossible not only for bamboo but also for most rods used in the usual techniques.*



*When the trajectory is rather high above the surface like in this case , the same tangent cast can be executed at low velocity. Thus even with a bamboo rod. In fact this cast was born with bamboo rods.*



*The fly is placed on the water with the leader curved backwards with respect to the fly. : This presentation is difficult but possible with bamboo.*

*In the circle the fly.*



*Also this maneuver is carried out with relative velocity. Possible with bamboo.*



*This is also possible with bamboo.*



*The same for this cast.*



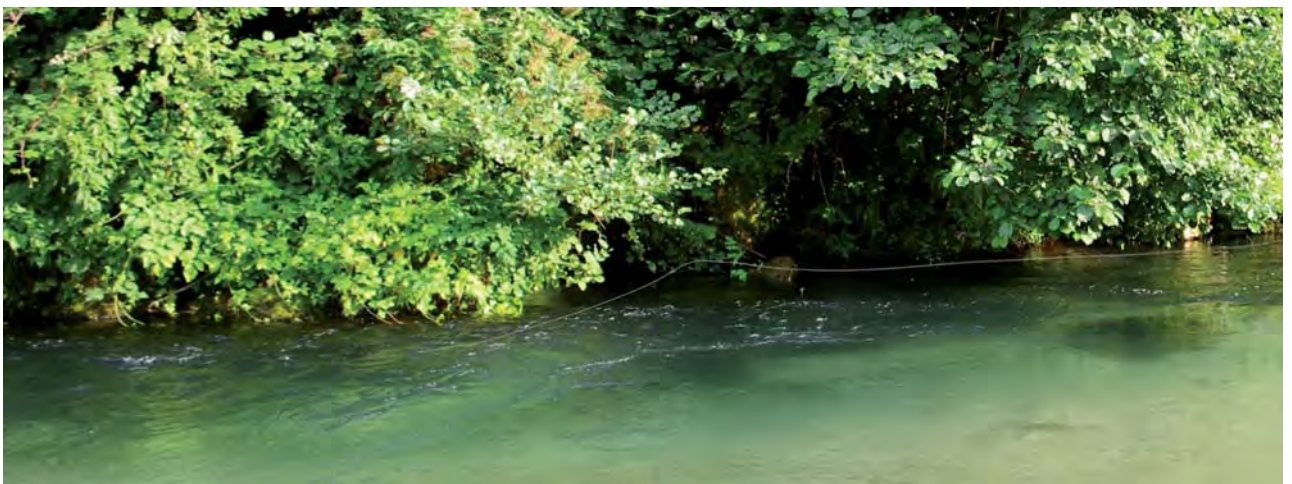
*This maneuver (one of the many versions of the superimposed TLT casts) is an exclusivity of high velocity. It serves to place you fly under the vegetation even for a short drift: a stimulus for the fish that rejects other presentations. The trajectory is executed in slight angulation. As soon as the finest part of the leader touches the water, you immediately stop. At the same time the leader which is still all in the air, curved backwards but that still has its initial inertial force, that little that makes it slide forwards and straight on the surface for a brief tract. Greater velocity makes the fly slide for longer tracts and with greater velocity.*



*One of the many typical presentations of this technique: the fly on one side and the tippet on the other. The line thanks to a long leader is still far away from the landing place when it will be the first to land. Silence is assured which is fundamental for flat waters. If the fly reached the fish with any disturbance, there are more probabilities to be accepted even if it is not the right fly. This can be done with bamboo.*



*Parallel trajectory but the line and leader are bent towards the water almost at right angles.*



*Detail of the previous photos. The tip of the line and the leader bent towards the water at a right angle.*



*Gabriele Gori, IBRA's first President at the presentation of the rod "IBRA - Roberto Pragliola" occurred in Arezzo (Tuscany)*

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Most of the photos (and texts) are extracts form my book "Il Lancio Totale".

All the casts were carried out with Loomis TLT rods. The lines are #3 double taper and the leader approximately twice the length of the rod.

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*Adda River at Berbenno di Valtellina*

# REFLECTIONS ... FROM THE DUNCE'S DESK: "A question of ... enamel"

by Giorgio Grondona



It was a Saturday, in March 2012 when with Beppe Bo, a young rodmaker from Rocchetta Tanaro, we went to Cesano Maderno to Luciano Oltolini to collect the culms of bamboo we had ordered a long time before and which had arrived in Italy in February. We left in the morning and reached the "northern" warehouse of IBRA after an hour's drive, all was well. As always, meeting Luciano is special and despite his grey, thinning hair, his liveliness and enthusiasm are those of a feisty teenager. We spoke about rodmaking, finished rods and those that would come out of the new culms; we loaded them, four bundles of ten culms each, the treasure that would make the dreams of two newbie bamboo planers come true.



The bamboo was on the truck, we could move on to phase two which at Oltolini's place means laying eyes on his wonderful agate stripping guides, completely handmade by Luciano and that in a short time have encountered the favour of many high-level rodmakers. At this point things started to deteriorate, not because of the marvellous agates I was admiring, but because of the awful symptoms caused by a devious flu virus, which interrupted our visit.

Once back home, Beppe helped me unload my share, half the load, which we placed on the garage floor, packaged just like Andy Royer, the "Bamboo Broker" the IBRA supplier, had sent them.

A few days passed and I fully recovered and I could finally dedicate my time to the dear culms of *Pseudosasa Amabilis*. I still believe that *Arundinaria Amabilis* has a better sound!!!

I must admit that the 2012 supply was my first consistent one. I attended the Rodmaking Course in 2009 and after that I had taken some from the IBRA stock, begged some from other members and had bought some from a local nursery, specialised in bamboo. The latter were shorter than Royer's culms, but this was the only noticeable difference, apart from the diameter, which in my opinion was lacking after splitting. You can imagine my expectations while I was unpacking and thinking about the maximum diameter that my category should have had...

Bjarne Fries wrote on his website and repeated it at a Gathering in Sansepolcro, that every time he starts making a rod, he builds an almost spiritual relationship with the bamboo he is about to work; well my disappointment at the small size of the culms in front of me provoked a much less spiritual sensation!!!

Luckily, to quote an Italian proverb: "Raglio d'asino non sale in Cielo" (the bray of a donkey does not go to heaven).

I still had a substantial stock of bamboo and so the small culms ended up buried beneath the ones that had arrived before and that my ignorance had decreed of better quality. While I was stashing them, I noticed one with some writing on it; what could it say, apart from an apology, so I ignored it.

Three years and fifty rods later, as well as several "casual lessons in humility", the moment to use the 2012 stock arrived with an important task, which was to make the rod that would have won the first price in the lottery at the European IBRA Gathering. I was to build it with Silvano Sanna, who lives in Lanzo Torinese. I was to prepare the blank and Silvano was to fit the ferrules, do the final assembly and varnish. In moments of crisis even this happens. In other moments Alberto Poratelli would have asked a "winning horse", but without "horses", the donkeys trot (I am talking about myself; Silvano Sanna is certainly not a donkey).

As mentioned earlier, three years had passed since the last supply of bamboo and I started choosing from the culms, which were exactly as I had stashed them and since I needed one for the Gathering rod, I checked them all carefully until I found something that at first sight was similar to the others, but with a small scribble on it: "Small but nice let me know if this work for you - A".



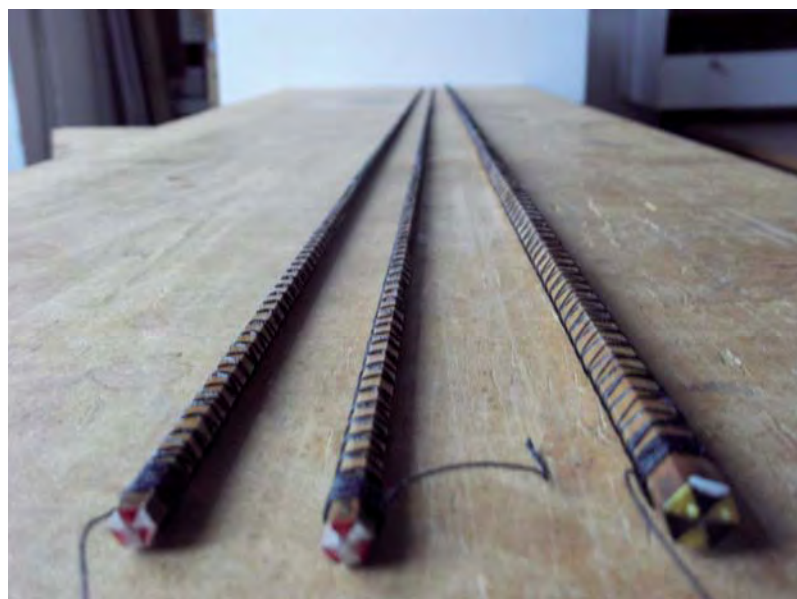
That A. was unmistakably Andy Royer's signature and if the "Bamboo Broker " had seen fit to point it out, he must have most certainly have imagined its quality; I a bit less but.... for the planned taper it was ok. The inter-nodal distances were good enough to respect all the functional and aesthetic parameters sought after by every rodmaker during production. The diameter just under 45mm and a circumference of 145 would have made it difficult to split it into 24 strips each for the butts and the tips, but the decision had been taken.

Of course I cut the culm into two sections, which I would have split later and I noticed the richness in power-fibers that little culm had. I'm not a good photographer, but you will understand that it is difficult to handle a camera with hooves. Sometimes, even an imperfect photo paints a thousand words. For the moment these will have to do and even the one of the nodes you will have to trust me that they were really very inconspicuous.

Splitting the halves did not present any difficulty, just as the subsequent splitting into six sections from which we would have recovered the final strips. Therefore, having eliminated the diaphragms and with a steel nail in the vice, I split the sections into strips to make the levels. To my surprise, a small cut of the section of the desired width and a light push, split the fibres perfectly following the longitudinal axis without wondering. Even the nodes did not present any issues. I heated and pressed them and after that the strips were almost straight, therefore in a short time and with little effort I obtained 48 wonderful strips, 24 for the butts and 24 for the tips. The staggering of the nodes was a simple formality, just as the rough planing, which was almost effortless. Granted that planing the levels requires no great ability, but if in this phase the fibres in the nodes do not tear, after the heat treatment, they should not create any problems and so it was.

I will spare you the chronicles that brought to the completion of the blank – see photos of the conclusion.

The sentence that Andy Royer wrote on the culm and the story that followed in my opinion means that Andy liked that culm. You can say that even among you humans likes and dislikes are often skin deep and since we are talking about bamboo you can say it's "a question of ... enamel" (another lesson in humility).



How did this end? Andy Royer was our guest at the IBRA Gathering in May 2015. Knowing he would be there, I brought that piece of bamboo and I showed it to Andy, who took a felt-tip pen and wrote:

"Thank you to I.B.R.A. our passion flows around the world".





ITALIAN BAMBOO RODMAKERS ASSOCIATION



*Adda River at Berbenno di Valtellina*

# THE “PATHFINDER”

BY ANDERS HEDIN

(anders.hedin@telia.com)

I am a bamboo-flyfisher since my teens, but the years have rolled on and now in my old age, I find myself in a hurry to do all the interesting things connected with our hobby. Besides the regular fly-fishing with my wife up in the north of Sweden every autumn, entomologic studies would for instance be exciting, with a camera put on a preparation-microscope connected to the computer. That would give some new knowledge, beautiful pictures and new hints to the fly-binding.

However, during the last six years, rod building has been the important part of my “indoor-fishing”. It all started 35 years ago, when I found a thick book on bamboo-rod building by Garri-son and Carmichael, down in a naphthalene-smelling cellar owned by a teacher, who had found this place to hide his small fly-fishing store. I was scared when I looked it through - the book was too complicated, but somewhere deep in my heart I felt its importance and bought it. It was then hiding in my bookshelf until my retirement several years later. Then I read it, twice. I started calculating. My wife, two years younger, still worked at the hospital from 7 a.m. to 16 p.m. In our apartment we had a rather large kitchen. Could it be possible to put up some equipment for rod building there, to work some hours, clean the kitchen, go down-stairs with the stuff into our cellar, and open the door for my wife at 16.00 with a big smile and give her a fresh and relaxed kiss?

Worth trying! However the planing form was expensive. It also was very heavy for transportation from USA over to Sweden. A real problem, until I realized that my dear daughter was married to Lasse, a warmhearted chap with skillful hands and very engineering-minded.

The following summer we bought the necessary iron bars. When I felt the weight of the two pieces my heart beat fast and I knew that I was going to do something foolish and probably impossible. Lasse bored and threaded the holes, and with a smile in his eyes he put the iron-bars in my tiny white clerk’s hands and wished me good luck.

After finding a good 60 degree file, buying two trestles and a board as a table, I started an exciting but in some way endless two years of work. I was happy to see on the micrometer that the 60 degrees ditches slowly became deeper every week. At last, one day my tapered grooves were finished on both sides of the iron bars. This minuteness of metal-work, some fly-fishing with my old delaminated Hardy rod, alternating with gliding in my aero club, filled my first years as “senior”, a quite enjoyable way to “spoil” the lonely spare-time. As I can remember it, my wife never noticed any abnormality when she went into the kitchen.

When these two years came to an end and the planing form was finished, I saw the crisis coming. My wife was also going to be retired and I had not yet tested the planing form with bamboo! She loved cooking and I saw the problem. She was the Master in the kitchen, I was her garbage-assistant who also washed the dishes after all tasty cuisines she performed. However, it turned out lovely. I had cleaned the kitchen in perfect order during the two years of metal-work and she supposed me capable to do the same with the bamboo-dust!

We made up a time table and it worked out perfectly.

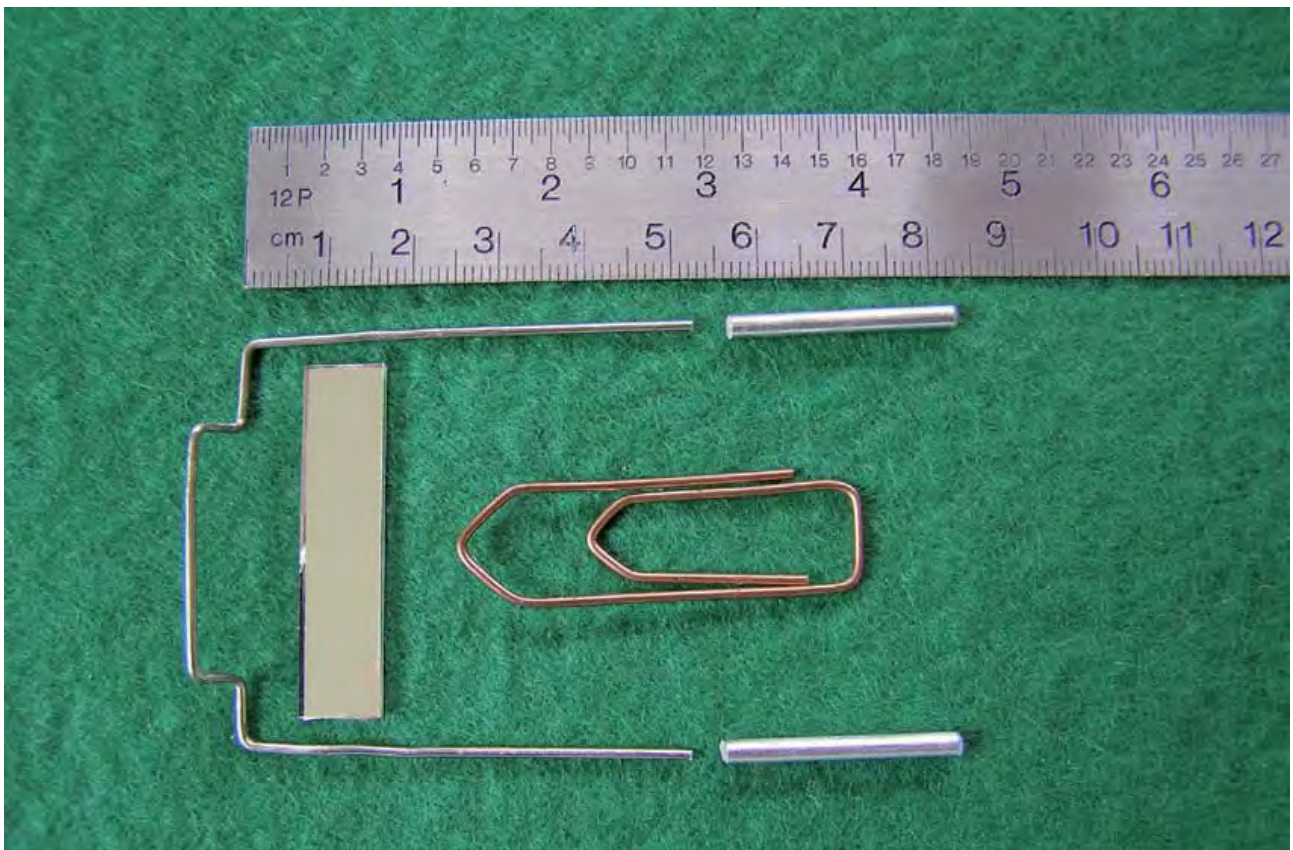
When we have a major problem I am used to solve it the scientific way. First, read all you can find about it and then think it over in a diametrically opposite way compared to solutions already published. It has been rewarding during the years. So was the case when I started to plane my first bamboo-strip. The books told me to put a shaving-mirror in the far end of my planing form and to look into it, to prevent the planer from tilting to the left or right. However, this was possible only when I was up planing the slender part of the strip close to the mirror. When I worked in the thick end of my bamboo-strip I could not see the little space between the planing form and the bottom of my planer, because the mirror was too far away.

One night, after a day with a lot of bad 60 degree angles, I got the solution. Bring the mirror to the planer, and I will be able to see the gap sharp and will go the right path along the bamboo-strip. In the dark of the night I could clearly see the construction of my "Pathfinder"!

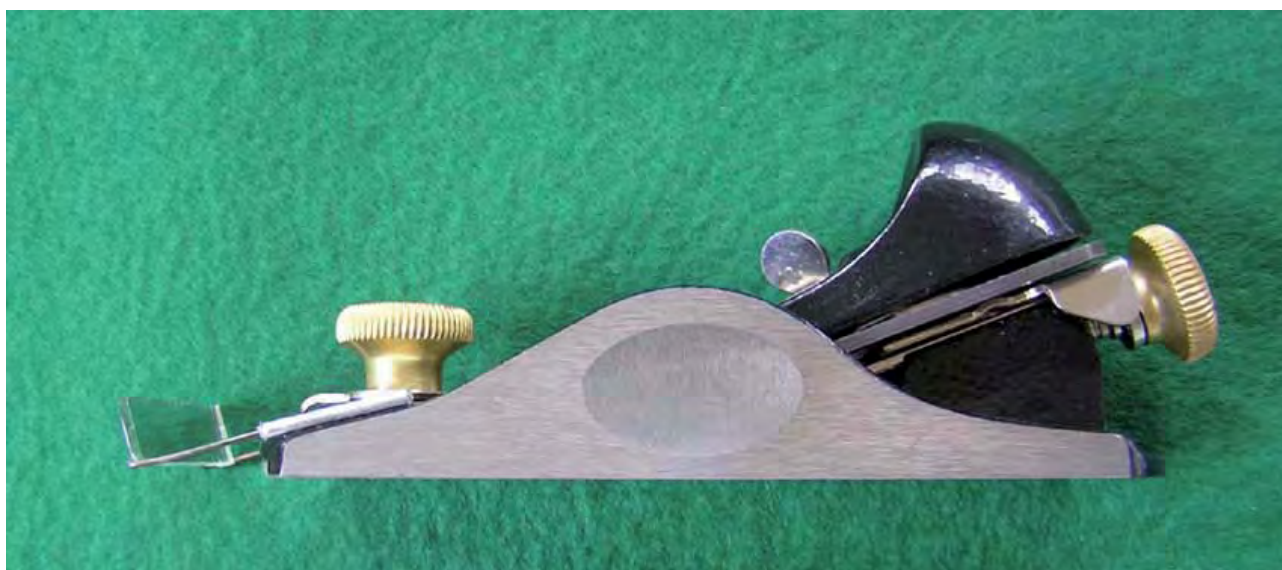
If you, dear hand-planer like me only make a few rods a year and do not yet have the feeling in your fingertips to balance the planer correctly more or less automatically, the Pathfinder will be very useful and it is easy to put together.

You only need:

- a large paper-clip;
- a piece of a 2 mm thin mirror (not thicker) cut 40x10 mm which is found as waste and could be cut in the glazier-store . Ask the glazier-owner to take away the sharp edges of the newly cut mirror-piece to save your fingers;
- two aluminum-tubes for binding a salmon fly streamers with 3 mm outside diameter, containing a silicone-like tube inside it, to fit the thickness of the paper-clip.

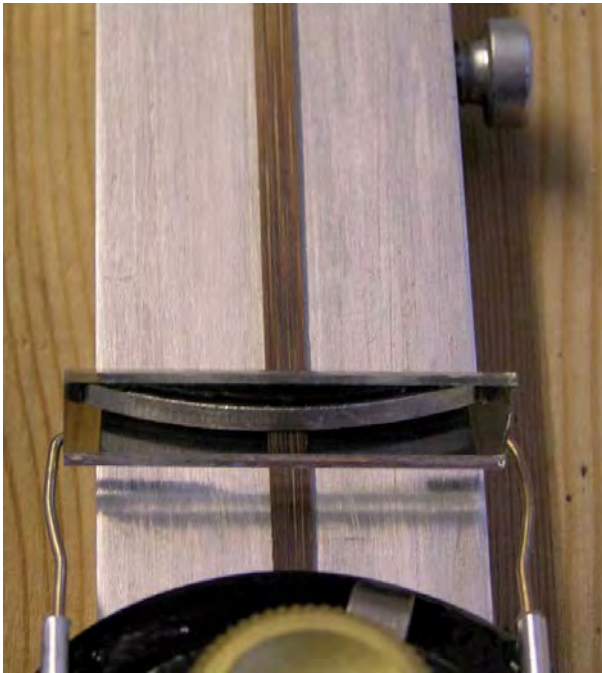


Use a plier and some good glue to attach the paper-clip on the back of the mirror and the aluminum tubes on each side of your planers front.



With the Pathfinder a little angulated and extended about 15 mm in front of your planer, you will easily see right in the dark gap between the planing form and the bottom of your planer. Your back and head will have a relaxed position and it will be easy to see and adjust any undesired tilting. Do not have any strong light behind you. Have it in front of the tip-end of the planing form thus coming from behind the mirror. The gap will then be dark and sharp.

Wish you a lot of nice planing!





*Sforzesco Canal*

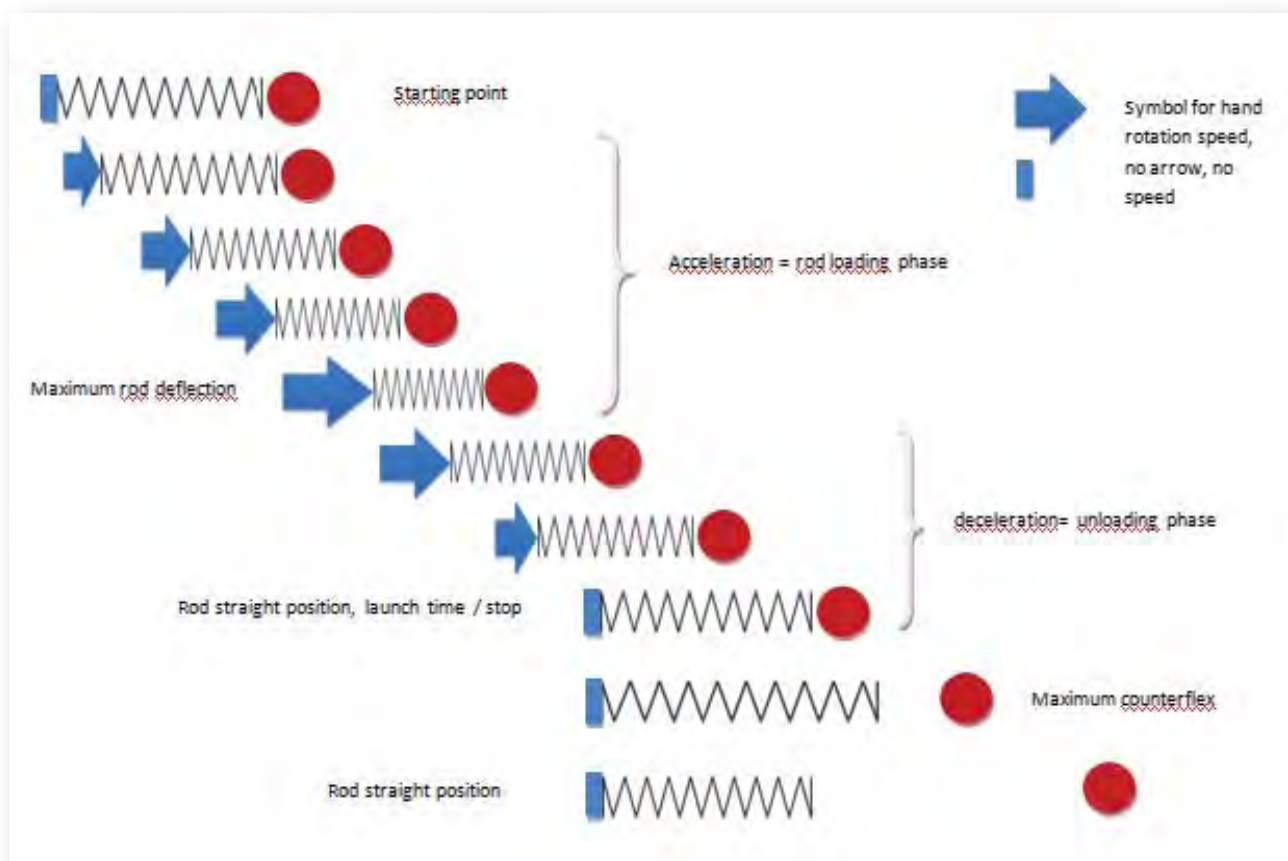
# THE MAGIC OF THE FLY ROD

## The self deceleration mechanism (SDM) or the underlying magic of the fly rod

by Daniel Le Breton

§§§

I like to use a spring and marble representation to explain the physics of the fly cast. The spring is the fly rod and the marble is the line (see [fly-fish-guide.net](http://fly-fish-guide.net), "Fly rod casting model"). Here is an illustration:

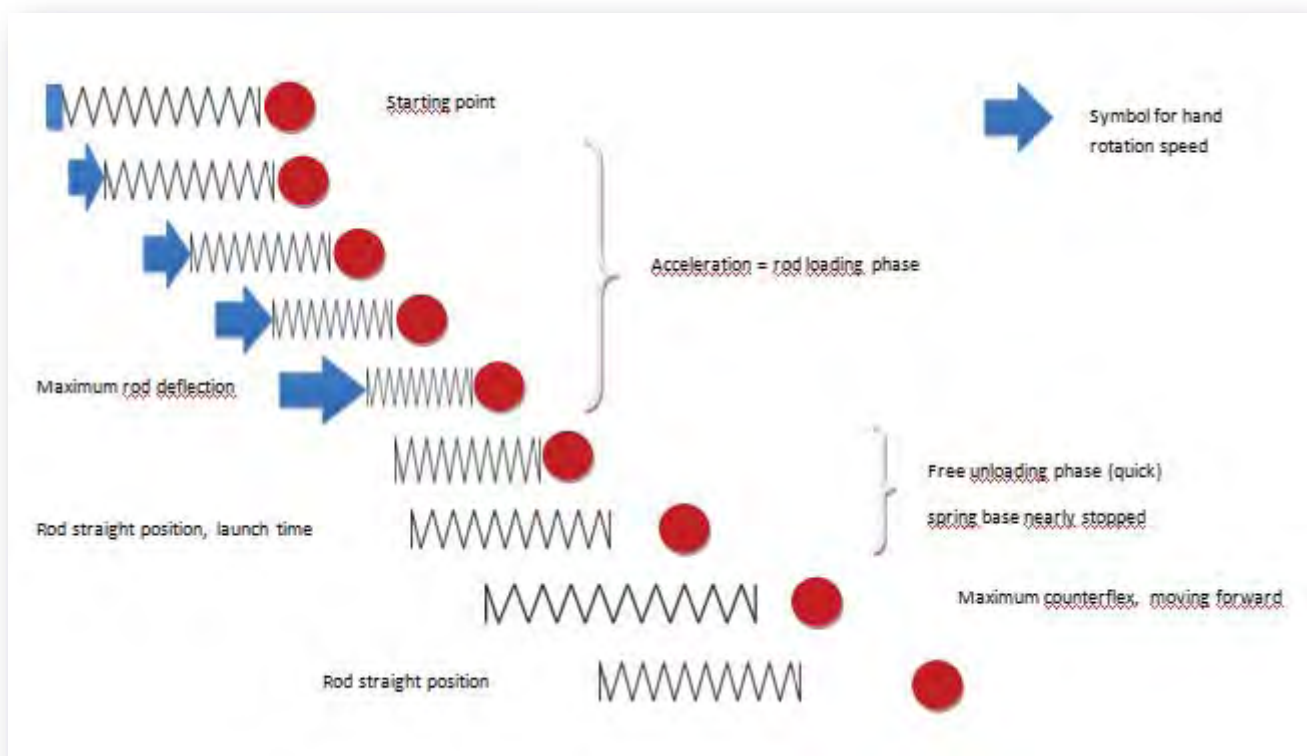


In the real world, the rod is also a lever, but the basic mechanism is the same. In my mathematical models, I just add the lever function.

Recently there was a discussion about “stop less” cast on a forum (Sexyloop) and that made me think that it could be interesting to see how the simple spring & marble model would react if we were not stopping the base (rod butt) after the end of the acceleration in rotation. In a normal cast we decelerate the butt to a standstill but in this virtual experiment, we just let it go and watch what is happening.

Not surprisingly, things vary with conditions (e.g. the mass of the marble), but the unexpected event came from the fact that the base of the spring can stop for a while, or even can slightly move backwards, before starting to move forward again as the marble is launched. In extreme conditions (light marble), there is just a tiny deceleration of the base of the spring which is difficult to detect, the spring just keep on moving forward. A testing device has been developed by one of my friends and thanks to his high speed camera; he could record characteristics (rod tip speed, angular rotation) which were looking like what the simple model was saying (see Sexyloops forum, the thread is named “Self Deceleration Mechanism”).

Here is an illustration of this mechanism:



The mechanism is pretty fast, the base of the spring seems to stop for a while and then restarts again moving forward. It is the natural propensity of rods to decelerate their butt if the conditions are there. In other words, this phenomenon is more and more intense if the load applied to the spring (the mass of the marble) increases. For a given cast the deflection of the spring increases with the mass of the marble, and this goes along with the capability of the spring to self decelerate itself. If we could completely control the motion, we would stop the spring as soon as it has decelerated its base. In reality, we decelerate the spring at a slower pace compared to its natural propensity, this is due to our physical capabilities, but nevertheless we get advantage from the phenomenon.

To me, this phenomenon explains the feel we get from the rod: we start with a short length of line and things are not easy, a neat stop is welcomed. Then we increase the length of line and the rod comes to life, it is more comfortable to cast and you can detect if the line goes along with the rod. Some people talk about "letting the rod do the work".

For cane enthusiasts, the natural propensity of bamboo to give heavier rods (same rod length) than graphite is not an advantage in terms of self deceleration. If you could divide by two the weight of a cane rod while keeping the same overall stiffness, you would increase the self deceleration effect for a given line length.

For those who prefer softer/slower rods, the SDM is easier to get with shorter length of lines. Lowering the stiffness of the rod has the same effect than increasing the length of line: you increase the intensity of SDM, the rod is more comfortable to cast.

This mechanism is a crude physical thing but I like the poetry of considering that as a magic built in fly rods. What wonderful and complex machinery!





*Adda River at Berbenno di Valtellina*



# TRIANGULAR AND OTHER SHAPES OF BAMBOO RODS

## ALL RODS ARE DIFFERENT

by Tapani Salmi

February 2014 in Bamboo Journal (p. 54) Gabriele Gori wrote an extensive analysis of the effect of the different cross sections on the power of rods calculated as Modulus Of Inertia (MOI). In his article he compared the MOI values of the different cross sections and different degree of hollowness of rods. We know that the number of strips, the thickness of strips, and the possible inside structure like hollowness of the rod has its effects on the rod bending. The MOI value could be calculated for different cross sections and it is a straight forward method to compare the rods of equal mass distributions. MOI formulas are found and the calculations may be performed easily e.g. at <http://www.engineersedge.com/calculators.htm> Internet site.

During the European Rodmakers Gathering in Sansepolcro May 22-24th 2015 we had an informative discussion on this topic with Gabriele, Philipp Sicher and some other makers and therefore I would like to make some completing remarks on the analysis.

Gori's article includes an extensive table to show MOI of almost all possible rod structures (number of strips, hollowness, etc).

As summary of his article for solid structures he wrote "the solid triangular section is most efficient" as the triangular (TRI) rod with equal MOI ("equal power") is 8-9% lighter compared to most common hexagonal (HEX) structure and the MOI of a TRI rod actually is 36% greater.

Thereafter in the article he compares hollow rods of 2,0 mm and 1,5 mm wall thickness and calculated the MOI values for these structures. Now it is clear that a HEX rod is more powerful than TRI. There are, however, different ways to build the hollow rod. The calculation of MOI is strongly dependent both on the thickness of the strips and on the total diameter/thickness and on the shape (HEX-TRI) of the rod. The wall thickness is only one factor in the formula. A TRI hollow rod of equal mass to a HEX hollow rod may actually be weaker or stronger due to different way to construct the final cross section.

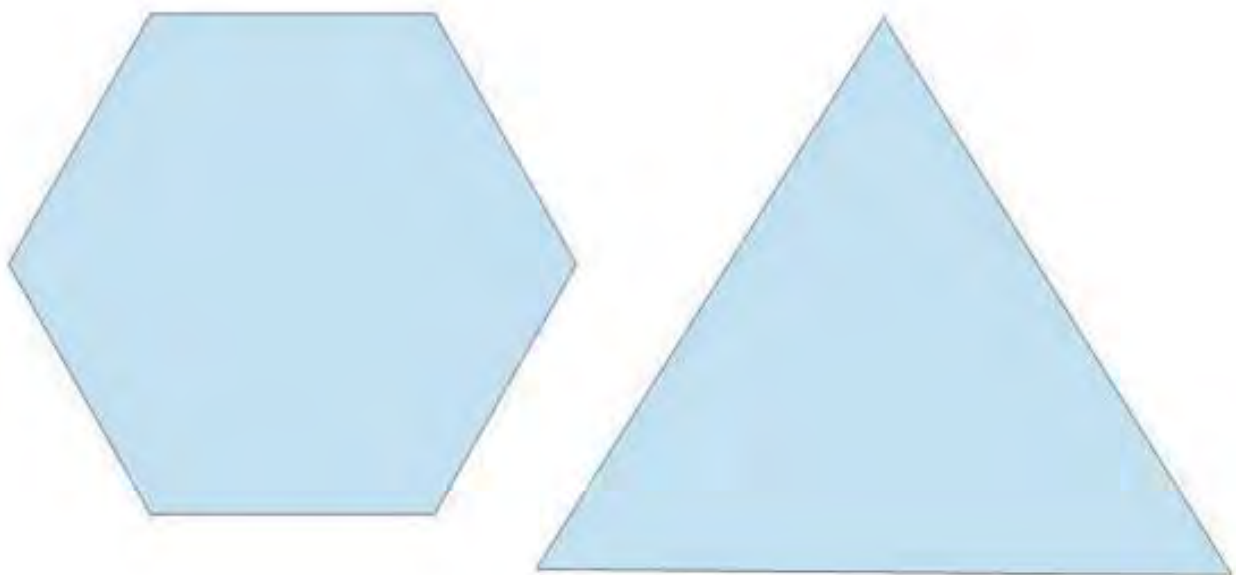
For the analysis of hollow building Gabrieli Gori used constant 1,5 mm and 2,0 mm strip wall thickness. The MOI value of a hollow HEX rod is now greater than a hollow TRI rod.

We may, however, start with strips resulting in TRI and HEX rods of equal mass and then plane the strips thinner. If we want to take away e.g. 50% of the weight we have to plane 71% of the material thickness away. Now we have still a HEX and TRI rod of equal weight. Using the MOI calculation the MOI value of the TRI rod is again 36% bigger. Of course, the HEX strips are now thicker than TRI strips because we started with strips of different thickness and took 71% of the thickness away.

For the practical rod making the durability of structure of an extreme hollow building is somewhat demanding. We e.g. need some internal support, "bridges" to support the shape of the rod. In addition the broadness of the glue line is important for the durability of the rod. The TRI shape gives some advantages for these building features.

#### Summary:

The hollow building of a cane rod is certainly the most effective way to increase the power-to-mass relation of the rod. Hollow building may be recommended to builders interested e.g. in longer and therefore heavy rods. The design to a hollow rod may be performed in different ways: by starting from an solid rod and by planing the strips thinner e.g. to get away 50% of the mass or by constructing the strips to a preset constant thickness and gluing the strips into the blank. The comparison of the MOI of rods of equal mass depends on the thickness of the strips, on the total thickness, and on the rod shape. The mathematical science of rod building seems to be quite complicated. The fishing poles, however, should be constructed to be useful for the individual preference of fly fishing style.



**FIGURE 1. Solid HEX and TRI rods of equal mass. The MOI of TRI rod is 36% greater than HEX.**

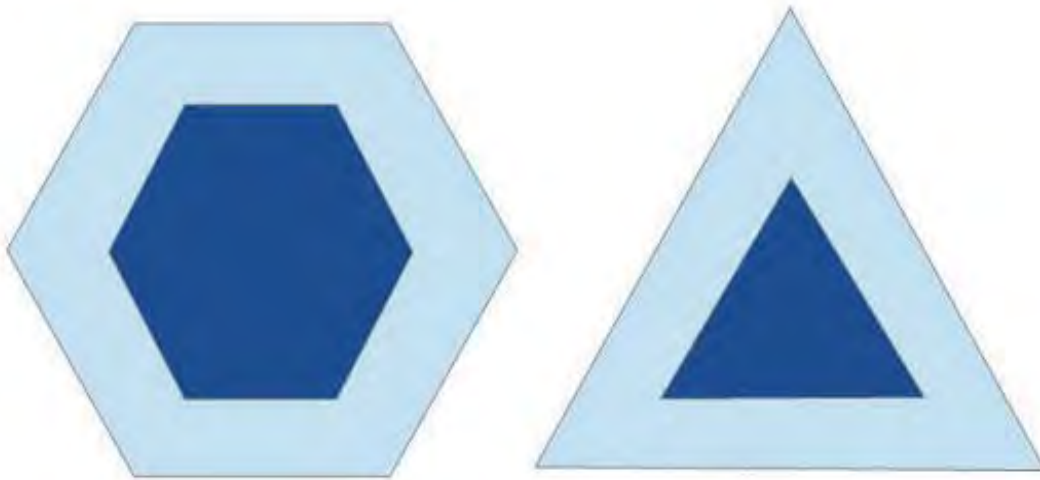


FIGURE 2. Hollow HEX and TRI rods of equal wall thickness and equal mass. MOI of HEX is greater.

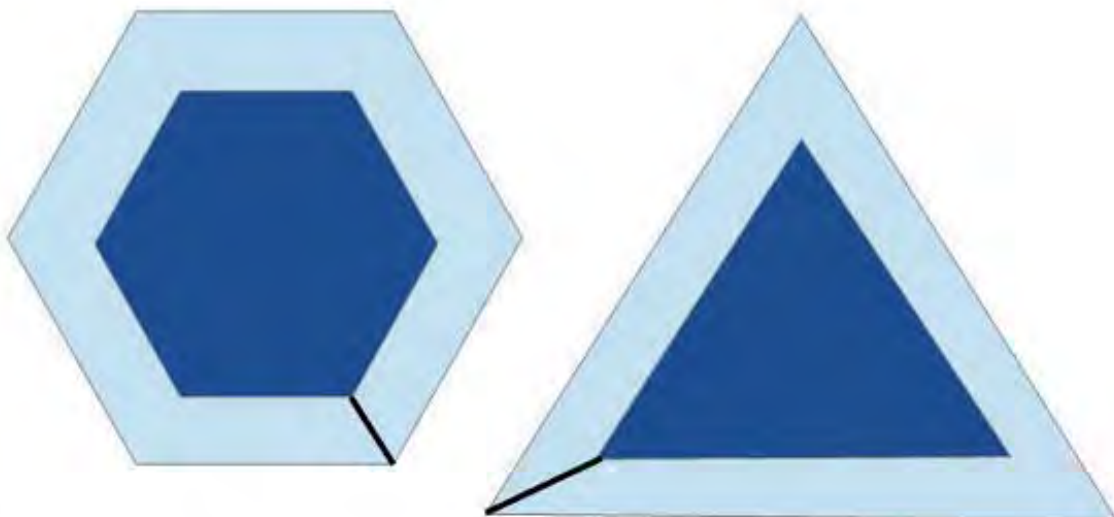
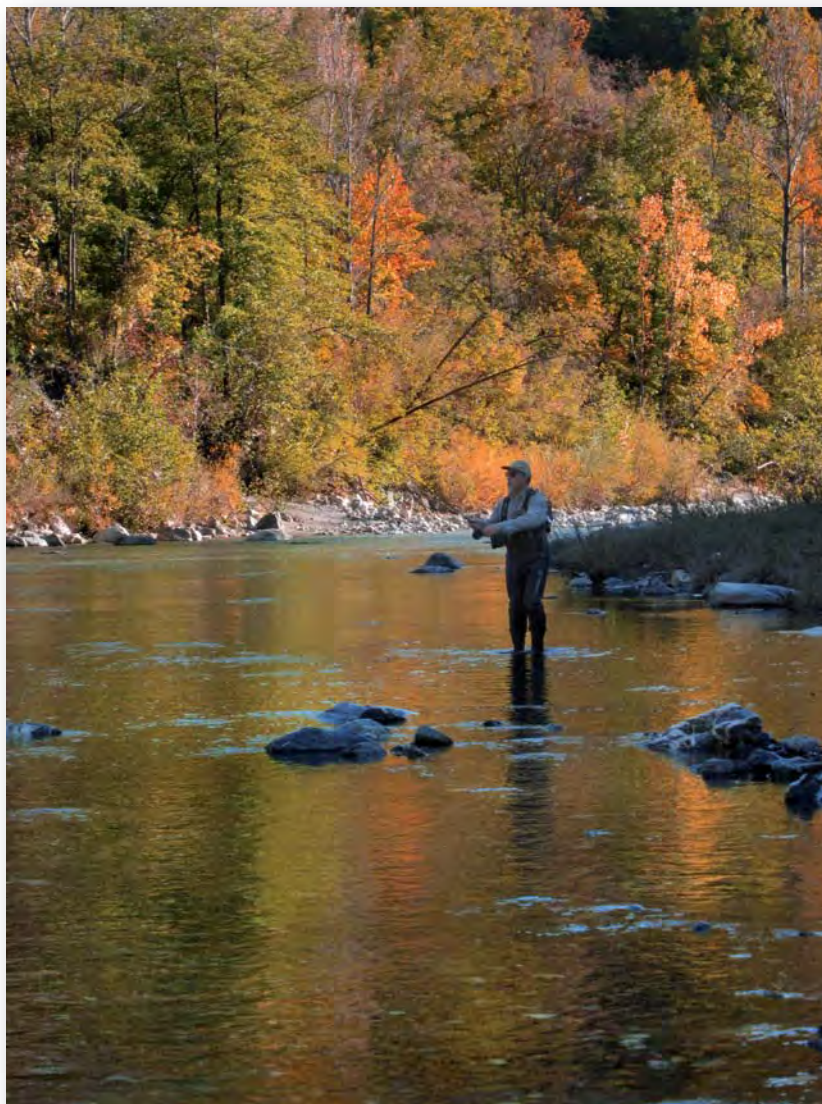
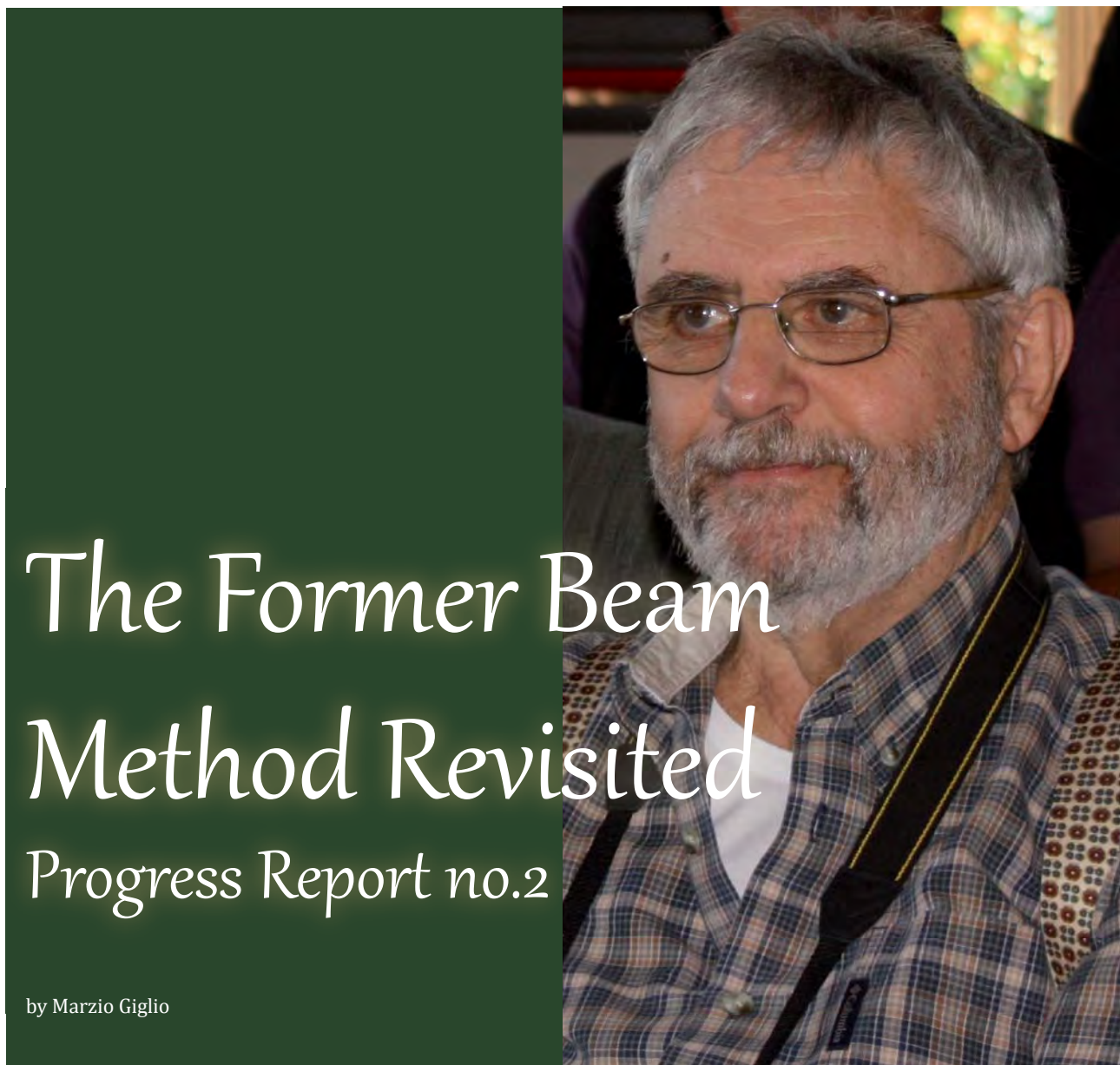


FIGURE 3: HEX and TRI rods from Fig 1 are hollowed by taking 50% of the mass away. The mass of both rod is equal, the MOI of TRI is 36% greater than HEX. Glue lines are visualized.



*Trebbia River*



## Introduction

This article is the Progress Report no. 2 about the revisited Former Beam Method (FBM) I presented at the 2014 Sansepolcro Meeting. The revisited method is specifically aimed to make quadrates. The instrumentation is really minimal. I developed the method because I wanted to make quadrates with the outside faces retaining the natural curvature of bamboo, so to minimize the loss of the outermost thin power fibers. Something that will be immediately appreciable, by looking at the thin fibers appearing on the wide surfaces of the quadrate rod. Also, the method, by construction, guarantees that the sections will have a “quadrate” symmetry, with diagonals of matching length. Frankly, I do not know if all this will make better rods. I find that the uniform curvature of the outside faces and crisp edges have a pleasing effect.

The real question is if the method has an accuracy comparable to other methods. I will present at the end some preliminary evidence that this is the case.

The present article covers some changes I have introduced to render the method simpler and more accurate. Some of the changes are just convenient improvements. Others are more important as they deviate substantially from what suggested last year. In particular, I will present a method for the final planing of the bamboo strip with a (commercially available) edge trimming plane with a skew blade. It performs very smoothly and it is quite reliable in performing the last steps that determine the accuracy of the finished blank. For convenience of the readers who have not read the FBM paper no 1 (Bamboo Journal, issue 16, September 2014) this article gives an almost self contained description of the revised version. I will discuss things following the sequence of the various phases of FBM, but mostly where changes have been introduced. Some repetition has proven unavoidable, as it was necessary so that a reader could understand without having to go back and forth to the 2014 article too often. I will indicate where an interested reader should go back to the 2014 article to read about points that have not changed at all. The FBM is the most minimalistic method to make a fly rods, as it does not require the adjustable steel bed with push-pull bolts like used both for the planing form and for the Morgan Hand Mill. It uses just standard commercially available woodworking or instrument making planes, and additional bits and pieces that can be easily built with standard woodworking methods. The FBM was invented by a cabinetmaker in the late 1800, and it was used by Hardy's before they built their own beveling machine.

The central idea of the original method is to plane the bamboo strips while they are glued with reversible glue to tapered "flats" on the edges of a wooden beam.

The volume carved away from the flats duplicates the volume of the strips to be done according a chosen taper. The bamboo that sticks out from the flats is then planed away so to reconstruct the original edge. This way the strips are "formed" from the beam. And that is the reason for the name.

Planing the bamboo while it is glued to the beam is very smooth and accurate. The FBM was the first rod making method I saw in the late seventies, in the shop of Rob Wilson in Brora, Scotland, before the Garrison Carmichael Bible appeared. I was not making rods then. So I could not ask technical questions. One detail that got my attention was that the outer enamel side of the bamboo strips was planed flat to ease glueing to the former beam. So when few years after I managed to read "The Bible" and read that it was imperative to spare as much possible the outer power fibers, I concluded that FBM was a bit brutal. So I joined the group of believers of "The Bible", I had a cold rolled steel bar planing form made, and I built hexagonal for many years. In recent years I got interested in quadrate rods. I liked the feel and the way they cast. So I made a few, using home made planing forms. People liked them, and this encouraged me to continue with quadrates. However, I was not completely happy with the general appearance : rod sections (here and there) were not as "square" as I wanted. So I started considering the FBM. I thought that because of the way the bamboo strips are generated, highly symmetric sections were to be expected.

There is very little published literature on the FBM. I know of two small books, one by Moss and another by Richard Walker. The most glaring deficiencies of both books are the lack of information on how to plane the FB, and how to plane the “flats” with the accuracy required to follow a chosen taper.

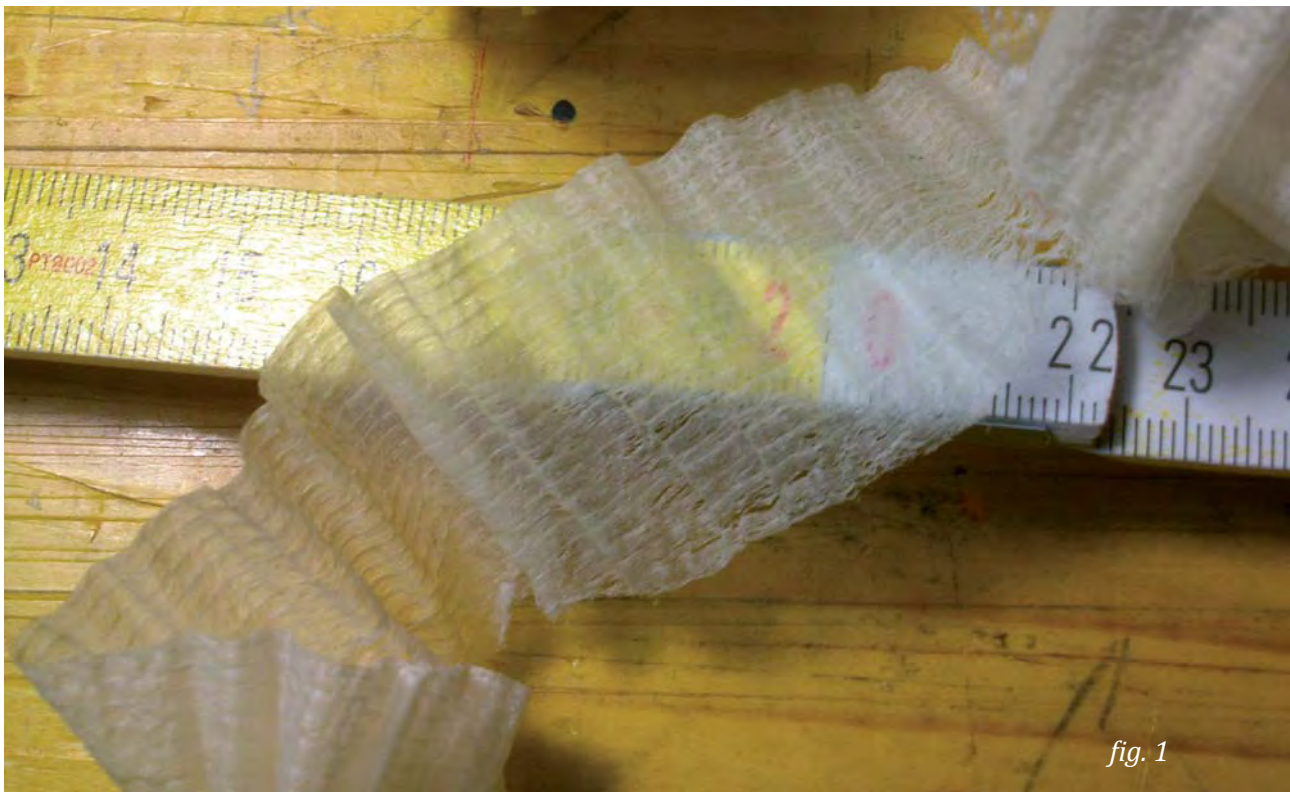
Neither Rob Wilson mentioned anything to me about this point. The 2014 version was the result of two years of hard work. It came after a long series of attempts. A fair fraction of them ended up with failures. The present version has ironed out most of the wrinkles left. Or so I hope.

### 1. The “Raw” Former Beam.

#### How to make it with a block plane and a new adjustable 90 degree fence.

The former beam is the starting point of the FBM, and the quality of the bamboo strips at the end of the process depends greatly on the accuracy of the “raw” FB (by “raw” I mean the carefully planed wooden beam before the “flats” are planed along its edges).

Choice of wood is essential, and the choice of knotless, straight fir remains the best. Best planes are low angle (bevel up) block planes (12 degrees), with low angle bevels, say 25 degrees. You can get very thin, one mil shavings, even planing against the fibers. One must practice to shave real thin shavings. You will need a high quality plane, and good, thick blades. The aim is to generate a single continuous shaving along the entire face in one single pass. You should be able to read across a shaving (see Fig.1). It sounds difficult, but it is not. Plane blade edge must be straight, and this means you must keep the stones flat at all times.



### Flatness.

Learn to check face flatness with a knife straight edge. Its length should be more or less the same length of the block plane. Also get some thin metal sheet, possibly one mil in thickness. .

Or be inventive. Oven paper has a thickness of slightly less than two mils. Lay a small ribbon of known thickness and put the straight edge across it, and lightly press the ribbon against the face.

Pull the end of the ribbon, and check if does slide away. Try again at different places along the edge of the blade. If the ribbon does not slide, the surface is flat to a tolerance of the thickness of the ribbon.

Even more sensitive tests can be done by having some strong light glancing to your eye from the region under test. Lower the blade, and look for thin light crack. To set your standards, block under the blade a one mil strip. You will be amazed by how unambiguously you can assess the presence of a one mil air gap left and right of the strip. High quality rounded knife edges are a necessity.

### Squareness.

This is tougher. To check for squareness you will need a high quality square for machinist with a knife edge and a thick fence at 90 degrees. With 30 Euro or so you can buy a 50 mm square that is true to better than five microns, one fifth of a mil! You really do not need that accuracy, but good squares with a knife edge come usually to that standard. What you have to aim for is to generate an apex with the two adjoining faces that are so square that deviations from the square are less than one mil. If the angle is slightly obtuse, light will come close to the apex. If it is acute, light will come from the part away from the apex. These super thin wedges of light will tell you in which way you have to correct. To correct, you must to have a block plane with an adjustable 90 degree fence.

Last year I suggested a rather crude system, with the fence clamped with a small C-clamp to the side wings of the block plane. The plane was a low angle (12 degrees) block plane by Veritas. To make something more stable, I decided to fasten the fence with bolts. Being scared to goof a good plane, I resorted to an old Stanley 9 1/2". I made two tapped holes on the left side wing of a Stanley 9 1/2". The fence was crudely made out from a standard plate and was fastened to the side wing with two socket head screws. A small brass screw with a large diameter head at the top of the fence is used to adjust finely the angle of the fence. A wooden handle at the bottom allows to exert positive pressure between the fence and the beam outer face. You can see the plane and fence in operation in Fig.2.



You can also notice the simple arrangement to provide a long fence against the other side of the beam. I have placed on top of my workbench a board with a good square edge. It is the aniline yellow surface you see. Its edge runs parallel the edge of the beech bench, and it is clamped so to leave a 30 mm wide corridor. The FB rests on the bench and against the vertical edge of the yellow board. There is a removable stop made by a 10 mm dowel inserted in a hole on the side of the yellow board. To plane the top portion of the FB it is essential that the horizontal force applied with the handle is much larger than the downward planing force.



*fig. 3*

I show in Fig 3 the stance I use when planing. Notice that I almost lean against the fence, pressing with the palm of my left hand against the handle. I would suggest a 10 to 1 ratio between horizontal force versus vertical. You will get consistent results only if the contact between plane fence and FB side is scrupulously maintained. Notice the thin shaving generated. Also notice that the fence-plane assembly can freely move along the FB as the FB faces are above of the horizontal yellow board and outside of the bench.

The procedure to square the four faces is as follows. Choose an apex, and plane switching often the face being planed, keeping the other against the plane fence. The faces will become flat and a uniform angle will be formed. Check with the square if it is acute or obtuse. Take notice, adjust the setting of the fence so to correct. Put pencil marks on the surface to be planed, and resume planing. Check if you are removing wood in the desired portion of the face. Check again the newly formed angle, and keep working until you are satisfied.

If so, do not change the two planing faces. Repeat a few times, to check how consistent you are.

Then use one of the faces that have been squared to square the neighboring one. And so on.

It may sound difficult. It is not. But it will take a few sessions to become proficient. The discovery you can plane the four faces with these tight tolerances will give you a great pleasure and satisfaction. There are people who like planing, and do it in an addictive way. They will be fine. If you hate planing, then the FBM is not for you.

Usually, if I have to recondition a FB that has already been used, it takes me 15 minutes or so, though sometimes I find a FB that gives me a hard life, and time required may amount to one hour, inclusive of honing the blade, re-tuning blade angles and so on.

If you survive this step, you have to face an additional, last sour point. It has to do with the ephemeral life of a well conditioned PF. The humidity changes will destroy the hard earned accuracy within few weeks. Or even days, if the climate changes rapidly. Look at the rings at the end of the beam. If they are quarter sawn, the rings will travel preferentially along one of the two diagonals. While drying, the two apices along this direction will become acute and the other couple will become obtuse, in due time. The FB conditioning is a bit like cuisine. You cook it, you eat it. Before I leave this paragraph, I must mention few additional points, that are easy to deal with and will pose no problem at all.

It is very convenient to rub paint on the FB face. I use medium quality artist colors (this adds colorfulness to the method). Rub varnishing must be done quickly, so that the paint thickness is super thin, it dries real fast, so there is very minimal water uptake. Typical amount of varnish for one FB is a few grams. So the thickness of the dried varnish is really small, and there is nothing to worry about paint thickness variations.

Having the surfaces varnished is very handy. Checking the air crack with the blade is easier, as light does not diffuse as in raw wood and the crack appears sharply defined. Also, as you will see later, I have introduced a new method for affixing the shim packs to the beam faces. I use now 3M spray Mount glue that is re-positionable. This glue works better on varnished surfaces than on bare wood.

Another advantage with varnished surfaces is that they will immediately reveal if during the final planing you are doing something wrong. Appearance of minute colored powder (or thin colored shavings) will immediately tell you that you are doing something wrong (badly wrong, if shavings are removed) as the painted surfaces should not be touched during the final planing of the glued bamboo strips. Remember: the FB planes are your reference planes.

Finally, keep all the shorter pieces of FBs, and condition them as accurate as the long ones. The short pieces are essential for many quick tests you will have to do in setting up and tuning some of the tools. There will never be too many of them around.

## 2.

### **How to cut constant depth “flats” or “grooves” along the edges.**

#### **Luthiers planes.**

#### **New guides for the planes.**

#### **A new method to set the depth of flats or grooves.**

The next step is to plane the flats or grooves along the edges. In the end we will need to have the flats or grooves with depths changing according to the chosen taper, but for the moment we will proceed in steps. In this chapter we first handle the simpler problem of how to cut taper-less flats or grooves, but with the possibility of setting the depth very accurately. As my method uses curved planes, to match the natural curvature of bamboo culms, instead of “flats” from now on I will rather use the term “grooves”, or use them both.

I also started to use flat sole planes for planing the “flats” in the initial stages and do most of the work. Final passes to cut the “grooves” are then done with a curve blade plane, otherwise identical to the flat one. Straight blades are a lot easier to hone. Be warned, I am skipping here most of the stuff on curved planes and blades. No space here to do it here. Tough, tough.

**The guide.** To plane constant depth flats or grooves, very obviously you cannot go free hand. You need a guide that rides astride of the two faces joining at the edge, and carries along the plane.

The guide cheeks at 45 degrees are planed with the same accuracy of the former beam, and checked. This is necessary to assure that the guide will slide with no detectable play. And this is essential to obtain accurate work.

The guide must have a number of features and perform various duties.

The most non obvious feature is that the plane cannot be rigidly attached to the guide, as it is commonly done in all the conventional chamfer planes and molding planes. Unfortunately, that was the scheme I first used, the one that gave me a long stretch of poor results and headaches in trying to understand what was going on. I eventually realized that the plane carried by the guide must be left free to assume diverse angular assets to follow the slope changes of the taper. One should not be fooled by the fact that the actual taper slopes are very small, of the order of parts per mil. Considering that here and there the slope can become real small (see Young parabolic rods), and at the handle the slope goes to zero anyways, blocking the plane to the guide makes the plane stop planing here and/or there, especially if the blade protrusion is small. A really insidious problem. Real nasty.

The second feature is that the guide must be shorter than the block plane used to condition the FB.

This point and the question about accuracy using wood beams are discussed at length in the 2014 paper. Here I simply say that if you plane a continuous, one mil shaving from the entire length of a FB face, then it is true that over a length equal to the block plane length, the face is flat to one mil.

And this is true anywhere on that face. Therefore it is quite logical that the guide should be kept shorter so that locally the former beam acts as an almost perfect reference. Indeed (see discussion in the 2014 article) the fact that a wooden beam might be bowed on its entire length by few millimeters does not prevent to plane the strips to one mil accuracy. This is a very puzzling point for many people! My FB do bow, say a couple of mm. Yet I will show in the end of this article that the strips accuracy is close to one mil. This wood versus metal topic is discussed in the September 2014 issue of Bamboo Journal.

The guide must keep the luthier plane on center of the edge, but we want to let the plane to be able to rock. The plane design is pretty much that of the last year. The physical size however has been made larger, to provide a better control. The guide is made by four pieces of wood. Two oak sides, and two mahogany spacers in between. Much simpler than the minuscular guides presented last year. The sides are 24 mm thick and 98 mm long (see Fig. 4)



*fig. 4*

Each side has the lower portion cut and planed at 45 degrees, and these slanted surfaces are the cheeks that will slide astride, along the sides of the FB. Also notice that oak fibers are vertical, to guarantee stability of the 45 degrees angle.

The front spacer is taller, almost as tall as the inner oak faces. In the figure you see a low, stepwise portion that holds a small steel disc (we will soon discuss what this disk is for). The back spacer is short, placed much lower. It is triangular in shape, the slanted surface cut to accommodate the stem of the back ball handle.

Both spacer match closely the width of the luthier plane. The four pieces are glued together, and three bamboo dowels, 5 mm in diameter, are pushed through the two spacer and sides so to add strength and discourage detachment. Two dowels go through the front spacer, the third through the triangular shaped in the back.

The plane body slides in between the two oak sides with a tight fit. So alignment of the planes with the mid plane of the beam edge is guaranteed. At the beginning, the plane freely removes material from the apex, with the groove is always well centered. This is particularly important for the plane with curved sole, as it is important that the centerline of the groove is in the edge mid plane. As material is planed away, the plane actually “sinks” between the guide faces, and the groove gets deeper and deeper. As we will see later, it is essential to stop planing when a desire groove depth has been achieved.

The luthier planes. Fixed the guide length, the plane must be even shorter. The choice fell on luthier planes. Dick sells brass luthier planes, flat sole, 40 mm long, blade 12 mm wide.

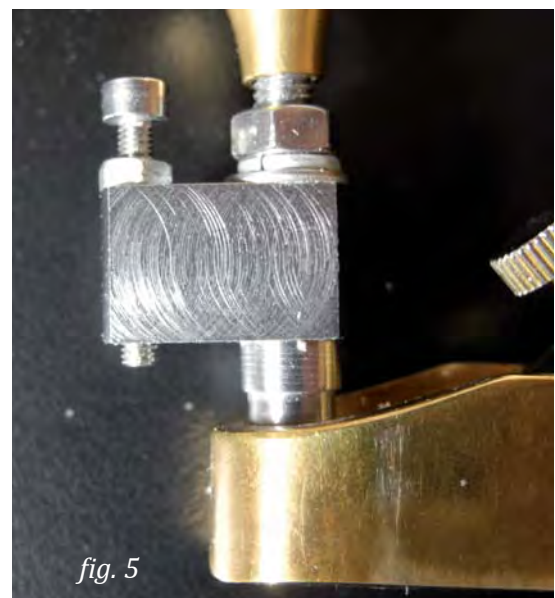
Unfortunately, there are no luthier curve sole planes with the required radius to match the average bamboo culm radius (one inch). The 2014 paper describes how to make a round plane starting from a flat one, and the procedure will not be described here.

In the new version I have added a second ball handle to the plane, besides the standard back handle, slanted at an angle as customary for palm luthier planes. The second handle is vertical and placed on the front of the plane body. It is screwed in a small block with a threaded hole glued to the front floor with epoxy glue (detail not shown). The vertical ball handle was introduced to facilitate the rocking motion of the plane body to guarantee alignment between the groove and the plane sole. The plane is shown in Fig. 4, together with the guide to be discussed here below.

The depth setting stop arrangement. The stop arrangement is quite unconventional, easy and accurate to set. Having learned (at a high price) that the most minute impediment to let the plane sole adhere to the planing surface makes the plane unable to cut any further, I have used the same scheme to arrange a stop. Unfortunately due the very minimal size of the plane, it was hard to find a place where to attach a stop assembly.

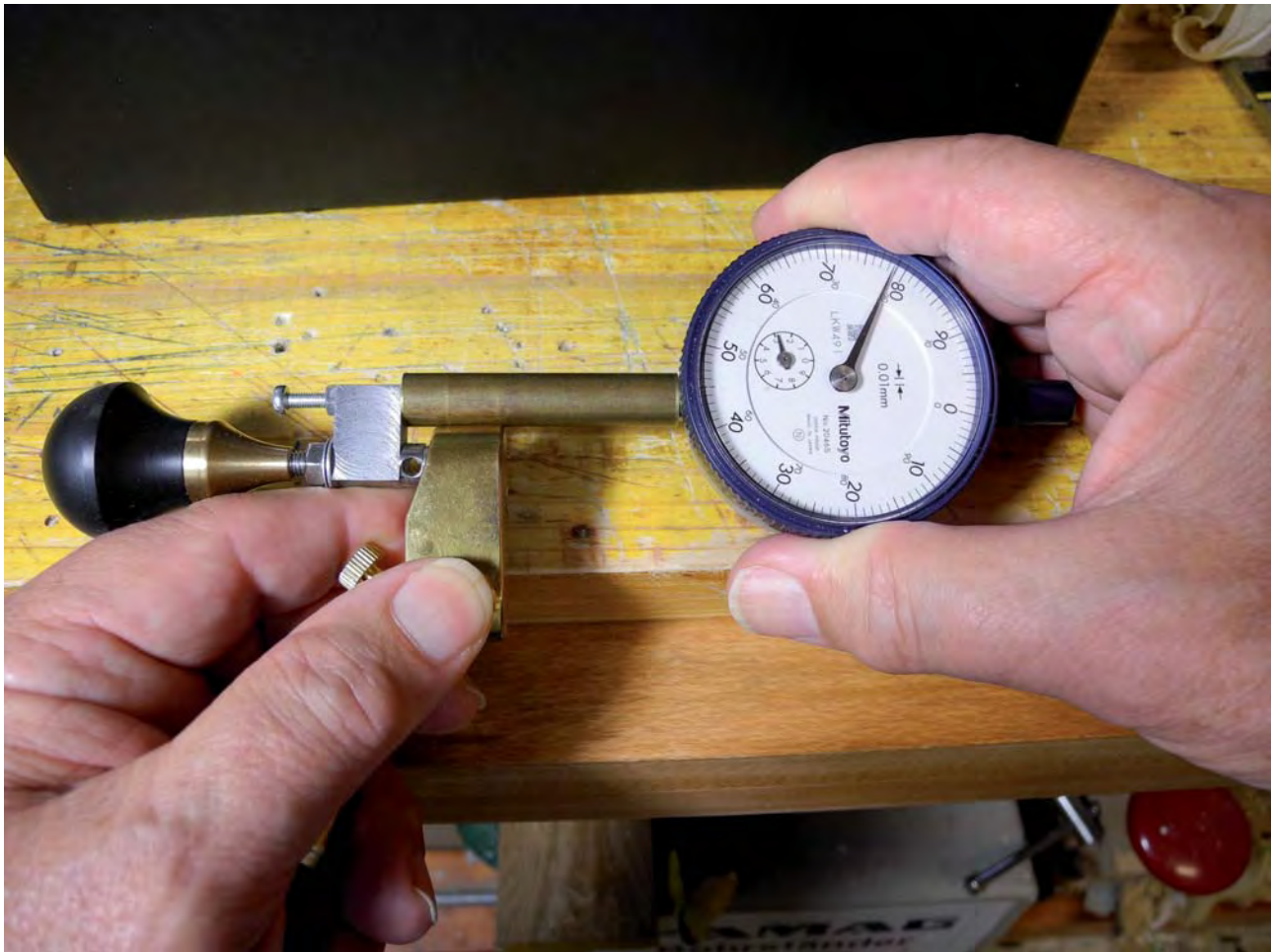
Luckily I had decided to add the second handle to gently push the front part of the plane. I decided to use the stout stem of the ball handle to fasten a small rectangular block.

As shown in Fig. 5 the small steel piece mounted as a flag, trailing forward. A vertical 3MA screw goes through a threaded hole in the front part. The screw axis is outside of the plane sole and in the forward direction. The length of the screw protruding from the lower face of the rectangular block can be easily adjusted, and locked there with a nut against the block surface.



*fig. 5*

The screw is aligned with the center of the steel disc glued into a recess of the front mahogany spacer. As the plane, pass after pass, sinks into the guide, as soon as the tip of the adjustable screw contacts the steel disc, the front portion of the bolt cannot go any lower, and alignment between plane and groove is (gradually) lost. Consequently, no further material can be taken away. The protrusion of the screw tip from the bottom actually determines the groove depth. Consequently it has to be measured with great accuracy. To this end I made a brass sleeve with a turned step inside, and a flat base with a 3 mm on center (see Fig .6 ).



The sleeve is pushed onto the stem of a dial indicator, the step inside resting against the dial stem rim. The tip of the indicator is a flat topped tip (not visible, it is inside the sleeve). The protruding part of the setscrew is pushed through the 3mm hole in the bottom of the sleeve. Alignment between the flat bottom of the block and the turned base of the sleeve must be achieved to get reliable data. Plots of screw protrusion versus groove depth dial reading show very good linearity. If you retract the screw by one millimeter, the groove will get deeper by one millimeter. This way the actual setscrew protrusion can be determined with an accuracy better than one mil. The actual depth of the flats or grooves can be set to a couple of mils, or better, if you use iterations. I highly recommend to test the “constant depth” cut by the assembly by planing short spare pieces of FB, at least 12 inches long.

### 3.

#### **Cutting a taper with the new shim packs.**

#### **Shims & shim packs.**

#### **A useful test.**

#### **Manufacturing and posting.**

This chapter deals with one of the most innovative ingredients of the revised method, as well practical advantages offered by the new manufacturing procedures that I have developed during the last year. To make it readable at all without obliging readers to go back to the 2014 article, repetitions here are abundant.

Why we need shims. From the previous chapter, we know how we can cut flats or grooves with a constant, selectable depth. But we do not want constant depth grooves: we want tapered grooves.

Here I will show how the “constant depth” guide-plane assembly is essential to generate a tapered groove using a trick. The trick is to place two tapered shims on the adjacent faces and to plane with the guide astride of the shims. The assembly will always cut an apparent constant depth. But anywhere along the FB, the true actual depth cut into the FB will be smaller.

Anywhere along the FB the sum of the true groove depth and of the vertical shift introduced by the shims will be equal to the “constant depth” set by the stop assembly. So, by controlling how the shim thickness changes, you can plane tapered grooves as you desire. The above basically tells you all you need. However, at the risk to annoy some of you, let me expand further.

Notice a peculiarity of the shims. If you look at a butt section taper you see that the rod diameter is largest at the handle stations, and it goes down at the ferrule station. So the groove must also do the same, as it duplicates exactly the volume of the strips to be made, deep at the handle, shallower at the ferrule. Consequently the thickness of the shims must be higher at the ferrule, and thinner to the handle station. It makes sense: close to the ferrules the diameter is smaller, and therefore you want the shims to push the guide higher, so to carve a shallower groove.

So what is the relation between the taper and the curve that describes the vertical displacements of the two shims? They are complementary curves. It implies that adding the two curves, you get a constant. Let me be more specific. Take a taper curve, a butt section. Let us plot the rod radius instead than the diameter. This is better, as we make bamboo strips, and therefore we are interested in strip heights. The strip height is small at the ferrule, it grows moving to handle stations, and flattens out to a horizontal line under the cork (see top of Fig 7).

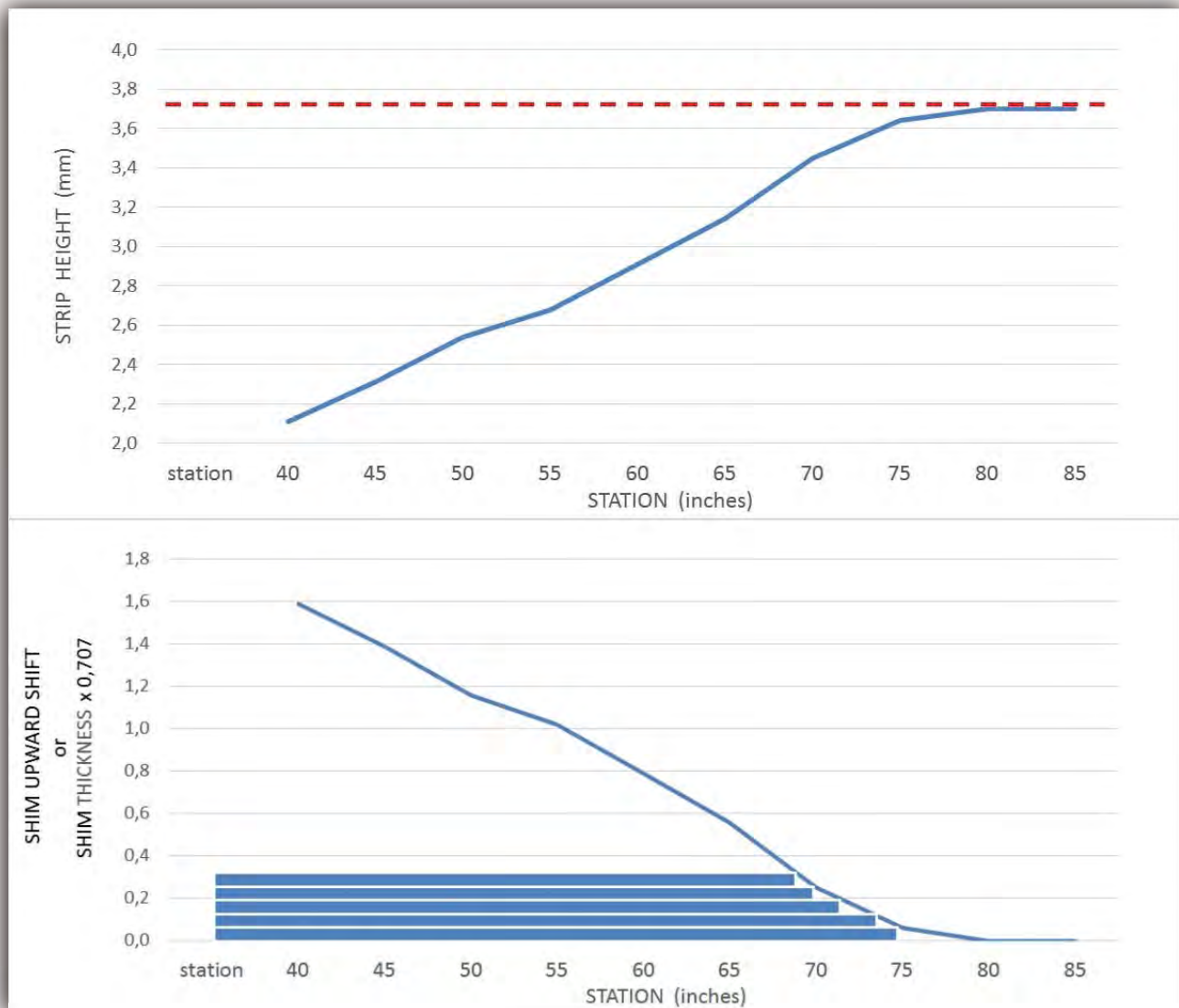


fig. 7

For sure, you have seen many plots like this. It is something that is very familiar to you. In the Figure you see that a dotted horizontal line has been drawn. The line indicates a constant thickness, in mils, and it is the thickness of the strip height at his maximum value.

A crazy idea: take the constant depth device, and set it so that the level groove has exactly that depth. Ignore the shim packs. Plane with the guide along an edge to the bitter end. Result? A useless level groove!! But if you have a positive attitude, the groove is quite the right thing in the handle portion. Same depth as the height of the strip at the handle! Sure, you took away too much going toward the ferrule. It would have been a smart idea take away less material as you plane toward the ferrule, and even less at the ferrule station. That is why you need shims! You need the shims to push up the plane and take away less. Can we determine the vertical shift due to the shim that you need at a chosen station? Select a point along the station axis. Draw a vertical line there. The intercept with the taper tells you what height the strip should be. Fine. You already know that. The good news is that the length between the taper and the red line is the require upward shift due to the shim. You can measure that difference in mils.

This is what we have in the lower portion of Fig. 7.

We have turned upside down the figure above, taking the red line as the horizontal axis, the station axis, as indicated. On the vertical, we have the shim induced vertical shift we need, in mils, the measurements being taken from the red line downward in the figure at the top of Fig.7. We anticipate here that the vertical shifts, in mils, are the physical thickness of the shim, apart from a multiplicative factor. Notice that the function starts high, and goes to zero at the handle. Sure, at the handle that we did not need shims.

The function at station 40" is 1.60 mm. Is that right? Look the strip height at 40" and at the handle. The height difference is 1.60 mm. Right on.

No shim at the handle, then you must shim up by 1.60 vertical shift at the ferrule.

### **The shim pack.**

All of the above implies that you should build two thin wedges, their thickness changing in a continuous way. Continuous wedges can be done, but it would be laborious and would require mechanical devices. To avoid this, I have developed a simple technique that approximates the continuous curve with a fine step staircase. The idea is to layer thin ribbons of decreasing length to generate an irregular staircase of steps of equal height, but varying width, so that the step edges fall on the taper line. I have called this peculiar, composite shim the "shim pack". You can get an idea of all this looking at the lower portion of Fig. 7 . The first layer is on the baseline, and it is the longest. The edge of the step is on the taper. Next layer will be above it, it will be shorter, and again its edge will be on the taper line, and so on. Just a few steps have been drawn. For a medium short rod, the number of steps could be twenty or so. As planing is done from the thicker end of the staircase to the shallower, the guide-plane assembly is "rafting" down the shim pack.

It should be recalled that the vertical displacement introduced by just one layer of thickness  $d$  is given by  $dx \cdot 0.707$ . The factor 0.707 comes from the fact that the layer is placed at 45 degrees from the vertical (just plain trigonometry). The guide is also going to be shifted horizontally, and away from the edge by the same amount  $dx \cdot 0.707$ . So now you understand why in cutting grooves with the round sole plane you must lay the shim packs on both faces. By so doing you null the overall horizontal displacement if the total layers number is even. If it is odd, you are left with the minimal horizontal displacement due to just one layer. So using two shim packs is essential for the round plane, as you want to keep the deepest cutting part of the blade on center. Let me also add however that if you would desire instead to cut "flats" with the flat sole plane, then you can make a single shim pack, and place it on one side only. If you do so, remember that you will cut/scrape away a fair fraction of the outermost fibers, especially on the butt.

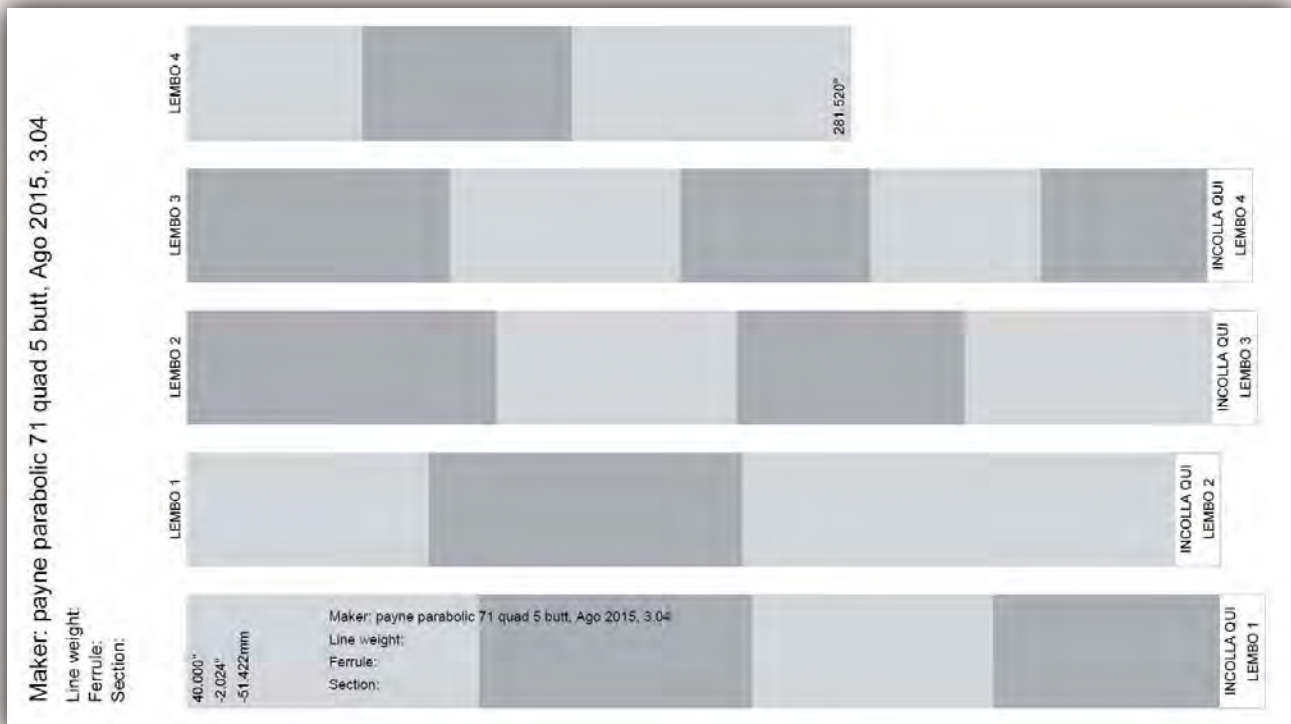
### **How to fabricate the new shim packs.**

The innovations introduced in the manufacture and use of the shim packs during last year are few. One is the choice of the material for the single layer.

Last year I suggested to use the adhesive tape by 3M, the Magic tape. Using it proved a very good for producing accurate shim packs. However, one of the difficulty in using Magic tape was its elasticity. Layering down one layer over the previous one required that great care was taken not to put any tension in the tape. Failing to observe this precaution lead to an accumulated tension. This induced curling of the pack, and subsequent delamination with the creation of voids here and there. Also, due to the small 2.2 mil tape thickness, the number of layers was fairly large. Typically 20 layers or so were requested per pack for a 7 foot rod.

I discovered that common printer paper has remarkable uniformity, its thickness being close to 4 mils. I tried first to make shim packs with various types of glue, with very depressing results. I eventually found that shim packs can be easily done by cutting A3 sheets into paper strips, 1" wide, and pasting one on top of the other by using 3 M spray Mount Glue. This glue allows repositioning, and this makes the fabrication of the shim packs very easy and straightforward.!

Also, because of the increased step thickness, the number of steps is almost halved with respect to the Magic tape. So packs fabrication is faster. In spite of the reduced finesse with respect to Magic tape packs, the number of steps is still higher than the number of stations that have to be adjusted with a planing form. So, in terms of fidelity to a taper, nothing is lost. Indeed, the method interpolates the taper in a continuous fashion in between the classic 5" inch interval. You are still left with the problem of determining the strip lengths sequence. As you know already that the edges of the steps should lay on the taper, you could devise graphical methods to find the sequence. It can be done. A software however has been developed to generate that sequence. It will be freely available in the future. If interested, send me the taper. I will e-mail back the sequence. The input data are the taper and the upward shift due to one single layer. The software generates an image real size of the sequence of steps.



*fig. 8*

I show in Fig. 8 the print for a Payne 7'1" parabolic, butt section. When printed on a A4 format, the width of the bars is 20 mm wide. The pieces must be cut, and pasted together as indicated. In the end you have a strip of the same length as the section, and made by light gray / dark gray steps. I call this sort of bar code strip the shim pack master. The staircase is made according to the real size sequence of light/dark gray sequence, The highest part is at the ferrule end. Paste the master on the bench top. Put on both sides of the master the two substrates. Put marks on the left when you step down from a light gray, and a mark on the right when you step down from dark grey. The various layers are placed on top of a cardboard substrate, longest strips being pasted first. Finally, one layer of magic tape is pasted below the substrate, and one above the staircase pack. The packs are very limp, they will easily lay down flat against the FB faces. They should be handled with some care and should not be bent.

### Planing the grooves.

Very few things to tell. Have the round blade well honed (no details given here). It is not necessary to cut very thin shavings. Two to three mils shavings are OK. As mentioned somewhere else, once you get closer to the final passes, the shavings become thinner and thinner. The stop mechanism is gradual, The front of the plane is blocked, and the heel gets lower and lower. As long as the heel does not go below the projected blade edge, the plane still takes shavings, thinner ones. Until the heel lowers so much to prevent the blade edge to bite into the wood. Planing one groove will take few minutes, especially if you use a reconditioned FB. With a new one, use the flat sole plane to remove most of the stuff real fast.

### A very useful check.

When you think you are done with the planing, stop, and ask yourself if you have really done all you had to do. The following describes a test to answer this question. Do not detach the shim packs, and perform depth measurements with the dial indicator and associated guide. Take readings to all stations, or even at intermediate positions. With the wheel point I use, I check continuously by moving slowly along the FB and watch what the dial does. If you have done the work correctly, then the apparent depth of the groove should be constant and equal to the value that you have set. You might find that here and there you read a value that is LESS than the set value. Go back, plane again rocking the plane pressing more on the forward handle and then on the back one to get best alignment with the groove. It is very likely that you will manage to get a thin shaving and the readings will become uniformly equal to the set one. To reassure you that the procedure is legal, I have found that if you try planing on a spot where the readings were right to begin with, no matter how hard you try, you will never be able to cut material away. If the dial moves plus minus one mil, around the set point above, detach the shim packs, measure the groove depth, and you will find that the groove is tapered with the same accuracy. I believe this check is really very useful.

### How to position the shim packs onto the former beam.

After trying different techniques, I found that the most reliable and safest way is to paste the shim packs directly against the former beam faces using the very same 3M Mount spray glue. The glue must be sprayed on the back of the shim pack, the surface that goes on contact with the FB faces. In this way the shim packs can be taken down, repositioned, and taken down again.

I found essential to use proper storing plates against which to paste the shim packs when not in use. So the shim packs are never let to stay anywhere to gather dust or debris. Either they are on the former beam faces, or on the storing surfaces. The storing surfaces are coated with glossy adhesive tape, so that there is no absorption from the storing surfaces.



fig. 9

Sticking the shim packs onto the FB faces does not deteriorate the repositionable glue as the faces have been painted with non absorbing acrylic colors. Pasting the shim packs with Mount glue offers maximum glued surface contact, and shim packs remain steadily blocked in position while planing. A green painted FB with the two (new) shim packs pasted on the sides is shown in Fig.9. I have underlined with a pencil the step edges, and you can appreciate how the step width changes along the taper. Notice that the edges of the steps on the two shim packs are staggered. Also shown on the right side of the picture you see the guide placed astride of the beam, with the curved plane inserted. On the bench you might notice a flat luthier plane for gross removal. Finally, you can also see the guide that carries the dial indicator. The tip (not shown) is Mitutoyo small wheel, that runs along the center of the groove.



*fig. 10*

I also show in Fig10 how easily the method can handle fast swells: the section diameter changes by a factor of two over roughly four inches.

#### 4.

#### **Preparation of the raw bamboo strips.**

This is pretty much covered in the 2014 article. Basically the raw strips receive the traditional node handling procedures. I straighten the nodes by hand and press the nodes with a vise with one curve jaw 45 mm ID. The strips are then baked. Finally, the outside is first scraped with the 212 scraper plane and then sanded using a piece of tubing with the same radius of the vise jaw. This “rectification” procedure takes away little material. It is essential as it guarantees that the strip will sit on the bottom on the groove. As the actual radius of the culm changes along the circumference, the danger is that occasionally the bamboo strip radius is larger than the 25 mm radius of the grooves. If this happens, then the strip would contact the groove at the edges. The result is that you will produce a strip with a height smaller than planned.

## 5.

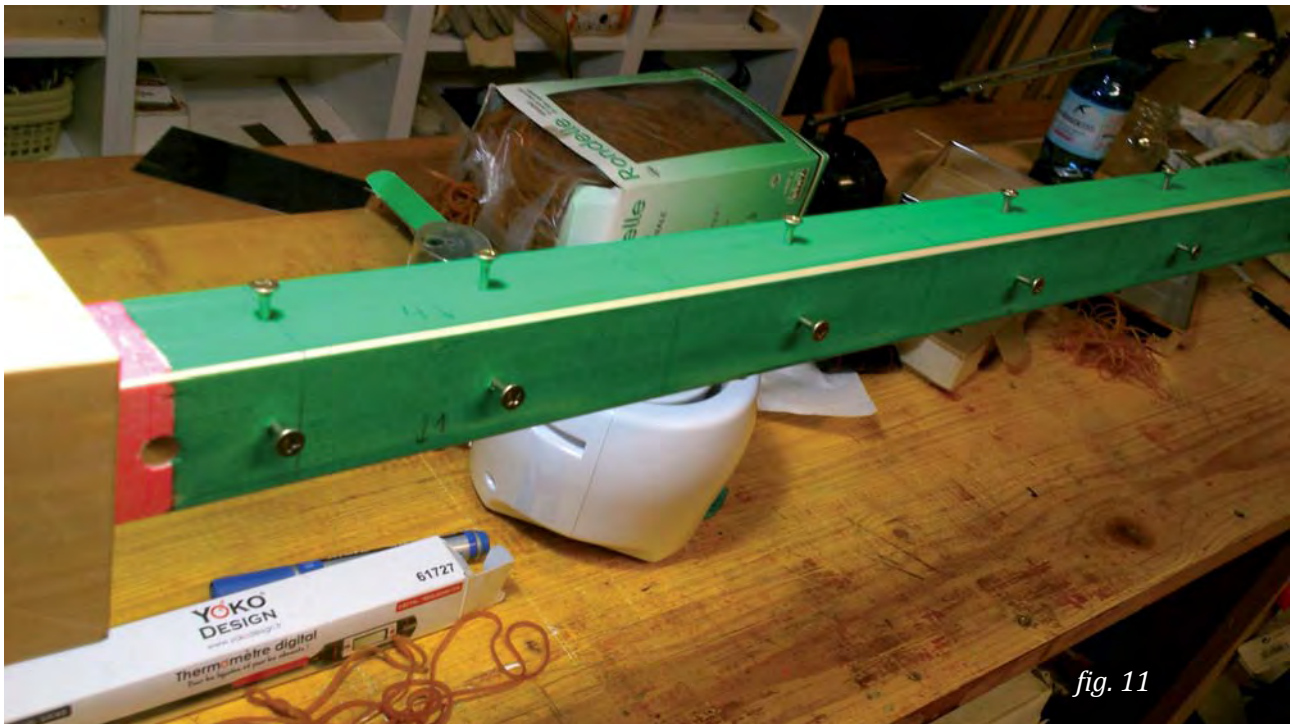
**How to bind bamboo strips while glueing onto the FB grooves.****The fish glue.**

Let me start with the choice of the fish glue. It might sound like a minor point, but I feel this an important one. I found that the use of fish glue completely eliminates a long series of itching problems that I found when using rabbit glue (worst) or bone glue (better). All of them were in connection with detachment, that in some cases proved to be rather recalcitrant.

Fish glue is clear, leaves no traces, but most of all, jointed strips can be detached very easily by simply steaming them with a kettle. Keep moving the former beam so that the bamboo steps are equally wetted and are under the steam uniformly. Typically, detachment of four strips takes 20 minutes or so, and you almost “peel” them away, after gently priming the detachment with a palette knife. I promise you will have no problem whatsoever. Unglueing very straightforward.

Glueing however is a bit tricky. Animal glues are used hot, around 65 degrees centigrade or slightly higher. When applied, they cool, going through a gel state, and glueing starts. When fully dried, the strength reaches the full value. You have to fasten, re-adjust, or whatever before pieced cannot be moved. The time over which you may adjust things is limited. Luckily the concentration we will use is extremely low. Say 5 grams of dried glue in 100 cc of water. At these concentrations you may have 20 minutes or so. Probably more. Never checked what happens afterwards. All this to say that you have to move rather quickly. Fastening can be done by wrapping rubber bands. Glueing four strips, wrapping the rubber bands, repositioning the bamboo strips onto the grooves, all done by hand, it is a sure way to end up with a disaster.

I found two methods to use. The first is super cheap, and requires no contraptions. The idea is to glue the bamboo strip one at a time. You place groups of four wood screws at different locations along the former beam, one screw per face. Rubber bands will be anchored to the screws. I show in Fig. 11 a FB with the screws. Space the screws on the four faces so that the threaded portions do not interfere.

*fig. 11*

To start glueing, you have to hold the FB by the ends, so that you can freely manipulate on the faces. Apply glue to enamel side of one strip and to one groove. Position the strip on the groove, and use the two screws closest to the groove to fasten a rubber band. Check that the strip is well centered. Repeat for all the stations. Also criss cross between screws of a nearby station to fasten at intermediate stations. You are done with the first strip. Repeat for all the four strips.

The other method requires that you make a kind of crude “lathe” that holds the FB at the ends, and is powered by a cordless drill. It is shown in Fig. 12.

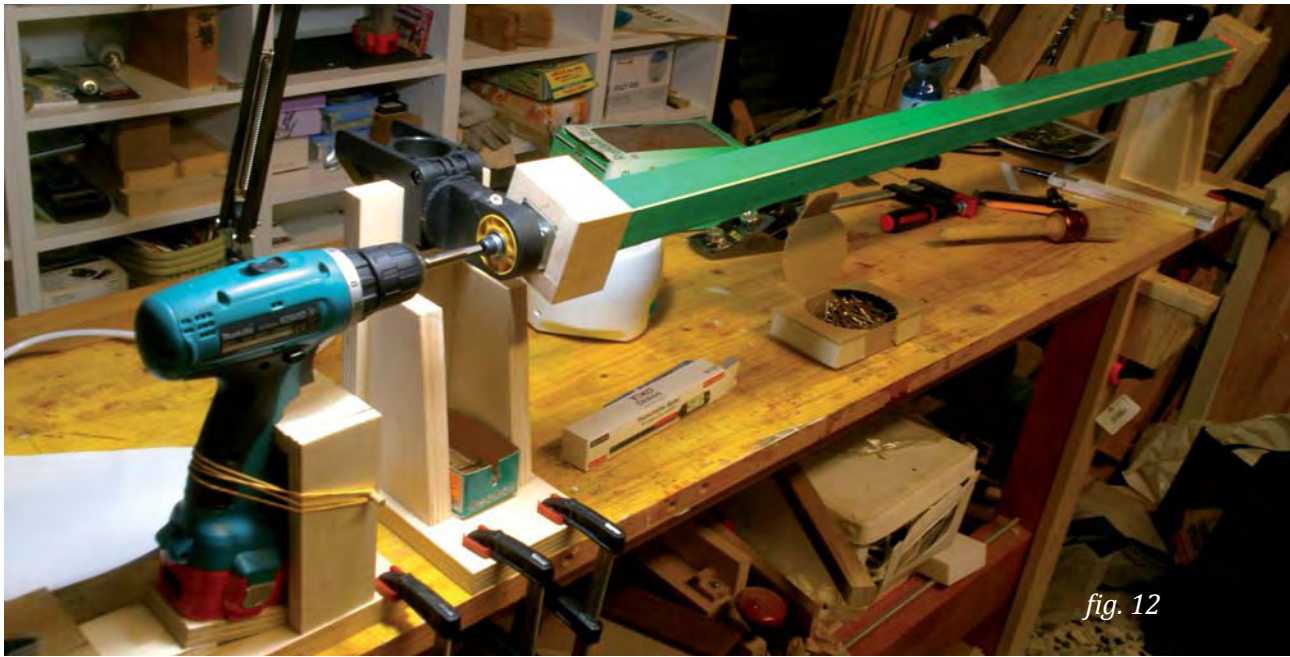


fig. 12

It requires two wood mounts at the end, two clamps to hold electric drills. The collars fasten two sets of turned down roller skate wheels. The “lathe” spindle are two bolts with diameter that fit inside the roller skate twin ball bearings. The bolts hold the two square cups where the end portions of the FB are held while spinning (again, see figure).

The “lathe” works remarkably well. The FB needs just three stations of wood screws, just to hold loosely each strip onto the former beam at the ends and on center. Again, one strip at a time. I then spin, low speed, while I keep tension on a rubber band chain anchored to one of the bolts at the end. Do it clockwise and anti clockwise. Before the strips are tight real hard, stop, and rotate by hand the beam. Check if all the strips have edges protruding from the grooves. Your nail will work great to assess protrusions as small as a fraction of one millimeter. As the glue is not set yet, and the groove and strip curvature match, repositioning can be done very smoothly by pushing on the sides. Strips with just marginal edges can still be used quite safely.

At the end you the FB with strips attached and rubber bands on will look like shown in Fig. 13.



fig. 13

## 6.

**Planing the bamboo strips with the iron edge trimming plane.**

This is the point that most radically deviates from what I have presented in the 2014. It is also the point that has reliably produced substantial advantages in the all important finishing stages. Those that determine strip accuracy and may bring you into the fabled “one mil accuracy”. In the 2014 version, I suggested that the final passes should be done with a scraper. Scrapers in one way or another have always been used to thickness bamboo strips. The argument to suggest their use in connection with the former beam method was that if the blade protrusion is real small, then it does not cut into the former beam itself (too soft), but only one bamboo strips that stick out from the beam surface. This is true only for very minimal blade protrusions. The trouble is that in the attempt to expedite things, one tends to use too much of a blade protrusion, and this leads to disaster. Also, the scraper use negates the advantage offered by a well made former plane, that is to plane or scrape while referencing to both the surfaces of an edge. I found that the Edge Trimming Plane by Veritas is almost ideal for the job. It has a built in 90 degree fence. One of the fences is actually the sole of a flat sole plane, with a 20 degree skew blade. The skew blade has a super smooth action. Planing the bamboo strips attached to a former beam proceeds as follows.

Block the FB with attached bamboo strips onto a strip resting onto the bench. Do it in such a way that the top surface and far side are unobstructed.

Gross planing to rough the raw bamboo strips is always done on the strip sides that stick up from the horizontal FB face. You can go really fast, and it is a matter of minutes to bring one strip face down so that it is proud of say 8 mils or less from the FB face. Rotating the FB, you clean all the four sides, and you are left with just 8 mils protrusion of the strips on all faces.

This is when the edge trimming plane comes into action. It will plane only on the horizontal side of the strip placed on top, on the far side. So you have to keep alternating the FB position.!

Shimming on both the inner faces of the plane are necessary. A shimming done by one or two of the card board is used on the vertical fence side, so that referencing is done on that side without interfering with the bamboo strips.

The protrusion of the blade is very critical, but easily done as the setscrews at the throat can be used for superfine tuning. The plane must protrude by less than 2 mils, and must be parallel to the plane sole. You will need some scrap of a acrylic painted FB to make these adjustments. The procedure is as follows. To set the blade edge parallel to the sole, first retract the blade. Then advance the blade until it barely protrudes. Check if it protrudes first on the left or on the right, and adjust the throat setscrew accordingly, pushing the blade edge to the left or to the right, until the blade protrudes evenly. Then paste a 3/4” wide 3m Magic tape on the plane sole, leaving 1/4” channel close to the square edge. So most of the blade edge is left below the Magic tape, and the blade can cut only close to the edge.



figura 14

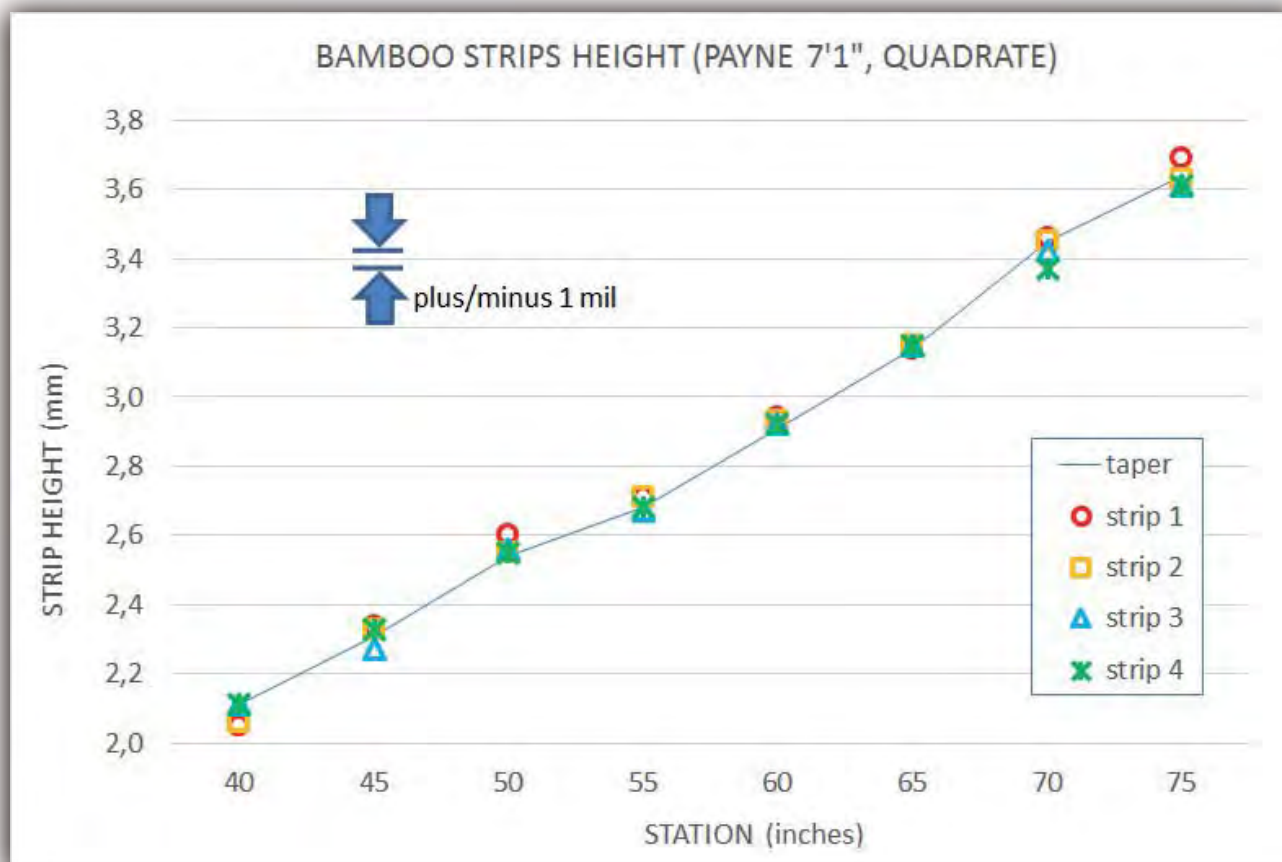
The edge plane in operation is shown in Fig.14. You will cut all the eight strip faces the same way, by planing the top face, far side, the fence being pushed against the vertical face on the far side, As shown in the picture, the shavings are very nicely formed, have the usual tight curly aspect due to the skew blade, and at the end they become extremely thin. Notice the Magic tape pasted on the sole, sticking out from the back and crudely folded in the back of the plane. Eventually you will feel that the 3M taped portion of the plane sole comes in contact with the horizontal top face. Keep pressure on both the fence and the plane blade. Keep shaving removing super thin transparent shavings. Stop when you cannot remove any material. The face will now be flush to the painted surface, and the varnish will be intact.



*fig. 15*

In conclusion I show in Fig.15 the images of four strips for a butt just after been unglued from a Former Beam, and tied together with a rubber band. You can see that the outer surfaces are uniformly round, thin power fibers can be observed on the round surfaces, and the edges are sharp and clean.

I also show in Fig16. the graph of the height of the strips at various stations, together with the taper curve. It is a Payne 7'1" Parabolic rod I am building. These are the first data I got in making a true rod section (done on the spare time while writing this article).



Out of 32 measurements, 23 are within plus minus one mil. The rest are within plus minus two mils. One is within three mils. Similar accuracies were obtained in the last months on planing short, level sections I brought to the last IBRA Meeting. These very preliminary data show that the added complexity of planing a true taper with shim packs does not reduce the precision of the method.

### Acknowledgments

I am very pleased to express my gratitude to many people for encouragement during the long stretch of time this work requested. IBRA has been my stable reference frame, and source of sympathetic support. I would like to thank Alberto Poratelli, President, and Gabriele Gori, Honorary President for providing me opportunities to give talks and arranging demos, and kept believing in what I was doing. Many thanks to M. Giuliani for asking me good questions, for moral support, and for sending me photos of gigantic fish & beautiful rods. M. Giardina, who made all of us aware of the Moss book, and for the gift of a copy of Walker book. I also thank Jo Nese for many technical discussions, for general musing about rod making, and for his wisdom. I am indebted to M. Cardamone, Bamboo Journal Editor for the patience and help with figures, text and appreciation for the work done. I would also gratefully thank Edward Barder for strong encouragement and first hand precious info about the original method. I greatly enjoyed technical conversations with Tim Anderson, who has shown me the incredible accuracy he achieves with the Hand Mill.

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In this issue of the Bamboo Journal  
the photographs of the interlayers  
are of

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journalist,  
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