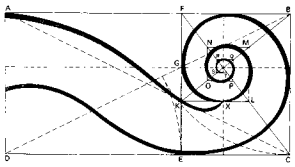

From the Makers Bench

Pernambuco

by Matt Wehling

Since the turn of the 19th century, the wood used in the finest bows has been pernambuco. Today I'd like to discuss this wood, which is the most important component of your bow.

Many of us know that pernambuco comes from Brazil. The wood shares its name with the Brazilian state of Pernambuco, which is part of the easternmost tip of the country, the part that juts out into the Atlantic. Pernambuco is a specialized form of the tree known as Pau-Brasil. The tree was important enough that the country of Brazil is named after the tree Pau-Brasil, and not the other way around. As such the tree holds a special place for Brazilians as a national symbol.

In the initial days of Portuguese colonization of Brazil, pernambuco was brought back to the old world as ballast for sailing ships as well as a textile dye. If you take pernambuco shavings and put them in a glass of water the liquid turns a deep red within ten minutes or so. The wood quickly became the main source of red dye for the European textile industry, as well as being used for some rouges (i.e. make-up) and even in some toothpaste! It was used for a colorant from the seventeenth century until the advent of aniline dyes in the mid to late 1800s. By that time, most of the Pau-Brasil habitat had been deforested.

Legend has it that the great bowmaker Francois Tourte first tried pernambuco as a bow wood, making bows out of barrel staves or from crates used to transport sugar. However, there are examples of bows that were made before Tourte would have been active as a bowmaker. Without doubt it was during Francois' lifetime that the wood became the standard for bows for musical instruments. With all of the pernambuco of various qualities coming into France for the textile industries, the bowmakers would have had an incredible selection to choose from. One assumes that the bowmakers would have paid a bit more than the dye manufacturers to have first choice of the wood, taking only a tiny percentage of what was available.

Today, as then, pernambuco varies greatly in quality. Musicians will often tell me of bows they tried that were of particularly dense wood, with the implication that denser is undeniably better for bows. But there's no correlation of density to suitability for bows and indeed, there is wood that is too dense to be used for a bow. Further, there is no sure-fire relationship between density and stiffness.

Personally, I am much more interested in the inherent "nervosity" of a piece of wood, that is, how quickly a piece of wood will return to its original state after being deflected. A particularly nervous piece can be made into a bow that will always be ready for what the player asks the bow to do. I am also interested in guessing what sort of tone the finished bow will produce from listening to the bow as I tap it. Some pieces go "ping!", and some go, "bowowowowowowow." It's a quality that is very easy to demonstrate in person, but hard to express on paper. Perhaps someday a bowmaker can demonstrate it to you.

From a practical standpoint for someone choosing a bow, you always want to get as good a piece of wood as you can afford. Below about $150 or $200, bows tend to be made of lower quality "Brazil wood," which is not pernambuco at all. If you can afford it, it's best to get a real pernambuco bow. Until you get to better handmade bows above a few thousand dollars, in my opinion it is better to spend money on better wood than on fancy fittings such as gold mounting. In the higher price range bows, the best wood is saved for those which will be gold mounted, but I have seen little evidence of this in lower priced factory bows with gold mounting. One can even find inexpensive factory bows being imported with frogs being made from banned materials such as ivory and tortoise shell.

(It should also be mentioned that there are many bows made of synthetic materials such as carbon fiber which some feel work as well or better than many pernambuco bows. They have the additional advantage of being darn near indestructible.)

As of last June, pernambuco itself was placed on a list of endangered species by the Convention on International Trade of Endangered Species (CITES). CITES is a treaty signed by 172 member countries which regulates the international trade of endangered species such as ivory, rhino horn, Brazilian rosewood, and, now, pernambuco. This does not ban the sale of pernambuco bows, it only regulates the international transport of raw materials used to make the bows. Most established bowmakers have their stocks, but it is hard to say what this will mean for up-and-coming makers. It is hoped that banning exportation of the wood from Brazil will relieve pressures in that country to illegally harvest the tiny amount of remaining pernambuco. It has long been illegal to cut or export pernambuco, or to even move the wood between Brazilian states without a permit. Sadly, these prior restraints had little effect on wood poaching.

In 1999, a group of concerned bowmakers got together to form the International Pernambuco Conservation Initiative (IPCI) to attempt to stave off the loss of pernambuco and promote the regeneration of the species. The work of this group has been important in many areas. First, the group has worked toward replanting pernambuco, having already planted over 140,000 seedlings, with a five-year goal of planting 500,000 seedlings. The IPCI has also funded an irrigation well for one group that propagates and distributes seedlings, and has helped fund studies of the species by a respected Brazilian agricultural research institute. Second, the group has worked to raise awareness of the plight of the species through concerts, promotion of amateur Brazilian orchestras, and many other means. The IPCI also has encouraged bowmakers to find alternative woods for bowmaking. And from a strictly selfish standpoint for us musicians, the IPCI was instrumental (no pun intended) in persuading CITES delegates to exempt finished bows from being banned from international travel. Without this exemption, any bow have would required an exit permit from the country it was leaving and an entry permit from the country it was entering.

Imagine a major U.S. orchestra hoping to tour Europe. If they had 50 string players who might have two bows each, that would

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mean 200 permits per border crossing (which could well mean over 1000 permits for a tour to England, Scandinavia and the continent, like the Minnesota Orchestra's recent tour). No wonder the American Symphony Orchestra League worked with the IPCI to receive this exemption. It was also members of the IPCI who mentioned to CITES representatives that the bows for viola, cello and bass were made of pernambuco, not just bows for violin. Otherwise violinists could have carried their bows across borders but the rest of us would have been banned from traveling (well, our bows would have been banned).

You can find out more about the IPCI, and make a tax-deductible contribution if you wish, at www.IPCI-USA.org.

Pernambuco is a beautiful wood with unique characteristics that makes it perfect for aiding musicians in the creation of stringed music. At this point, it looks like the work toward re-establishing the viability of the species is off to a good start.

Matt Wehling's experience includes studying bow making in France for five years with modern French master makers. In 2002 and 2006 he was awarded Gold Medals for his violin and cello bows from the Violin Society of America, and he has contributed to Strings *and* The Strad *magazines. His shop is in Northfield, MN.*

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