

Wooden Arrows— *Myths and Truths*

Traditional Archery

SINCE THE INVENTION OF THE BOW AND ARROW THE TRADITIONAL ARROW SHAFT MATERIAL HAS BEEN AND IS WOOD. For this reason alone most traditional shooters want to use it. In the period of time between the early 1960s when the compound bow began to sweep the market until the rebirth of traditional archery in the late 1980s and early 1990s, much of the knowledge that was in the hands of average shooters disappeared as the older shooters and arrow makers dropped out of the sport. Many of the new generation of arrow makers lack the knowledge of archery physics for properly matching wooden arrows to traditional bows. New bow materials, new glues, and new strings further complicate the problem and many misconceptions have developed, I will try to debunk some of these.

ARROW MYTH #1 Right-handed archers should shoot right-wing feathers and left-handed archers should shoot left-wing feathers (or *visa versa*, I've heard it both ways).

ARROW TRUTH #1 A properly matched arrow allows the fletching to completely clear the bow, be it right-wing or left-wing, and modern high-speed photography has shown that even helical-fletched arrows do not even start to rotate until the arrow is well past the bow.

ARROW MYTH #2 Matching arrows to weight will *only* give you a set of matched arrows.

ARROW TRUTH #2 Although there is some relationship between arrow mass and its stiffness, the only real way to measure and match arrows is by measuring the deflection of the shaft in 1000ths of an inch with a two pound weight hanging in the center of the shaft and the grain of the wood in each shaft

properly aligned (usually done with a spine tester).

ARROW MYTH #3 Arrow shafts can be spined by a machine that feeds them into an electronic spine tester.

ARROW TRUTH #3 This is not so, because an arrow shaft has four sides relative to the grain of the wood, it will have two stiff sides and two weak sides. The stiff sides are the ones where the grain runs the entire length of the shaft. The weak sides are the ones where the grain runs out of the shaft. Because the arrow bends around the bow when it is shot, the cock feather should be lined up with one of the stiffer sides and the arrow needs to bend the same way on the spine tester as it bends when it goes around the bow. This can only be done by hand with proper indexing of the nock being all important.

WOODEN ARROW MYTH #4 I am going to buy me some cheap practice arrows and learn to shoot (cheap arrows are fine for just practice).

WOODEN ARROW TRUTH #4 Cheap practice arrows are not arrows. They're sticks with feathers on them and no two will shoot in the same place so you'll never learn to shoot. Ishi said, "Any old stick will make a bow, but it takes a damn good one to make an arrow."

WOODEN ARROW MYTH #5 I like nocks that fit on the string tight so I won't have trouble with them falling off.

WOODEN ARROW TRUTH #5 A tight nock will cause the string to pull the back end of the arrow in toward the bow, causing the end of the arrow to slap the bow, thoroughly messing up the shot and ruining



Ryan Wright shot these wooden arrows from a hunting weight compound bow at 20 yards to demonstrate the potential of properly matched woods.

the fletching. The arrow nock should be just tight enough to keep the arrow from falling off the string. (I wonder how many deer are spooked by the sound of an arrow nock snapping on the string.)

WOODEN ARROW MYTH #6 Compound bows are so powerful that they will cause wood arrows to break when shot, possibly injuring the shooter.

WOODEN ARROW TRUTH #6 Traditional bows, pound for pound, place more stress on arrow shafts than compound

bows (*see photo*). Remember a stick with feathers does not an arrow make. Arrows should always be properly matched to the bow you are shooting and you should never shoot a damaged arrow. I always break a cracked shaft as soon as I notice the crack, so I won't accidentally shoot it later.

WOODEN ARROW MYTH #7 There is no reason to shoot wooden arrows from a compound bow.

WOODEN ARROW TRUTH #7 Actually there are a number of really good reasons to shoot wooden arrows from a compound bow. Wooden arrows cut the noise of the bow by at least 50% and that means better hits and you will also be able to recover your deer more easily. Also, because the frequency of the vibration of the shaft material is much lower, more of the energy of the bow is delivered into propelling the arrow and less in making it flex back and forth (*see photo*).

WOODEN ARROW MYTH # 8 I have a 50 lb draw bow, so I need 50 lb arrows.

WOODEN ARROW TRUTH #8 Correct arrow spine is determined by a large number of factors such as bow design, bow material, bow string weight, arrow length, point weight, and shaft material, not just draw weight.

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Dan has produced a video tape on traditional archery techniques.



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