

You are what you think!

■ *By James Watson, Native Awareness*

Many times I have been asked why I do what I do. People are often intrigued when told that I teach tracking, awareness and survival skills. To help explain, I recount my teachers', mine and students' stories of adventure and journeys occurring whilst learning the skills. A question always asked is, "That all sounds very interesting and exciting, but what's the point? We will never need these skills again." There is a train of thought that considers that we may one day need these skills again due to the increasing unpredictability of the global climate and the volatile political situation.



However, for me there is an even more important reason why I teach what I teach. I see fear as a great problem in many people's lives and I believe the more skills you have, the less fear you have. I have concluded that the future of our planet lies in our relationship with Nature and that we will never be alone whilst the Earth is there for us. The ancient skills of our ancestors will provide the key to reconnect with something that has been stolen from us. We must reawaken a greater understanding and appreciation of our place in the world and, as my mentor says, "Move with the Spirit that moves through all things."

This year Native Awareness was invited to work closely with a group of teenagers, and during a school term, they took a split log and turned it into a fully functional bow. It was extremely rewarding to see the development both of the bows and of the group. During the introductory class we laid the staves out and told the students that they should take their time when picking their staff, as they would be working with it for a long time and would inevitably form a relationship with it.

A few took this advice on board, but mainly they chose a staff which they thought would be easier to work with.

During the term there was a lot of excitement, especially to start with, when I told them that there is a tradition that the teacher usually names a student's first bow. I said that the name would be a reflection of both the bow and the maker's personality. As the weeks passed and the bows progressed, the atmosphere of the group changed. It was as if they were seeing their staves as less of a stick and more of a living being and when the bows were flexed for the first time, the students' attitude completely changed. I then often saw students carrying their unfinished bows as if they were escorting a friend. There were even a few times when I witnessed individuals, whilst working, humming to their bow as if they were breathing life into it. This all came about quite naturally. Once in a while I have met up with a student and he would talk to me about his bow, as if referring to a friend, reminding me of the bow's name... "Chickadee and I went into the woods last week..."

Disclaimer!

Before we start this 'How To', I must remove myself from any responsibility for the breakdown in your relationship with partners, family members and friends. Be warned; bow-making can become highly addictive and after your first, you will not be content! New designs and species of tree will fill your mind and you will find yourself heading down to the garden shed more often than into the house! I must confess to being an addict. I sometimes have to go into rehab and work on other skills such as tanning, tracking, fire-making etc. Fortunately, I'm addicted to these skills too! I have a teacher who says "You are what you think!"

Terminology

As with most things there is a lot of terminology in bow-making and I will keep it to a minimum. I'll describe the terms as we go along, but here are a few to get us going.

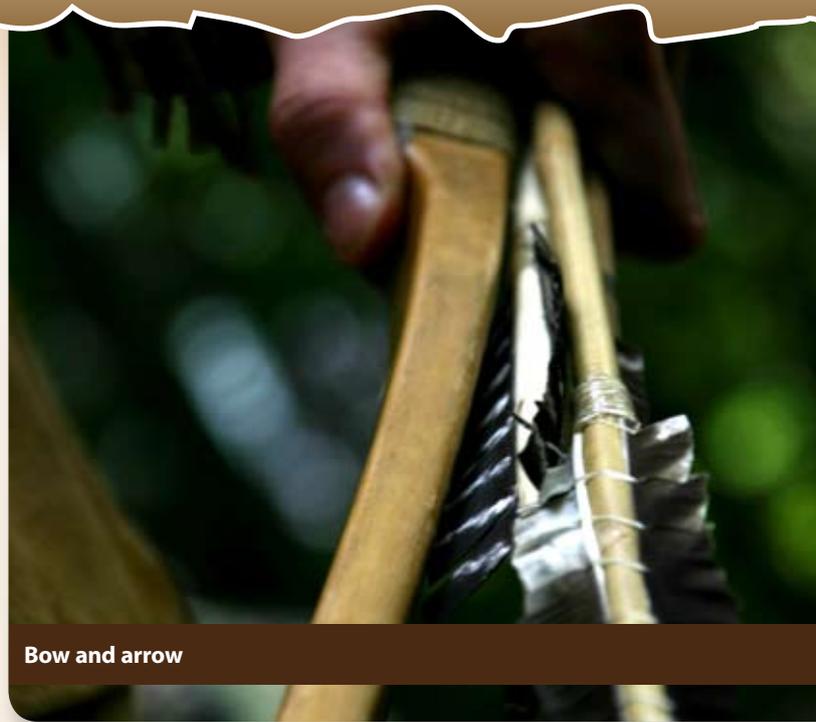
Back of the bow	the side of the bow facing the target.
Belly of the bow	the side facing the archer.
Limb	measurement from the end of the bow to the middle of the bow.
Stave	piece of wood that the bow is going to be made from.
String nocks	the grooves at each end of the bow's tips that secure the string.
Tiller	the removal of wood from a stave so that the bow bends correctly.

The bow that I'm going to describe is a design that Tim Baker recommends as being ideal for a first attempt. Mr Baker is from the USA and is an expert on bow design. It is a simple bow that should create good results. Through the bow-making stages I will introduce other designs to convey and illustrate to the reader an understanding of the many possibilities.

Timber Selection and harvesting

So which species of tree makes the best bow? People are mainly aware of yew, ash and elm and sometimes regard other timber as being inferior, or even useless. In fact, most species can be shaped into a bow, some performing better than others but by changing the design, lesser timbers can become effective hunting tools. There is great anticipation in trying to develop the best design for each species of tree. I've spent many nights awake, thinking about the next bow, the next challenge!

For me, there is much pleasure in going into the woods and selecting a tree to harvest. I like the added connection that develops with



Bow and arrow

the finished bow, knowing that I have been involved in the whole process, from felling to sanding the bow smooth. I realise that, for many, this isn't perhaps possible as they do not have access to suitable trees. You can, however, buy staves from dealers, but I have found them to be quite expensive, mainly due to the carriage charge. Often the most reliable source for staves is the local firewood suppliers, where I have seen beautiful potential staves being chopped up into logs!

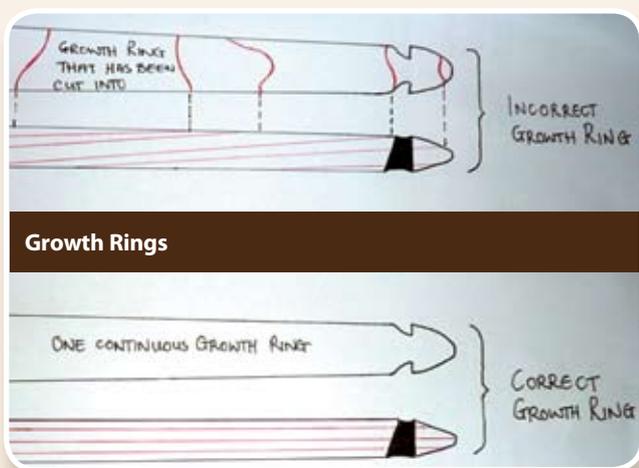
It is best to harvest the timber in winter, as the tree will be dormant and contain less moisture.

For your first bow select a tree that is as straight as possible, with few visible knots and cracks. Hard woods such as oak and ash are good to start with but save experimenting with yew until after you have a few bows under your belt. I would suggest you harvest a tree that is about a foot in diameter as it will provide a flat back to the bow. I usually cut the trunk length to about six feet before splitting the staves out. I have found it better to split the staves out quite soon after felling the tree. Using metal forestry wedges or even hardwood wedges, the felled tree must be split in half, by hammering the wedge into the end of the log. This will cause a crack to open up. Now place another wedge into the new crack and hammer, allowing the crack to continue along the length of the wood. Repeat this until the log has been split in two. An axe may be needed to free up the two halves from attached fibres. The halves can then be split to create quarters or even eighths. You want a stave of about four inches in width.

After splitting the staves out, the ends need to be sealed to stop the timber from cracking whilst seasoning. Many materials can be used for this, but I have found white wood glue to be cheap and effective. Now the stave should be left under cover for about a year to fully season. However, for those like me, who are impatient and want to get started, there is a method to speed up the drying process, so you can get working on the bow straight away. I shall explain this in part 2, in the next edition.

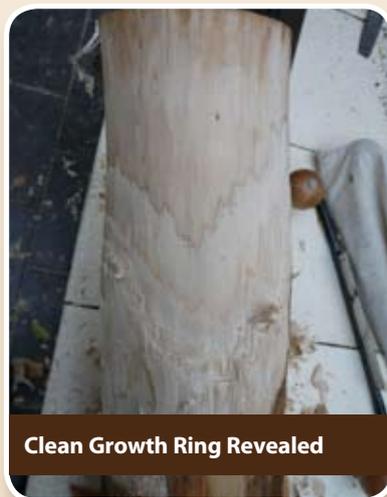
Chasing a Growth Ring

'Chasing a growth ring' is an expression that describes the removal of the bark and the outer growth rings from a stave. Think of it as peeling a few layers off an onion. You do this to reveal a beautifully smooth clean surface on which to mark your bow out. It is an important thing to do as this surface will be the back of the bow and experience great tension as it is bent. Indeed, when bending the bow, if there is more than one ring exposed, the upper ring will peel away from the lower, resulting in your bow exploding. Not good!



Growth Rings

First, look at the end of your stave. If you have used white wood glue to seal the end you should be able to see the radial growth rings. If not, use a piece of coarse sandpaper to reveal the rings, and for your first bow choose a ring that is quite wide and close to the bark side of the stave. It's a good idea to indicate the ring with a pencil or pen.



Clean Growth Ring Revealed

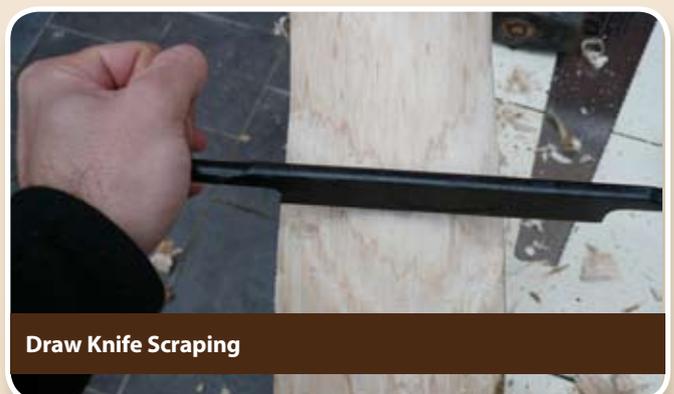
I know of a lot of bow-makers that use various clamps and benches to support the stave. I chased my first growth ring by leaning the stave upright against the kitchen sink whilst clamping it firmly between my legs. You can do the same against a tree or fallen log.

Pulling the draw-knife towards me, I cut down to the growth ring that is immediately above the desired one, the eventual back of the bow. I then cut down slowly to reach a spongy layer that is sandwiched between the rings. Then I alter the angle of the knife so that it is more on edge, and push it away from me, thereby scraping the spongy layer off. This action also straightens the line up so that the clean growth ring can be seen, along with previous growth rings (see photos). It is best to be methodical, just like scraping a deer hide. Work the whole width of the stave and continue along its length. It is very tempting to do a little here and a little there, but it is easy to lose track of which ring is which. This is one of my favourite stages of bow-making and it's usually at this point that the addiction starts. After about three feet of exposed growth ring, most students are planning their next bow!

When teaching bow-making I notice how gingerly people go about this task, as they find it difficult to differentiate the rings. By the time they've chased the whole ring, they are using the draw-knife like a professional!



Draw Knife Cutting



Draw Knife Scraping

Marking the bow's front view layout

After you have chased the whole length of the stave, it is time to mark the bow's front profile on the stave. I first inspect the timber for any problem areas, such as knots and cracks, and highlight them with a pencil.

Firstly, the centre line of the bow should be drawn on the stave. This is a line that runs the full length and from which the rest of the dimensions are calculated and marked.

If you look closely at the growth ring you will see parallel lines running the length of the stave; this is the grain. If the stave is straight, the grain will be straight; if the stave snakes a little, so will the grain. It is important to follow the grain to prevent the bow from failing. The grain photos show how the snaky grain of an Osage orange stave can produce a beautiful and highly effective bow.



Grain Close Up

For Mr Baker's design, the bow should be about your height, so mark this on the stave. Next, find the mid-point of the bow. For example, if six feet long, the mid-point will be at three feet, so mark this on the centre line. The width of the bow should be 1 3/8 inch wide from mid-limb to mid-limb i.e. the middle half of the bow. Next, taper the mid-limb to 1/2 inch at the nocks.

Remember you have to use the centre line as a guide, so if the grain snakes, so, too, should the edge of the bow.

It may be a little tricky to lay out, especially the taper from mid-limb to the nocks, but by taking frequent measurements you should be fine.

So this concludes part 1 of this 'How To'. Good luck in finding your staves and, please, if you have any questions or comments that need answering before the next instalment, don't hesitate to contact me. It's good to share the knowledge.

