



What is Wood Part 2

Some information on what exactly makes wood, wood.

Continuing from the first part, here are a few more useful things to learn and know about wood.

Fungi and Disease

There many varieties of fungus and disease that affect timber. Not all of them are totally bad. Many only affect the colour and pattern of the wood, NOT its strength. There are the well known ones such as dutch elm disease that are harmful, and ones such as white spot which can create beautiful patterns and lines in the wood. This is often called spalting. It can occur throughout the entire piece of timber or be localised. This is dependant on the growth of the fungi spore.

When gathering some wood, I found some with what appeared to be fungal infection but I was unsure if the wood could be used so I asked someone who advised 'try it and see', so I collected few pieces. The pieces I collected were larger than normal so I could trim the wood down more, if the timber turned out to be poor quality. What I found was, that the sapwood was soft but the heartwood very sound. I was able to trim and shape the pieces down, removing the softer sapwood and ended up with some lovely didgeridoos.



One thing to note with fungi in wood is that it does not live well in certain conditions. It will not survive in wood with a moisture content below 20% (see seasoned wood page re: moisture content). It needs air to live, so when a didgeridoo is finished and sealed inside and out, helps reduce the fungi's potential. Fungi, as a generalisation prefers to feed on sap wood. Therefore (as in the example above) allow for this when gathering the wood to assist in reducing problems later on.

It must be said that I am not a biologist and the range of fungi etc is so extensive, that I can not begin to scratch more than the surface of the subject. What I have written is what I have found out in my own quest to make didgeridoos and use as my own

guidelines.

Stressed Wood

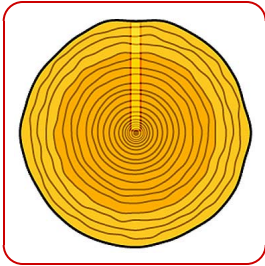
Often termed tension, reaction, or compression wood, it is wood that has not grown erect or 'normally'. Though formed differently in softwood trees to that of hardwood species, the cause and effect are pretty much the same. As the tree grows, it can become stressed for a number of reasons, it could be encumbered e.g. weight of snow or ice on the limbs (colder climates), to partial uprooting in storms (either the tree itself or a tree leaning against it), to sunlight being available from only one direction. Whatever the reason for the 'stress', the results are similar. The wood is affected in that it grows with abnormal or irregular growth rings, with the pith not being central.

When the wood subsequently seasons and dries out it will shrink, twist and warp unevenly. Consider the didgeridoo. When cutting in half to hollow out, if the wood is stressed, and you cut along the stress line, the wood can 'ping' apart instantly and it nigh on impossible to glue the pieces together snugly. Don't forget that the distortion can happen in three dimensions, not just twist or move one way. When cutting stressed wood you may find that the surface is burred (similar to that of cutting wet wood with a blunt saw).

Stressed wood can also add significant character to the didgeridoo if thought of before hand. When shaped, the growth rings will appear irregularly so it can be shown of to great effect.

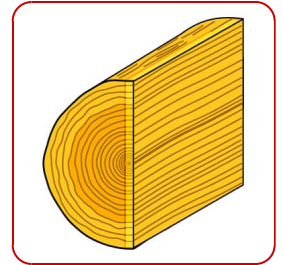


Grain

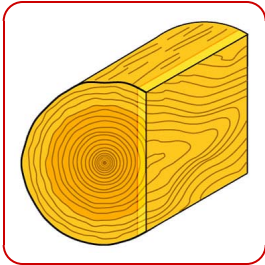


Couldn't write this without mentioning grain. Knowing what you are looking at and how something is formed will help immensely when working the wood. The grain of the wood depends on the species of tree and the growing conditions of the tree. I have read that there are over 50 different uses of the word grain and many sub-categories. The description of the grain depends on the surface of the wood, or how it has been cut, e.g. across the width of the wood, along the length of the wood, and so on. Needless to say (but I have anyway), you do not need to know them all so I will only cover the most important ones:

Cross (or End) grain is when the wood is cut perpendicular to the axis of growth, ie it grows up, you cut it across. This cut shows you the growth rings of the tree. It is known as the transverse or cross-sectional surface. In didgeridoo terms this is when you trim the length of the wood down.



Radial surface is when the wood is cut vertically through its middle. This surface or cut shows the growth rings as vertical lines and knots will appear horizontally. This is produced when cutting a didgeridoo in half, prior to hollowing.



Tangential surface is when the wood is cut vertically but the cut does not pass through the centre of the wood. Basically it is cutting a vertical slice off the wood. In didgeridoo terms when shaping the wood down, you would trim the bulk by cutting slices from it, along the tangential surface.

Knowing the grain will surrender much information such as the age of the wood, the type or species of the wood, whether it is stressed or not. It will show you the original shape of the timber and tell where branches and limbs grew, and so on. I remember speaking to one didge maker who started telling me about the wood and describing what and where it had had limbs growing, the original shape of the wood and so on. I thought 'how?', then thought 'why', then went away and found out!.

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