

## Wood.

I haven't a clue as to your knowledge of the world and how it works. If this is repetition, hopefully it will help. If it is new territory, great!!

Wood lives and wood dies. Though it is dead, it continues to live. How is that? Well, think of wood as a very hard sponge. Wood continues to be affected by temperature and humidity changes, even after death. Therefore, though it is really dead, you should care for it as if it is still alive. If you do this in a quality manner, wood will respond to your caresses in a quality manner. Sort of like petting a cat. Rub him/her the wrong way, and you will find out quickly which end of the cat has claws<G>.

### Wood, Forced to Live in a World of Evil

Why and how does wood react to the changes? As I said, wood is essentially a sponge. The problem with wood is that it is not homogeneous (all the same), and it has irregular layers (called tree rings). These layers are made up of soft and relatively hard sections, arranged in concentric but uneven circles. The quality and sizes of these layers of rings is dependent upon how the environment affected the tree during its life. Hard lives tend to make lots of close together rings. Easy life tends to make wider rings. Literally it is possible to trace the history of climatic conditions based upon tree rings. And, literally, they have traced the date to when structures were constructed back into medieval times by comparing the arrangement of the tree rings (good net surfing when you have a lunch in one hand and a mouse in the other). It's called the science of Dendrochronology (Tree-ring-time literally).

The hard and soft portions of the wood absorb moisture differently. So if moisture is added or removed the wood will move to react to this change. If the change is rapid, this stresses the cellular bond in the wood. Sometimes, literally, to the breaking point. Hence the reason for this soliloquy.

Temperature causes all matter to expand and contract. Humidity's effect is less limited, but in wood more dramatic. Their effects cause essentially the same stresses.

NOTE- just a point of information. Different things expand at different rates. Have you ever wondered what makes the left right blinkers in your car go click click off and on? The current goes through a piece of metal that is iron on one side and brass on the other. That metal is what is known in the industry as a "bi-metallic strip." When the left indicator is turned on, power runs through the metal and heats it up. As it heats up, the brass side of the metal expands faster than the iron side; and it pops and moves to break the current flow. When it cools back down, it reconnects the circuit, the lights turn on again, current flows again, and the heating cycle starts again. If you had industrious parents who pulled a trailer, when the trailer was connected, the clicker clicked very fast. This is because the power drawn by the additional tail light in the trailer caused the clicker to heat quicker, and break the connection faster.

Back on topic.

Another bug in the ointment, trees do not grow straight. So the piece you get will be a “piece of some part of the tree (one part of a chicken is the same as any other part, right?).” As each and every tree is different (like people), this obviously means that each piece of wood that is cut is different.

Only skill and experience will allow a bowl maker to make something that will last a generation or more. When a bowl maker cut wood, in the old days, he would throw the logs under his house. Under the house the wood would dehydrate slowly. It is the quick dehydration that causes wood to check, crack, and craze (dictionary time folks). After it has been under the house 2-3 years, then it is (probably) ready for bowl making.

If, during the drying process, it is noted that the wood is starting to become stressed, he will sometimes coat the ends of the log with wax. This way the wood will only express moisture through the bark, which is an even slower process.

### **Why do I Wax Loquacious?**

How does this relate to us? Well, some folks have wooden goblets or plates. How would we take care of them to ensure a long useful life for a cherished object?

The most obvious way to protect a wooden object is to paint or varnish it. Once the wood has stabilized, paint all surfaces. Even the bottom. Once the piece is 100% covered, you likely have protected it as best as you can. Still, care should be exercised.

Or, if the piece is to be used to hold foodstuffs, then food grade oil could be used to cover the piece to protect it (remember ALL surfaces, even the bottom). As the oil is absorbed into the wood (remember I said it was a sponge!), recoat it as required; in order to assure maximum and continued protection.

NOTE: Just because it is oil, does not mean that water will not have an effect upon it. Yes, there ARE water soluble oils. Like mother’s spit, water is a universal solvent.

### **Differential Temperature and Stress in Wood**

Have you ever dropped a piece of ice into a cup of coffee or hot tea? You usually will hear a series of cracks. What has happened is the outside portion of the ice has rapidly increased in temperature (hasn’t melted it and still is solid, though it has shed a bit of skin), while the inside has not (ice is a poor conductor of heat, relatively). The stress of the shape/size changes caused by fast thermal expansion near the surface of the ice causes the ice on the outside to stretch; and—CRACK. This is called differential temperature stress, and may be easily considered when you think about one portion of something quickly brought to a temperature that is different from the other portion. For whatever reason (usually time) the piece has not had a chance to thermally equalize (this means that the temperature across the whole piece has not reached a state of equilibrium- or is “all the same temperature”).

## Taking Care of your Wood

So, what should you do?

1. Protect the wood. Either varnish or coat it with oil. The oil will soak in. If the piece is unused, check it about twice a year and recoat with oil as necessary. If you are going to use it, wipe off the excess oil before use.
2. Store the piece out of direct sunlight. Also, do not place the piece where the sun will heat ONLY 1 side of it. Though this will likely not be a problem short term, weeks and months of this uneven heating can create disaster.
3. Do not place extremely cold or extremely hot material/liquids inside the piece. Cold mead or wine probably is ok. Remember it's wood and unknown.
4. Do not place the wood piece very close to fires or other hot things (remember heating only on one side).
5. Store the piece out of drafts and out of the gale generated by heater/air conditioner vents in the home. Again, quick bursts of heat or cold, and only on one side.
6. When the piece is being used out of doors, between uses, cover it with a scrap of cloth (certainly you have a scrap of beautiful cloth that is too pretty to throw away, but too small to make something out of). Your peers will see that you are doing something pretty, and marvel at your attention to sanitary conditions (even if it is totally by accident). This also keeps you from drinking a bug.
7. As soon as reasonable after each use, clean and wipe it out with a cotton cloth. Then re-oil.
8. Replace the item in its relatively temperature and moisture controlled area until next use.

Now, someone may think that I am being excessive in my thoughts possibly. However each wood object is made of unknown material, that is known to be temperature and moisture sensitive. We don't know how long it will last, or what is likely to offend it. If the piece is a favorite, certainly I would consider taking better care of it.