

UNDERSTANDING WOOD GRAIN

Whittlin' Basics

This handout describes how wood grain influences knife carving.

Understanding growth and grain

The basic characteristics of different types of wood are created by those fine lines that represent the growth cycles—annular rings. These are called the *wood grain*. You will need to plan your project so that most of the carving is *with*, not *across*, the grain.

FIGURE 1 the formation of wood grain.

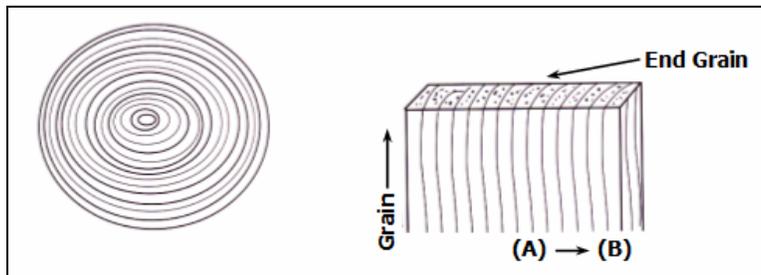


Figure 1– Grain Formation

Growth rings are added for each year of a tree's life (A). When the wood is cut, these growth rings create the grain. Carving with the grain means to cut in the same direction of the wood (B).

To understand wood grain, or *grain dynamic*, think of petting a dog or a cat. When you stroke with the fur, the texture of the fur is nice and smooth. The hairs will lay flat against the animal's skin. If you stroke against the fur, the fur sticks up and resists your efforts.

The same principle applies to wood grain. If you cut across or against the grain, you will meet resistance. Your knife will dig into the wood too much and you will end up breaking the wood instead of carving it.

What makes basswood a good carving wood?

Because of the short growing season in Minnesota and Michigan, the tree grows very slowly. That is, the annual rings are close together. Note that the Southern basswood has a longer growing season that results in wider annual rings.

Learning grain dynamics

Cut with the grain of the wood to prevent the knife from digging into the wood at the wrong place. If the wood does not show the grain, the knife will find it. FIGURE 2 shows the wood grain on typical block of wood.

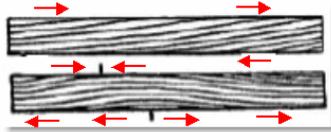


Figure 2– Typical woodgrain flow

If your knife is “digging up” large chips or chunks of wood, you are carving against the grain. Reverse the direction of your cut.

Demonstrating grain dynamics

To find the grain direction of a piece of wood, carve a small shaving off the block. If it shaves easily, you are carving with the grain. If the knife digs into the wood, you are cutting against the grain. Turn the block around and carve in the other direction. You will find the wood will shave off much easier.

Project: To learn about grain dynamic, round a square practice carving block into a cylinder.

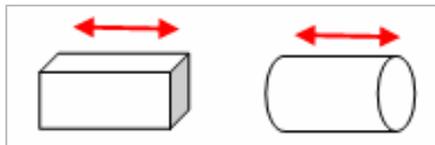


Figure 3– Grain Changes

Notice that the dynamic changes half way down the block (FIGURE 3).

There will certainly be projects for which you will need to carve across the end of the wood grain. Just remember to be careful. Take shallow cuts and keep your blade sharp.

Reference: *Carving Neckerchief Slides*, Robert Reitmeyer, 2002

WHITTLE DESIGNS

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