

Professor James Bailey

Types of Wood

Wood used for a woodcut must be clean, well seasoned or kiln dried, and perfectly flat in all directions. Many types of wood are suitable, both hardwoods and softwoods may be utilized depending on the amount of detail required. Certain soft woods, such as some species of pine, cedar or cypress, may not allow details to be successfully rendered and may also compress during the printing process but may still yield interesting results. Hardwoods such as mahogany, poplar, ash, birch, apple or cherry plywood are more difficult to carve and require more attention to tool sharpening but retain smaller details and hold up to printing pressure and abrasion better.

Woodcuts are relief printing plates made by carving marks in blocks of long grained planks or plywood. Long-grain refers to the grain following the direction of growth, i.e., parallel to the tree trunk/branch the piece of wood was cut from.

Plywood made from birch, cherry, and fir is widely employed as it has a more predictable and consistent thickness, surface quality and more is easily acquired than suitable planks. Plywood should be flat, clean, free of internal voids or knots that may affect impression and checks or cracks that may damage rollers. Plywood is typically graded with a lettering system: A being the high grade and D being low grade. Two letters are commonly listed, (sometimes a third added to indicate the intended exposure rating) with each letter indicating a face. For example, AA graded plywood would be plywood with two clear faces and few voids. AC plywood is the most common and would indicate a clear face and a face with some imperfections and filled knots or voids. Voids in the internal structure of the plywood block may affect impression. AA or higher grades of plywood will have the fewest voids.

Buying wood directly from a well stocked lumber yard that serves fine woodworkers rather than one of the box store retailers will yield higher quality and more selection of interesting species. Lumber yards also often offer some milling services, so you may be able to have stock panels or planks accurately milled to desired dimensions and occasionally thicknesses as well.

Buying small samples of various species and performing some tests is ultimately the best way to determine which wood products will yield the desired results.

Additionally fabricated plywoods can work well such as MDF (Medium density fiberboard), it comes in $\frac{1}{4}$ " and $\frac{1}{2}$ " (stay away from the $\frac{3}{4}$ or 1"). Woods like particle board or Masonite are both very hard to carve due to the glues involved and produce poor results.

Sealing Wood Blocks

Some woodcut printers like to seal their block before they begin to print. Here are a number of ways to do this from various people and sources.

Sealing the Block

The wood surface can be sealed with Shellac (alcohol based) (Bullseye spray shellac) or Waterborne Acrylic Varnish to allow for better ink release and to help prevent surface splintering of softwoods during carving. Avoid using sealants or varnishes that are oil based as the inks and solvents can soften them during printing or cleaning with disastrous results.

Wood may be printed without sealing the surface, however the ink used during printing will soak into the surface somewhat rather than release onto the paper. This affects the density of solids until the pores have been filled and can be frustrating. The wood surface will also swell and

soften a small amount. Sealing the surface prevents this from occurring and allows for more carefree handling during printing.

Apply one or two thin coats of Shellac or Acrylic Varnish, lightly sanding between or after each coat. Careful application is important; drips, brush marks, stray bugs and other imperfections will reproduce in the print. Only enough varnish is needed to seal the pores of the wood and toughen the wood surface. Coating both sides at once and drying raised on thumbtacks prevents warping.

Acrylic varnish will significantly raise the grain as the water contained in the vehicle readily soaks into the wood. The effect is not as pronounced with Shellac.

Check to be sure you've coated the surface uniformly, as any areas of uneven application may show up as changes in ink density due to absorption.

Karen Kunc from the University of Nebraska seals the wood with shellac. Notes from her class say that it's important to seal both sides of the block to prevent warping; to rub the shellac on with a rag or paper towel; that it can raise the grain of the wood slightly so the block may need a light sanding after the shellac is dry; and that shellac cleans up with alcohol. (*The Artist's Handbook* also says that it can be thinned with alcohol. The alcohol may turn it cloudy, but they say this will go away when it dries.) Karen puts it on after drawing or transferring her image onto the block, so her reason for using the shellac is to make it possible to take a proof, clean the block of ink, and still see the original drawing underneath. Shellac is insoluble in turpentine or mineral spirits.

Bill Paden at NYU used PVA glue (like Elmer's) thinned with water. He would apply this to the plywood, allow it to dry, sand it lightly and then carve. He felt this strengthened the wood so it was less likely to chip, especially the very thin veneer on the top of the plywood block. PVA glue is not affected by water after it dries.

Cleaning a woodblock after printing.

The block should be cleaned with a gentle dry wipe with a sturdy cotton cloth. Alternatively, a cloth dampened with a small amount of solvent may be used. Non-drying oils, water-miscible solvents and even mineral spirits can swell and soften the woodcut, breaking free small details or changing the surface's reaction to ink. Solvent, if used, should be used as sparingly as possible.

*****NEVER USE VEGETABLE OIL TO CLEAN A WOODBLOCK!!!!!!**

Blocks should be stored flat, the surface protected, in an area with controlled temperature and humidity to prevent warping or other distortion.