

Hand Applied Finishes Class Held by John Hodgson

The NWA shop has been eventful with SIG activities, classes, and meetings in early May. John Hodgson gave a full day class on Hand Finishing on May 4, 2019. He first gave an overview of the instruction with five variables to good finishing:

- The choice of wood species
- The surface preparation
- Use of sealers and conditioners
- Choice of stain (if used at all)
- The topcoat(s)

John used PowerPoint with his talk and provided materials for hands-on learning[of sanding techniques, application of fillers, correct brush strokes, and the optics of various glosses. This article can only summarize the wealth of information John taught his participants. The editor apologizes for the rich information not included because of the limitations of newsletter space. But nothing can replace the valuable experience of a personal lesson in the NWA classroom.

GOALS John began with a[discussion of the goals for finishing a piece. Consider the purpose of the project. How much protection does it need? How much color is desired? Is the surface exposed to interior or exterior environments? What is the project's function? Depending on the functions of the project, make decisions as to stain or not, the tint of the stain, interior vs. exterior topcoats, oil vs water-based topcoats, wipe on or brush on topcoat, and the pros and cons of each of these decisions.

PLANNING Early planning is essential. It begins with the choice of wood species. Make a test board of the same wood used for your project. Partition off sections that will be sanded with various grits, perhaps applied with fillers, stained with various tints, and experimented with various topcoats. Label the back of the board with the specific products and grits you used.

COLOR If natural coloration and grain are desired, walnut, cherry, mahogany and ebony are attractive without stains. Woods lacking color like pine, ash, maple, birch, aspen, and basswood might be enhanced with stains. Dense woods like oak and maple can resist oil based pigmented stains if sanded to too high a grit. Water-based stains can be washed off and reapplied if the result isn't satisfactory. Non grain-raising commercial stains like Behlen or Mohawk are excellent but high in noxious odors. Use a respirator with organic filter (not a mere dust mask) and work outdoors, if possible. Pine, maple, cherry, and birch have hard and soft areas which can blotch from unevenly absorbed stains, so a conditioner like Minwax Prestain applied to the bare wood may prevent blotching. Sunlight on parts of a project's surface will eventually bleach the dye in stains. The solution to that is obvious!

SURFACE PREPARATION Proper wood preparation requires a flat as well as smooth surface. The wood should be planed, scraped, and sanded with progressively finer grits. The slightest raised grain or sanding marks will stand out after staining. Wipe mineral spirits on the bare wood to detect glue and other impurities before applying a stain and finish. For dents, use wet cotton cloth and a steam iron to draw up the depression but let the wood dry thoroughly before sanding.

FILLERS A smooth finish on open grain woods can be achieved by use of a filler. Use a wood

filler for dimples and open pores. Stains can be added to the filler to match or color the wood. Apply with a cheap brush, wipe excess with squeegee, expired credit card or wood strip. Burlap wiped across the grain is effective for complete removal of residue. Always let the filler dry thoroughly before sanding.

TOPCOATS The choice of topcoats is determined by trade-offs. For example, oil finishes are easy to apply and repair, but less durable. Oil based urethanes provide a durable protective coating, but they are volatile, difficult to repair and cleanup is more difficult. Water-based topcoats provide easy clean up but can dry too quickly in large surface applications. There is an extender to add to prevent premature drying. Types of brushes and application techniques vary depending on the choice of topcoat. Always maintain a wet edge with water-based products, overlapping the previous stroke. Lay it on and leave it! Don't try to correct a drying coat. A minimum of three to ten coats is best and wait at least 72 hours before a rub out. John recommended some high-quality products like Bill Bush's Bush Oil, aluminum oxide sanding papers and sanding sponges. He suggested artists' brushes from Michaels or Hobby Lobby with a 20% coupon is the frugal way to buy fine-bristle brushes for water-based topcoats. Wipe on topcoats like Minwax, Waterlox, Watco, and Arm-R-Seal are easy to apply and can provide protection with multiple coats. Brushes should be conditioned before using: Dip the dry brush up to the top of the bristles in the appropriate solvent (mineral spirits for oil-based applications, water for water-based) to keep the bristles from hardening. Never apply finishes directly from the can to avoid contamination from wood and dust particles. Pour the quantity you want to use into a sealable jar. Strain water-based finishes with a nylon stocking material. Thin finishes should be applied on vertical surfaces to prevent sags and brush strokes.

RUBOUTS A rubout with 400, 600, 800 grit wet/dry paper removes brush marks and surface dust from fully cured topcoats. Wait 200 hours before a hard rubout of oil-based urethane topcoats. The final stage of hand finishing has two options. A soft rub out with 0000 steel wool and paste wax or a hard rub out with 400-600[or 800-1000+] grit wet/dry paper on a padded block with mineral oil, Dawn, Wool Lube, or a combination oil and mineral spirits as lubricant. It is finished up with pumice and rottenstone (available from Woodworkers' Supply) using a felt block (Amazon) soaked in mineral oil... or else auto polishing compound. If rubbing out with an orbital sander, use 1500 grit Mirka Abralon foam grip discs with the previously mentioned lubricants. Be careful when rubbing out not to sand through stained surfaces. Lastly, wax the surface with a good carnauba wax and buff. John rewarded his participants with gifts of sanding blocks, brushes and brush cleaner as well as supplying them with the materials for hands-on learning. Gifts to participants were brush and brush cleaner.