Lake Charles Woodworkers Club, Inc. August 2012

Mentoring Program - If you have a project, a problem in any woodworking area, these members have volenteered to help. Give them a call. Jeff Cormier: 582-3278; George Kuffel: 478-2707; John Marcon: 478-0646; Chuck Middleton: 625-3134; Gary Rock: 433-1679; Eltee Thibodeaux: 436-1997; Dick Trouth: 583-2683. Each have years of experience and knowledge.

July Meeting Highlights

Tom Bergstedt was our host this month at his great shop. We certainly enjoyed the biscuits and hot rolls. We had two guests: Joe Bruce and Harold Hoelzes.

Jeff Cormier's jig of the month were two router trammels for cutting circles. To make a trammel, first remove the router's sub-base, and trace the bit opening and mounting screw locations onto a rectangular piece of hardboard or plywood. Bore these holes and make sure to countersink the holes for the head of the mounting screws. Then measure the radius of the hole you want to cut from the inside edge of the bit. Now drill the hole for the pivot pin.

The second trammel is only slightly more complicated and included a sliding measure stick that provides very high accuracy. You can find many variations of these on the Web as well as commercial ones.

Jeff's safety tip was about house cleaning - that is, keeping your shop, especially the floor, clear of debris, cutoffs, power cables, air hoses, etc. Lots of accidents happen becuase of tripping in shops.

Eltee Thibodeaux showed us the first of several Show & Tell items this month. His was a nice scroll work sign titled "Happiness is Success." Eltee also showed a great router table push pad.

Pie Sonnier out did himself this month with a wonderful 35 ton crane from a plan. It included an articulated lifting arm. His challenge was to make a lifting ball of the right size and weight. Pie reminded us about Sulphur's Man Show that starts August 2 and runs until September 2.

J.W. Anderson brought one of his great cypress plant stands and a beautiful coffee table of unknown wood. Ray Kedbodeaux had some turned pencils as well as a scratch awl from a kit plus photos of a flip stand for small stationary tools. This was from a plan. Sears used to sell something simular to this that held three tools.

Dick Trouth showed us a turned pen and pencil set from tulip wood that was also the Bring Back this month. Stephen Thomas had a segmented hollow vessel that was tall and very light. Orginally, he wanted to finish it showing the natural wood but the finish left several of the segments blotchy so he ened up painting it a great purple. Stephen prefers Polycrylic to the Rustoleum product because of its ease of use and consistency. He hand carved the handles. We'll discuss how to lessen blotching on page 2.

Ted Garner had the great segmented bowl of multiple woods including maple, ebony and purpleheart. He started the finish with a sanding sealer (reduced shellack) of three coats then 2 coats of poly. Ted uses an Incra sliding miter fence for his precise cuts.

Gary Rock had a great bowl of black gum wrapped with white cotton string. Don Elfert built a nice jewelry box of maple with walnut edging and walnut handle. It has a compartmented insert with flocking.

There was a general discussion about area tool suppliers including Woodworkers Paradise in Lumberton, TX,, Poussons in Lake Charles and PMC Machinery and Tools in Hammond, Rockler and Woodcraft in Houston. It was noted that Joe's Electric in Sulphur repairs power tools. Gary Rock won the Bring Back Item. Our guest, Harold brought several custom dowel cutters of a cleaver design that cuts dowels of various sizes out of many types of wood. These were raffled off at the end of the meeting.

Coming Up . . . Saturday, August 11 at 9:00 A.M. at the great shop of Joe Comeaux

Blotch Control for Finishes

If you examined a board with a microscope, you would see many tiny holes called "pores."0 Woods with fine pores, including pine, cherry, birch, and maple, tend to blotch when stained. This uneven coloration is a result of variations in the density of the wood. Anything put on the surface tends to absorb more in the softer areas than in the harder areas of the wood. The greater the absorption, the darker the color. Your paint thinner will reveal potential blotching problems.

To avoid blotching, make a homemade conditioner. Most commercial conditioners, as well as homemade mixes using lacquer or varnish but will leave a slight amber cast. You can buy conditioners that even out the density of the wood and minimize blotching. However, you can accomplish the same thing with a homemade concoction. Unless you're planning to use a water-based finish, one way to condition blotch-prone woods with a highly diluted coat of the final finish prior to staining. For example, if you've chosen an oil-based polyurethane as your finish, mix one part poly with five parts paint thinner. Apply a liberal coat of that mix and allow it to dry. Lightly sand the wood with 220-grit sandpaper, and you have evened out the density. You'll leave the mix in the softer areas, and sand it off the harder areas. Always test your mixture and procedure on a scrap piece before trying it on the actual project.

For a colorless conditioner, or one that will be coated with almost any finish, use a reduced coat of clear shellac. You'll find premixed, canned shellac at most home centers and hardware stores (consensus was that Zinsser or Bulls Eye are the best of these). You want to look for unwaxed shellack for this. This product is way too thick for a conditioner, so mix 1 part shellac with 4 to 5 parts denatured alcohol to make the amount you need for your project.

You can also make up enough shellack yourself using flake or button shellack. That way, you don't have to purchase a whole can for a small job. Dry shellac is mixed with denatured alcohol in a particular ratio called a cut, which refers to the amount of shellac in pounds dissolved in a gallon of alcohol. A 2-lb. cut of shellac is 2 lb. of shellac resin dissolved in a gallon of alcohol. When mixing shellac from flakes or buttons, you can scale down the ratio of cut to make a suitable amount. For example, adding 2 oz. of flakes to 8 oz. of alcohol produces a half-pint of 2-lb.-cut shellac. What we want for this sealer coat is a 1 pound cut created by mixing 1 ounce of blond flake shellack with 10 ounces of alcohol. Yes, that is correct because you don't want to simply half the amount of shellack or double the alcohol and here's why.

The mathematics for shellac dilution do not follow a general ratio formula because you are working with the weight of a substance in a volume. For example, say you want to take a 2-lb. cut down to a 1-lb. cut. It would seem logical that it would be a one-to-one reduction of shellac to alcohol, but it's not. When you dissolve 2 lb. of shellac in 1 gal. of alcohol, you displace the original volume by 20 percent, thus giving you 1.2 gal. total in which 2 lb. of shellac are dissolved. So a 1-gal. volume of a 2-lb. cut shellac contains only 1.66 lb. of shellac. Three lb. in alcohol gives roughly 1.3 gal; 4 lb., 1.4 gal, and so on.).

One other thing to note is that you need to use the correct alcohol. Denatured alcohol is ethanol, which is the same alcohol used in alcoholic beverages. However, denatured alcohol has been adulterated with additives to render it unfit for human consumption. A typical denatured formula consists of 190-proof ethanol, 4 percent methanol, and 1 percent methyl isobutyl ketone (aka MIBK). The proof refers to the amount of pure ethanol as a percentage divided by 2 (e.g.: 200 proof equals 100 percent ethanol, 190 proof equals 95 percent ethanol). Some finishing purists insist on using 200-proof ethanol, which dissolves the flakes a bit faster. However, using this as opposed to commercial denatured alcohol hasn't proven to increase the durability or other properties and you can't just go to the big box store and purchase it.

Whether it's due to normal squeeze-out or an unnoticed drip, dried glue will also produce an unsightly spot or blotch in the finish. Let the glue start to set, then scrape it off with a sharp blade, and wipe the wood with a damp rag.

Paint thinner will make glue spots visible before you finish. If they show up after you have applied stain or a topcoat, you'll have to scrape or sand to remove them. Barry Humphus

Don Elfert's Jewelry Box.

Ebonize Your Wood

The next time you're working on a project that calls for a dark, opaque accent, a piece that looks like ebony, try ebonizing wood for just the right look. It's a fairly simple process, but works better on some woods than others. In his segmented bowl project last month, Ted Garner used real ebony we talked about the high price of this exotic wood. For example, 1/4" thick Gaboon Ebony (very hard to find) sells for as much as $52 per board foot. So it was Ted that inspired me to do some research and do a bit of testing.

Ebonizing wood is not the same thing as simply coloring wood with ebony stain. When you ebonize wood you're causing a chemical reaction that makes the material turn black. The benefit to this process is opacity. When wood is stained you can sometimes see the grain through the stain. When wood is correctly ebonized it becomes pitch black.

It's important to understand that this is more art than science. You should definitely experiment before using this technique on a project with several samples before you committ to your final project. Keep these samples and record how you did them.

Ebonizing depends on the wood having a lot of tannin content. As a rule hardwoods have more tannins than softwoods, and dark hardwoods more than light hardwoods. That makes oak, cherry and walnut good candidates for ebonizing. Birch and maple, for example are not good candidates, but I'll show you a way to work around their shortage of tannins.

Even among the usual suspects there's tannin and there's tannin. One piece of walnut may ebonize completely differently than another. You'll need to experiment with the pieces you're using to see what it takes to get the results you want.

Ingredients for ebonizing are all household items. Tea, steel wool, and vinegar. The reaction with tannins is caused by iron acetate being brushed on the wood. Don't run off to the hardware store looking for it. It's simple to make.

Start by washing the steel wool with soap and water to remove any oils. If you don't do this the oil may prevent a reaction with the vinegar. With the steel wool in a glass jar, pour vinegar over it. You'll know it's working when bubbles are coming off the steel wool. Bubbles should start to form within minutes of the vinegar contacting the steel wool. You can cap the jar, <u>but cap it loosely</u>. The gas must be allowed to escape. Note that exothermic chemical reactions produce some heat so be aware that what you do will result in a bit of heat that is not dangerous in this reaction. The equasion is

$$Fe\ (s) + 3\ O2\ (g) \rightarrow 2\ Fe2O$$

The steel wool and vinegar need some time to react; a couple days would be good, a week would be better. If you suddenly realize you need iron acetate for a project. You could use a stronger acid, but vinegar is in your kitchen, cheap and no danger at all in this reaction.

Now, you can accelerate the reaction process by heating the mix in a double boiler. Gently heat the mix for a couple hours, then let it sit overnight. You should be able to use it the next day. Remeber to turn off the hot plate.

My spouse bought a hot plate for my shop at a garage sale for fifty cents. It's earned its keep a number of times. In addition to making iron acetate, make yourself a nice pot of tea. Steep 10 tea bags in a quart of hot water to make a really strong brew. The tea will be used to add tannins to wood. With the tea you can also ebonize maple or birch.

A good jar of iron acetate will look pretty icky. Remove particles from the iron acetate by pouring it through a coffee filter.

You need to test this on a wood sample. Brush the iron acetate on to some sample woods and see what you get. Results are not instantaneous. Elapsed time on these boards is two minutes. The tannin-heavy woods-walnut, oak, cherry-are much darker than the other woods.

Want things to get even darker? Add tea. Brush tea on to the wood and let it dry a little. I have found that the results are best if the tea is slightly damp to the touch when brushing iron acetate over it.

The tea really helps. You can also brush tea on top of the iron acetate. The bottom line is that tea has a lot of tannins in it, so it's a tannin-additive for low tannin woods.

Ebonizing only affects the surface so machining, such as routed profiles, should be done before ebonizing.

The ebonizing process may raise the grain, especially if you use tea. It's a good idea to do a pre-ebonizing grain raise. Brush on a little water and, after the wood dries, sand off the whiskers. That should prevent you from having to sand the ebonized piece and taking the risk of sanding off the ebonizing.

The iron acetate needs to get into the wood, so don't sand finer than 220-grit or you may prevent the liquid from soaking in and having the chance to react.

Give yourself ample opportunity to experiment with this process before using it on a project. Keep the test samples and record how you made them.

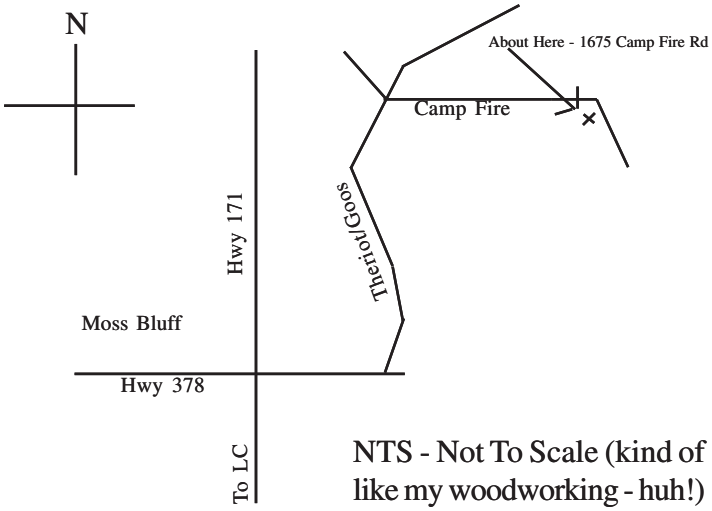
Jeff Cormier should be proud of me as well as Bill Kolb of SOWELA as we have combined both interesting chemistry and woodworking this month! Bless the chemists as they make most of what is great in the U.S. industry possible. Our local petrochemical industrial complex is based entirely on chenistry. *Barry Humphus.*

August Meeting Location

Joe Comeaux, who has been so gracious to do the duties of Treasurer for the Lake Charles Woodworkers Club in the past has also graciously agreed to be our host this month at his fine shop.

Joe says to take highway 171 North (or South, depending on where you are coming from) to the intersection with highway 378 (signal light in Moss Bluff). Go East at the light. Follow Theriot Road/Goos Road for about 2.5 to 3.0 miles to Campfire Road. Go right on Campfire Road to 1675 Campfire Road on the right about 0.75 miles. His house faces Campfire at the corner of Campfire and Tanglewood Drive. His drive way is on the Tanglewood side of the lot.

Hmmm - while I'm going to punch in his address into my GPS (and still likely miss it), if you have questions, give Joe or Sandra a call at 855-6361 just to make sure.



NTS - Not To Scale (kind of like my woodworking - huh!)

Lake Charles Woodworkers Club, Inc.
www.lcwoodworkers.com
1039 Timberlawn Dr.
Lake Charles, LA 70605