

John Griffith, President
Patrick LaPoint Treasurer

Officers and Directors

Barry Humphus, Editor, George Kuffel
Gary Rock, Steve Thomas, Joe Comeaux

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

July Meeting Highlights

LCWW President John Griffith was back after missing a couple of meetings due to other commitments. One of these was a 6,700 mile trip to the northwest in Washington State where he visited a great forest where he saw some of the great spruce trees who's wood he builds his wonderful guitars.

John also started the meeting with one of his guitars nearly ready for final assembly. This was his fourth instrument and he showed the internal bracing that provides stability to the fret and bridge over the life of the instrument.. John leaves the inside of the the piece unfinished as was recommended

by the instructions he has been following but does sand to 220 grit. He makes the soundboard as thin as possible as this will provide better tone and resonance for the piece. He uses spruce for the body and mahogany for the neck assembly. The bracing is of a fan design recommended by the instructions. Some manufacturers (such as Martin) use an X style bracing. In any case, John found that building the jigs for construction as well as learning the

precise use of hand tools has been an exceptional experience.

Ray Kebodeaux started Show and Tell by displaying two walnut platters, beautifully turned with the larger one finished in Watco butcher block oil and the smaller finished with spray-on poly.

Steve Thomas brought us some scrap bowls - seriously, the segmented bowls were made from the many pieces and cutoffs in his shop. One was done from left-over glue-

up rings from a different bowl project with 72 segments. The most remarkable bowl though was one of maple, purple heart, coffee nut and walnut with 1,842 separate pieces -- amazing!

George Carr had several chip carved crosses of basswood and satin finished with gel stain. Patrick LaPoint had a couple of nice band saw boxes. He pointed out that you need a really sharp blade to avoid burning when making the turns. These were of a mystery wood he got collecting wood scrap at the Port of Lake Charles. Patrick also had a great looking humadore again of Port wood but lined with cypress. He mentioned that these can also be lined with Spanish cedar.

Steve McCorquodale brought a great bench of cypress with cedar legs. The cypress was from the many cutoffs he had from his days as a miller. The bench was carefully designed to not be too tall or wide with the legs mounted outboard for stability. It also featured a pair of dark cedar strips to accent the cedar legs. He pointed out that you cannot tell the age of a cypress tree by counting the rings as cypress trees contain lots of false rings. The only way to determine an unknown age of these trees is through carbon dating. It was mentioned that in 2004, a great bald cypress forest was discovered in sixty feet of Gulf water off Gulf Shores Alabama after the passing of Hurricane Ivan that year. The forest is more than 60,000 years old. A 30 min. documentary of the forest and research on it is available at www.nola.com.

Eltee Thibodeau brought a 22 inch scrawl work of Sitting Bull. Gary Rock had an exquisite vase with a thin finial that was turned, carved and had pyro designs. Mark Underwood had a couple of really neat large bolt, nut and washer designs out of yellow heart and blood wood. Mark described the process of making these he learned from a colleague at the Gulf Coast Woodworkers.

Steve McCorquodale won the Show & Tell prize. Patrick LaPoint said that the raffle for the large purple heart timber will be drawn at the August meeting.

Coming Up . . . Saturday, August 12 at 9:00 A.M. at the Stines on Nelson Road in Lake Charles.



Gary Rock
 Eltee Thibodeaux
 Mark Underwood
 Patrick Lapoint
 Ray Kebodeau

Thoughts on Finishing
 Finishing can be one of the biggest bugaboos for woodworkers. Though you remain undaunted by complex joinery or intricate and precise machining, scores of woodworkers still cringe at the thought of applying a finish to their work. “What’s the best finish for my project?” is a question often heard. Being able to answer that question confidently and comfortably is an important hurdle to overcome.

Finishing products can be grouped into manageable categories, based on general working qualities and the degrees of protection they offer: waxes, oils, varnishes, shellacs, lacquers and water-based finishes. Different finishes offer varying degrees of protection, durability, ease of application, reparability and aesthetics. Unfortunately, no single finish excels in all of these categories — a finish that excels in one may fail in another — so in choosing a finish you must accept trade-offs.

You should ask yourself a series of questions to determine the best finish for your project. Answers to these questions will point you toward the right finish to use on a given project, based on how well you need to protect the surface,

how well the finish will hold up, how easy it is to apply and how you want it to look. To get a better understanding of the choices, let’s first take a look at the different categories of wood finishes and we’ll ‘finish’ next month.

All wood finishes can be classified as one of two distinctly different types, based on how they dry, or cure. Evaporative finishes—such as lacquer, shellac and many water-based finishes—dry to a hard film as the solvents evaporate. (Water is not a solvent — it’s a carrier for the finish emulsion.) These types of finishes will always redissolve in the solvent used to thin them, long after they’ve dried, so they tend to be less durable than reactive finishes. Most reactive finishes — such as linseed or tung oil, catalyzed lacquers and varnishes — also contain solvents that evaporate, but they cure by reacting with either air outside the can or a chemical placed in the can before application. These finishes undergo a chemical change as they cure, and after that they will not redissolve in the solvent originally used to thin them. Except for the pure oils, reactive finishes tend to hold up better to heat and chemicals.

Waxes — don’t consider wax an appropriate finish in and of itself. Use paste wax (carnauba mostly, sometimes beeswax) to polish furniture but only over other finishes, such as lacquer or shellac.

The true oils — Linseed oil and tung oil, the drying oils most often used in finishing, are readily available and relatively inexpensive. These finishes are called true oils to distinguish them from other products hyped as oil finishes and to separate them from naturally nondrying or semidrying oils used in finishes, such as soybean oil. These true oils change from a liquid to a solid through polymerization, a process that strengthens the cured finish.

Linseed oil is available in several forms. Unrefined, it’s called raw linseed oil, rarely used on wood because it dries so slowly. By boiling the oil, the resulting product is thicker and dries more quickly. Most boiled linseed oil sold these days is raw oil that has been mixed with chemical additives to speed up the drying time (e.g. Japan dryer or equal). For wood finishing, you should use only boiled linseed oil.

Tung oil is derived from the nuts of trees that are native to Asia but have been cultivated in other parts of the

world. Tung oil is available in a heat-treated or polymerized form. The heat-treating process makes the oil a bit more durable and speeds up the drying time. This minimizes a tendency of tung oil to “frost” (dry to a whitish, matte appearance). Tung oil is paler in color and has better moisture resistance than linseed oil.

Linseed and tung oils are penetrating finishes, meaning they penetrate the fibers of the wood and harden. These are the easiest finishes to apply: Wipe them on, allow them to penetrate the surface of the wood and wipe off the excess with a rag (*Safety hint: dry the spread out rag in a well ventilated space*). These oils are usually not built up with enough coats to form a surface film, like that of varnish or lacquer, as the film is soft.

Varnish is made of tough and durable synthetic resins that have been modified with drying oils. Cans of varnish list resins such as alkyd, phenolic and urethane, and the oils used are tung and linseed and other semidrying oils such as soybean and safflower. Varnish cures by polymerization but the resins make this finish more durable than oil. Oil-based varnish is the most durable finish that can be easily applied by the average woodworker. Varnish surpasses most other finishes in its resistance to water, heat, solvents and other chemicals.

Varnishes that contain a high percentage of oil are called long-oil varnishes and readily reduced. These include marine, spar or exterior varnishes and some interior varnishes. Long-oil varnishes are more elastic and softer than medium- and short-oil varnishes that contain a lower percentage of oil. Medium-oil varnishes comprise most interior varnishes. Short-oil varnishes require extremely high temperatures to dry, so they’re used only in industrial applications.

The type of resin used in the varnish determines the characteristics of the finish. Alkyd varnish is the standard all-purpose interior variety with decent protective qualities. Phenolic varnish, usually made with tung oil, is predominantly for exterior use. Urethane varnish (polyurethane) offers a better resistance to heat, solvents and abrasions than any other varnish. Varnish is typically applied with a brush, although a highly thinned and gelled version, called wiping or wipe-on varnish, can be applied with a rag.

Oil and varnish blends are mostly oil with some varnish added, offer some of the best attributes of both ingredients: the easy application of true oils and the protective qualities of varnish. (Watco-brand Danish oil, teak oil and a number of other finishes.) It’s difficult to ascribe accurate protective qualities to these products because manufacturers don’t usually disclose the ratio of oil to varnish. Oil and varnish blends will dry a bit harder than true oils, and the finishes will build quicker with fewer applications.

While most people think of shellac as a liquid finish, in its pure form it’s a natural resin secreted from a bug that feeds on trees. The secretions are gathered and refined into dry flakes, which are dissolved in ethyl alcohol to make the shel-

lac solution that winds up in cans at the store.

You can buy shellac premixed, or buy it in flake form and mix it yourself. The premixed variety is available in amber and clear, which is shellac that’s been bleached. With flakes, shellac is available in a wider variety of colors and wax contents than with the premixed version (contains wax). The wax in shellac decreases the finish’s resistance to water and prevents some finishes from bonding to it.

Professionals regard lacquer as the best all-around finish for wood because it dries fast, imparts depth and richness to the wood, exhibits excellent durability (depending on the type used). There are several different types of lacquer, and they exhibit different performance characteristics.

Nitrocellulose lacquer is the most common. If the label says lacquer, it’s likely nitrocellulose, made from an alkyd and nitrocellulose resin dissolved and mixed with solvents that evaporate quickly. This type of lacquer has moderate water resistance, but sensitive to heat and certain solvents. The big drawback is it’s tendency to yellow as it ages.

Acrylic-modified lacquer is made from a mixture of a nonyellowing cellulose resin (cellulose acetate butyrate) and acrylic. This lacquer possesses the same properties of nitrocellulose lacquer but it will not show as an amber color when applied over light-colored woods. Also, the finish won’t turn yellow over time.

Catalyzed lacquer bridges the gap between the application traits of nitrocellulose lacquer and the durability of varnish. Catalyzed lacquer is a complex finish composed of urea formaldehyde or urea melamine and an alkyd that has some nitrocellulose resin added to make it handle like normal lacquer. The addition of an acid catalyst initiates a chemical reaction that forms a very tough, durable finish. Catalyzed lacquer comes in two versions: precatalyzed and post-catalyzed. Precatalyzed lacquer has the components premixed, either by the manufacturer or at the store when you buy it; post-catalyzed lacquer is a two-part system that you must mix in your shop, following precise ratios. Once the catalyst has been added, these lacquers have a fairly short pot life (the time in which they can be used).

Water-based finish contains some of the same ingredients as varnish and lacquer — urethane, alkyd and acrylic — but many flammable and polluting ingredients have been replaced with water. The chemistry in this product is complex. Because the resins don’t have a natural affinity for water, they must be chemically modified or forced to combine with water. Water-based finish is usually made with either an acrylic resin (sold as water-based lacquer) or an acrylic urethane mixture (sold as water-based polyurethane). As with varnish, the addition of the urethane makes the resin tougher and more scratch resistant, but water-based urethane does not have the same solvent and heat resistance as its oil-based counterpart.

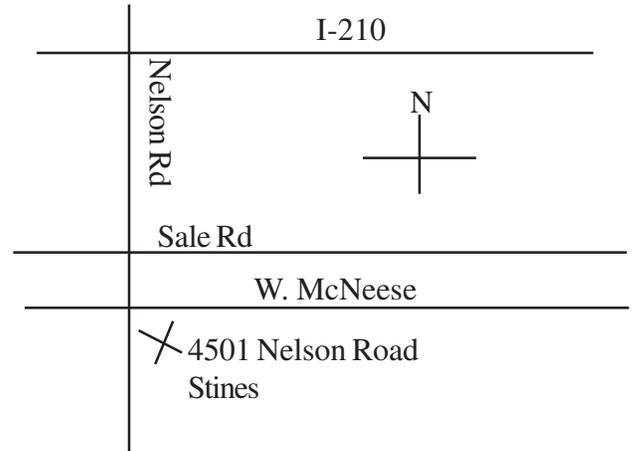
Next month we will finish up these thoughts on finishes.

January Meeting Location

We have the wonderful opportunity to meet at the Stines Lake Charles location at 4501 Nelson Road. Please enter the store and go to the back left in the store to the meeting room.

To get there go South on Nelson Road in Lake Charles going from I-10 or I-210 and turn into the parking lot. Go to the back of the main entrance to the very back to the meeting room to find us.

Please take an opportunity to explore Stines before you leave to find the items for your shop or home that you may need. As always, thank the folks at Stines as you check out.



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