

Finishing Mahogany

Transform the light-pink color of freshly milled mahogany into the deep, rich shades of old-world furniture

BY JEFF JEWITT

When the cabinetmakers in England and America who built early 18th-century furniture fell in love with mahogany, most of the wood was of a color and quality that few woodworkers will have the chance to work with ever again. Those old-growth trees of Cuban and Santo Domingan mahogany (*Swietenia mahagoni*) yielded lumber with a much darker color and a finer texture than what's commonly available now. I first saw that wood up close many years ago, when I toured the collection of American furniture at a museum in Williamsburg, Virginia. The first thing that struck me was the color of those pieces: It wasn't just the patina—it was simply awe-inspiring wood. So when I recently had the chance to put a finish on a piecrust table made with a single-plank top, I knew I had to come up with a way to coax that rich, dark finish from the lighter color of the Central and South American (also called Honduras) mahogany (*S. macrophylla*) available today.

Lay on the first layer of color

It is not uncommon to find worm holes in otherwise perfectly sound mahogany lumber. To avoid wasting a lot of wood, you can fill and color them easily (see the story on p. 38). After that, you can lay on the first level of color. I use an amber-colored water-soluble dye as a base coat to mimic an old finish. The amber undertone evens out color variations in the wood and adds depth to the final finish. I prefer water-soluble dyes because they're easier to control. Also, they tend to absorb more evenly into the wood than alcohol-based dye stains, which dry faster and leave behind unsightly lap marks.

Before applying the stain, sand the piece with 220-grit paper, then raise the grain by wiping the surface with distilled water to minimize any further grain-raising. (Tap water can contain mineral impurities





STEP ONE START WITH A WATER-BASED DYE STAIN

An amber-colored stain as the first coat of color does two things: It gives the lumber an aged look, and it evens out different shades inherent in the wood.



Raise the grain before the first coat. Before applying a water-based dye stain, wet the surface thoroughly to raise the grain, then let it dry. Sand down the raised fibers before applying the dye stain. The result is a smoother finish than you'd get without taking this preliminary step.



Spray it on for even coverage. An inexpensive plastic spray bottle is a great tool for applying water-based dye stain quickly and evenly.

that may discolor the wood.) Wait several hours for the water to dry, then resand with the 220-grit paper.

Use a plant mister to spray on the amber dye, saturating the surface quickly and thoroughly. Water-based dyes are very forgiving compared with alcohol-based dyes, but make sure you soak up any excess with clean rags. After the amber dye has dried, scuff the dry surface using a gray synthetic abrasive pad such as Scotch-Brite brand; go lightly so that you don't cut through the dye.

Mix the second color into an oil-sealer coat

Now it's time to add the second, primary overtone of color. With this table, I used a technique that I first heard about from Rob Millard, who builds reproductions of 18th-century furniture. To get an aged effect and a rich color, use boiled linseed oil colored with dye. You can use an oil-soluble dry powder or a liquid concentrate like I used on this table (see Sources of Supply on p. 41). Practice on some scraps first to get the effect you want. To enrich the yellow undertone of the first color, I used equal amounts of TransTint



Abrasive pads conform to tight spaces. To smooth out intricate shapes after staining, abrasive pads work better than sandpaper, and they last longer.

STEP TWO

SEAL THE WOOD WITH A COAT OF TINTED OIL



Powdered or liquid dyes mixed with oil will stain and seal the wood in one step. Jewitt uses boiled linseed oil. Be precise and keep track of the amounts that you mix so that you can duplicate the same concentration if you run out.



Elbow grease appreciated here. Saturate a wiping rag with the dyed-oil mixture and apply it quickly and efficiently, wiping in a circular motion.



Use a brush to do what the rag couldn't. The dampened rag may not effectively stain detailed areas, such as the carved edge of this table.

brown mahogany and reddish-brown liquid dyes, mixing 5 ml of each into 100 ml of boiled linseed oil.

Mix the color into the oil in precise amounts and keep a record so that you can duplicate the mixture if you run out. Apply the oil by vigorously wiping it on with a rag in a circular motion; you can use a small brush for intricate shapes. Don't add thinners to the oil because it causes dark circles to form around the pores where the color becomes too concentrated. If the piece becomes too dark, just wipe the colored oil with a new coat of clear oil or a rag dampened with alcohol to remove some of the color.

Fill the grain with a rottenstone slurry

As an option, you can fill the grain in the tabletop at this stage, rather than waiting for the oil to dry and using a paste wood filler. Filled grain results in a smoother surface after

the topcoats have been applied. Or you can leave it unfilled. My preference for tabletops is for a filled surface, so I added some more clear oil, sprinkled some rottenstone on the surface and padded the slurry mixture into the grain of the wood with a circular motion. The rottenstone isn't as abrasive as pumice, which might cut through the dye and the undertone color. Also, the gray rottenstone adds a bit of darker color when it's mixed with the oil. After the rottenstone filler has set up for several hours, use a wadded clean cloth to wipe off any excess slurry remaining on the surface. Let that last coat of oil dry for at least three days. If it's cool (65°F or less) and damp in your shop, let the coat dry for a week.

Build up the topcoats in thin layers

You can choose from a wide range of topcoats—a solvent-based wiping varnish, spray lacquer or even water-based finishes if you



Filling the inevitable worm holes

In most extrawide mahogany boards, you'll often find large worm

holes near the edges. You can cut them out, but then you risk losing your chance to make a one-piece top, and you waste a lot of lumber. I've used all sorts of putties and fillers, and I've come to the conclusion that the best solution is to use a non-shrinking auto-body filler, such as Bondo brand. I've used Bondo for 20 years now in

repair work, and while I suspect that some purists may despise it, the product has several things going for it.

First, it's absolutely nonshrinking, so after two or three years, you won't notice any depression where the hole was. Second, the color of the mixed putty is a pinkish red that matches the natural color of the mahogany, and it's easy to tweak to get the final color of the finish. When you apply Bondo to an open-grain wood such

as mahogany, it's important to apply masking tape around the hole so that you don't get any Bondo in the grain, which will show up later in the finishing process. Let the Bondo dry several hours, then remove the tape and sand the surface level. After the subsequent staining and first coat of shellac finish, you can further refine the putty with some dry pigment colors mixed with shellac, if necessary (see the bottom photos on the facing page).



Even out the color. After applying the first coat of tinted oil, a rag dampened with alcohol or a new coat of clear oil will help even out the color. The alcohol will dilute the dye without affecting the oil sealer.



Mix dry pigments into a little shellac. After doing this a few times, you really can develop an artist's eye for color.



Paint around the rim of the filled hole. The distinct black line left around the rim needs to be covered with a nearly opaque coating of color.



Add some faux grain. Small, darker-tinted lines will look like grain texture after a finish goes on over the repair.



Tweak the color after the stain has been applied. After the sealer coat of oil goes on but before the topcoat, tweak the final color of the repaired area.

STEP THREE

BUILD UP THE FINISH WITH THIN COATS



Jewitt chose seedlac shellac for the finish on this table because it adds more color to the surface and dries quickly, so he can apply three thin coats in a day. Shellac also bonds well to a surface that was sealed with linseed oil.



Small brushes are better for tight spaces. Slap on several thin coats with a small brush to avoid muddling up carving details.

Dewax your own shellac. Mix shellac several days ahead of time to allow impurities to settle out of the mixture. Skim the clear shellac off the top with a syringe.



apply dewaxed shellac first—as a barrier coat over the oil. For this job, I opted for the classic and traditional shellac finish. For brushing shellac, I prefer a 1½-lb. cut. Because a gallon of shellac was much more than I needed, I just factored the ratio down to 3 oz. of shellac flakes mixed into a pint of alcohol.

I really like the subtleties of texture you get with a brushed-on shellac finish. I use a technique I learned from Don Williams at the Smithsonian Institution many years ago. The trick is to apply the fast-drying shellac in whisper-thin strokes with a very finely bristled synthetic brush, such as the Taklon brushes sold in specialty catalogs and art-supply stores.

For this table I used two widths—a 2-in. brush for the flat top and a 1-in. brush for the intricately carved base. A single 1½-in. brush would suffice if you don't want to buy both sizes (these brushes are rather pricey).

To apply, dip the brush about halfway into the shellac solution. With shellac, bubbles aren't a problem like they are with brushing varnish, so you can scrape off the excess shellac by dragging the bristles across the lip of the jar. The raised, molded edge of this table can be a challenge for laying on a finish, but this brush excels at the task. Because it doesn't hold a great deal of finish (like a larger brush with an internal reser-

Fill the grain for a smooth top

Fill only the top surface of the tabletop. A second, fresh coat of oil mixed with some rottenstone sprinkled over the surface forms a slurry of paste that fills the open grain, leaving a smoother finish after topcoats are applied over it. This step is not recommended for intricately carved details, like those on the table legs.



Sprinkle it on and rub it in. Swabbed in a circular motion, the rottenstone and oil form a gray-colored slurry that fills the open grain on the tabletop.



Work toward the center. Lay down each brush stroke of thin shellac quickly. Brush from the outside edge toward the center of the table to keep the finish from pooling at the shaped edge.

voir would), this small brush doesn't deposit a pool of shellac when it first touches the surface. And because it has a finely chiseled edge, you can place the brush down lightly right where the edge of the raised molding meets the flat surface of the tabletop and drag it gently toward the center. Use minimal pressure and leave just a whisper-thin film of shellac. When you start to run out, dunk the brush into the shellac again and feather each new stroke into where you left off with the last one. Brushing shellac this way takes a bit of practice, so start on the undersides of a project to get the feel for it. For the intricately carved parts, I use a slapping or flicking motion to apply the shellac. The fast-drying nature of shellac keeps dust pimples from forming in the finish, and you can keep building up new coats very quickly.

SOURCES OF SUPPLY

J.E. Moser's powdered dyes, Wizard Tints liquid dyes and rottenstone:
Woodworker's Supply (800-645-9292;
www.woodworker.com)

TransTint liquid dyes and rottenstone:
Woodcraft (800-225-1153;
www.woodcraft.com)

I usually build up at least three coats in a day, let it dry overnight and then lightly sand the surface with 600-grit wet-or-dry sandpaper for the flat areas and gray synthetic pads for the complex shapes. Once the shellac has dried for at least three days, you can dull the surface with 0000 steel wool if you want more of a matte sheen. Because all of the layers of shellac melt into one another as the last one dries, there's little danger of rubbing through the finish. If you have to remove some brush marks, use 600-grit sandpaper first, and then follow that with the 0000 steel wool. A light coat of paste wax will bring up a dull surface to a satiny sheen. □

Jeff Jewitt is a frequent contributor of finishing articles to Fine Woodworking.