How to Conceal Sapwood

Use gel stains, dyes and pigments to refine cherry and walnut

BY TERI MASASCHI

A few years ago, cherry boards containing sapwood were the exception at reputable lumberyards. Now they seem almost the rule. Increasingly, furniture makers are faced with a dilemma: Do they waste growing amounts of an ever more expensive product by cutting off the sapwood, use only narrow boards or resign themselves to unsightly streaks of sapwood in their work?

The solution is to color the sapwood so that it blends in with the heartwood. There are a number of different ways to stain, dye, glaze and seal sapwood. While I will use cherry for most of my examples, I also

METHOD 1

COLOR THE SAPWOOD WITH GEL STAIN

A coat of clear gel varnish (below) followed by gel stain is an easy way to conceal sapwood.

Stain the sapwood. *After the coat of varnish has dried, wipe on a coat of gel stain over the lighter area to blend it in (right). If the tone of the gel stain isn't quite right, adjust it by adding some Japan color. Unlike the heartwood, cherry sapwood does not darken with age, so stain the sapwood a little darker than the surrounding wood.*

will show a method for concealing walnut sapwood, because sapwood is appearing more regularly in both cherry and walnut stock available today.

For a natural look, color only the sapwood

The popularity of the natural look on finished cherry has made hiding sapwood more difficult. There are three methods to blend in the sapwood without darkening the whole board.

Combine gel varnish and gel stain—For a light, natural cherry look, wipe a clear gel varnish over the entire surface and then match the sapwood to the heartwood using a gel stain. It is quite likely that the commercial gel stain won't be an exact match with the heartwood. Blend Japan colors or artist's oil colors with the oil-based gel varnish to get a perfect match. Don't worry if the stain is too light; repeated applications will make the sapwood darker.

Brush away the sapwood—Dye stains applied with an artist's brush are a great way to blend in small streaks of sapwood, especially if the aim is to have a natural final appearance for your workpiece. Water-based dyes can be used, but they have the side effect of raising the grain. Instead, you may opt for alcohol-based non-grain-raising (NGR) dyes, which are fast drying and come premixed.

On a piece of scrapwood that closely matches the workpiece, wet the area surrounding the sapwood with a solvent such as mineral spirits or naphtha to get a better idea of what the wood will look like with a clear finish. This will dictate the color that the sapwood needs to match. Using this sample board, choose a dye that most closely matches the wet heartwood, combining two or more colors, if necessary (I used amber fruitwood and golden oak in this example). Carefully brush the dye on the sapwood and check the color. If it is too dark, wipe the sapwood with a rag dampened with denatured alcohol to lighten the dye. Rewet the surrounding area to compare the match. If the colors are close, go forward with a clear sealer coat.

After the sealer coat has dried, a final color tuning can be done with a light application of glazing stain or pigment stain. Bear in mind that cherry heartwood character-

METHOD 2

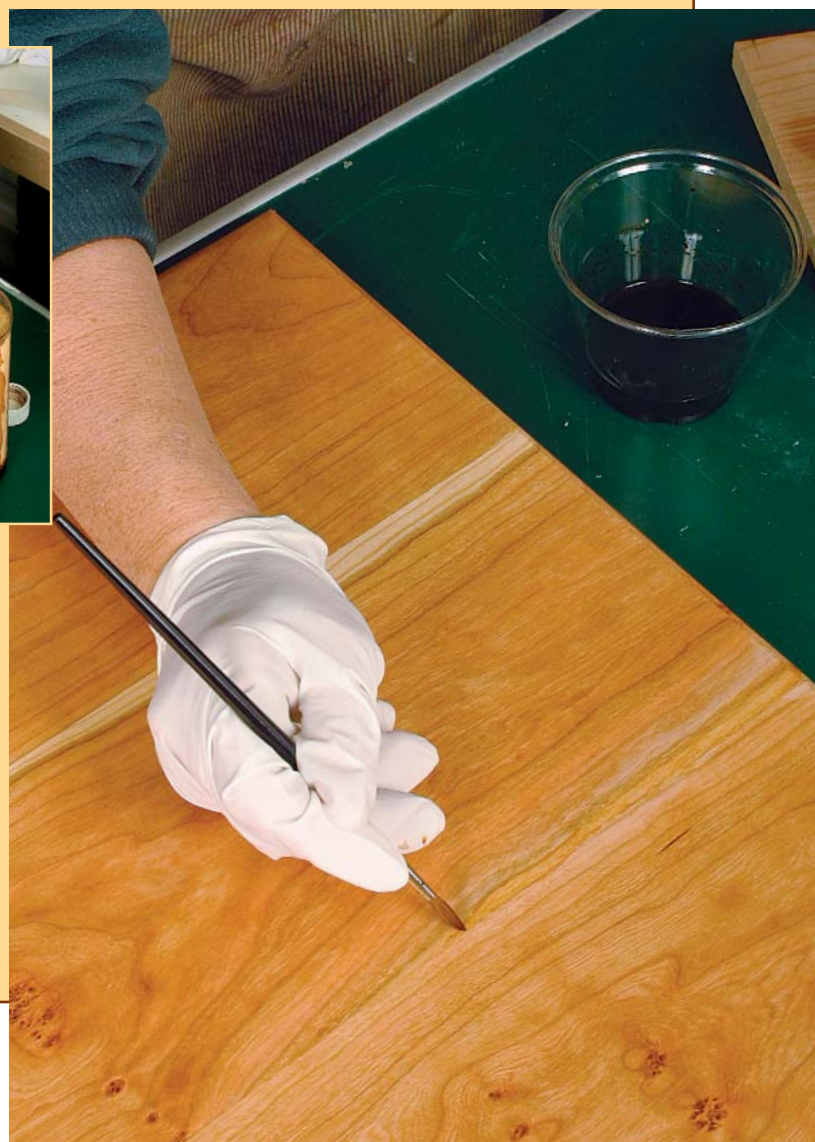
COLOR THE SAPWOOD WITH DYE STAIN

Dye stains offer a greater choice of colors than gel stains and more flexibility in choosing a clear finish.

1. Simulate the finish. *Wipe the piece with naphtha or mineral spirits to see how it will look with a finish applied. This allows you to color the sapwood to match the heartwood's final appearance.*

2. Always test first. *On a matching piece of scrap already wiped with solvent, test the color for a good match with the heartwood.*

3. An artist's touch. *Brush the dye onto the sapwood. If it is too light, add another coat; if it is too dark, wipe off the dye at once with a cloth dampened with alcohol.*

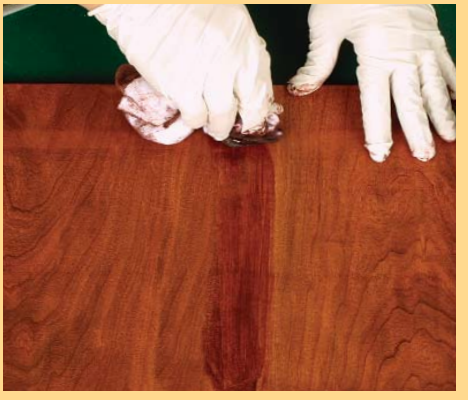


Photos: Mark Schofield

METHOD 3

APPLY MULTIPLE LAYERS OF GEL STAIN

For an antique cherry look, color the whole piece using a gel stain.



One coat may not be enough. *If one general application does not hide the sapwood (above), wipe another coat of stain specifically on the sapwood (right). Normally, two coats are enough to blend heartwood and sapwood.*

istically darkens as it oxidizes and ages, so you may want to leave the sapwood looking a little dark initially.

If you don't want to go to the trouble of painting the small streaks of sapwood, but you still want a light finished look, simply seal the entire surface of the wood with a washcoat of shellac. Then lightly apply either a pigment stain or a glazing and shading stain in either Vandyke brown or burnt umber. Quickly wipe off the bulk of the stain with a clean cloth. Treating the surface like this won't make the sapwood streaks disappear, but the stain or glaze will mute the streaks.

Hide sapwood by staining the entire board

For the darker, aged appearance of antique cherry, color the whole piece. There are two different ways to do this.

Apply incremental coats of gel stain—Gel stains are probably the simplest way of blending the lights and darks in a piece of wood. If the color of the gel stain is an acceptable tone, apply a single coat of stain over the entire piece, wipe off the surplus and buff the surface. When it's dry, apply a second coat of gel stain to only the sapwood streaks, again wiping off the surplus and letting it dry. Two applications should be adequate, but for high-contrast areas, a third coat may be necessary. The reason gel stains are so easy to use is that they add more color with each incremental coat. While several coats on the entire surface may give a muddy appearance, this is not a problem on small areas of sapwood.

Combine both dyes and glazes for flexibility—Because cherry is prone to blotching, I strongly suggest spraying the dye in this next process. If you do apply the color by hand, pretreat the wood with a stain controller (see Finish Line, *FWW* #156, pp. 113-114). Adjust the gun to spray a fine mist and stain the entire piece with a golden-oak NGR dye. Now set the gun for a narrow pattern and give the sapwood streaks a few extralight applications. This method is successful because the dye dries as soon as it hits the surface and builds the color layer by layer. Because the dye does not penetrate the wood, this method gives you plenty of control. Next, apply a washcoat of a 1- or 1½-lb. cut of dewaxed shellac. When it's dry, scuff-sand with 320- or

METHOD 4

COMBINE DYES AND GLAZES

For ultimate control, treat the wood with a dye and then adjust the tone with a glaze.

First spray the piece with a light coat of dye stain. *The stain dries quickly, without blotching. Then dial the gun to produce a narrow pattern over the sapwood only.*

Then brush on a glazing and shading stain. *Aim for overall but not uniform coverage. Do the edges last.*

400-grit paper. Finally, glaze with a burnt-umber glazing and shading stain, and topcoat when dry.

Avoid bleach and chemical stains

Bleaching the entire board to an even whiteness and then staining it to match the rest of the piece could be one solution. However, the bleach is harsh, and because it's water based, the bleach creates more problems than it solves. Applying bleach raises the grain and opens the pores, so boards treated in this way tend to accept stain differently than untreated wood.

Chemical staining is a solution that's a long way from the problem. Because chemical staining is designed to work by reacting with the existing tannic acid in the wood, and sapwood has little or no tannic acid, you first have to add tannic acid to these areas. Even so, it is not a totally reliable process and sometimes requires a color touch-up afterward. □

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A recipe for walnut

Walnut has its fair share of sapwood, and this four-step staining method is my personal favorite for dealing with it. With this method, you can enhance the appearance of a whole piece and hide the sapwood. Stain the entire piece by hand or spray it with a light color, in this case, a lemon-yellow non-grain-raising (NGR) dye, and let it dry thoroughly. Then apply a darker dye or pigment stain over the whole piece (here I used Vandyke-brown NGR dye) and let this dry, too. The third step is to brush or spray on a washcoat of shellac; after it dries, scuff-sand with 320- or 400-grit paper. Finally, glaze the board with a complementary glazing and shading stain such as burnt umber, wiping off the surplus with a clean rag. Application of a topcoat reveals a beautiful, consistent brown tone.

Tone it down. *Apply a yellow dye to neutralize the sapwood. After it has dried, brush on a coat of Vandyke-brown NGR dye to establish a base color.*