



# Recycled Redwood Wainscoting

A cabinetmaker re-creates period detail with redwood salvaged from wine vats

BY MILES KARPILOW

**Worth the effort.** The finished paneling extends the detailing of the adjacent entryway into the dining room. Baseboards and door casings have been stripped of paint and refinished.

**O**ver the 30 years that my wife and I have lived in our home, I have redone almost every room. Being a cabinetmaker, I started with the kitchen, then the bedrooms, putting back windows that had been covered over, replacing inappropriate ones, replacing cracked and loose plaster with drywall, and so on. When we bought this house, I knew it was going to be a lifetime project, and so it has been. Although the house is not an architectural masterpiece, it does have character. Its brown-shingle exterior gives it an affinity with the Craftsman houses of the area, but actually, it is a little older and has details that are distinctly Victorian.

Although I liked the character of the house, I felt no preservationist obligation to return it an "original" state. My criterion for change was to be appropriateness. Nothing was sacred or indispensable—except the redwood. The doors, casings, trim and baseboards are all redwood, as are the eight columns that surround the porch and the open staircase in the front hall.

## Built when the forests would last forever

When the house was built in 1896, they were still logging the redwoods in the East Bay Hills above Berkeley and Oakland. These redwoods were huge from the evidence of the stumps that have been discovered in recent years—some the biggest anywhere. Redwood was abundant and cheap, and its widespread use established a tradition that many architects today are understandably loath to give up. Some architects in the past, notably Bernard Maybeck, used redwood with taste, sensitivity and an awareness of its structural qualities as well as its beauty, but much of it was treated merely as a readily available wood and even cut into 2x4s for framing. There were mills that worked nothing but redwood, producing doors, sash and water tanks.

The popular taste of the time favored dark wood, and even though redwood is naturally dark, it was often painted or, as in the case of our house, finished with a dark, lusterless shellac, apparently to look like mahogany. When tastes changed in the 1940s and '50s, it was painted over in varying shades of white. Upstairs, we stayed with paint, and downstairs, I selected my projects carefully.

I refinished the living-room trim, the staircase and the porch columns, but the dining room presented me with a quandary. The low chair railing and the tongue-and-groove paneling below it never appealed to me. I didn't want to put a lot of effort into stripping the paint and still have something I didn't like. Various ideas were dismissed as too ambitious or inappropriate, so we continued to live with the room exactly as it was when we moved in, bland wallpaper and all. Finally, I decided to copy the coffered paneling in the front hall. Extend it, so to speak, into the dining room.

### Justifying old-growth materials

This plan involved using redwood. And not just any redwood would do. It had to be old growth, preferably vertical grain, and my conscience just wouldn't allow it. Even though over the years I had used a lot on my own and other people's projects, for about ten years, I've avoided using old-growth redwood and talked other people out of using it.

About the time that the dining-room project was stirring in my mind again, I got a job building a couple of mammoth doors for a ski cabin. The architect brought me a pile of 3-in. thick redwood planks that had been the bottom of an old water tank. Here was the solution I had been looking for. Sure, I had seen ads in *Fine Homebuilding* for recycled lumber, but I had visualized industrial timbers with nail and bolt holes and other

scars of their use: not what I wanted in my dining room.

I made a trip to the source of the old tank, Recycled Lumberworks (707-462-2567) in Ukiah, California, to inspect some redwood wine-tank staves. These staves had come from the Taylor Winery in Hammondsport, New York, and, of course, originally came from California. Joe Garnero, the owner, let me pick out vertical-grain staves, and I ended up buying seven of them at \$2.25 per bd. ft.



**Starting over from the bare bones.** As preparation for the new wall finishes, the author stripped the lath and plaster to reveal the original framing. Here, the new layer of 1/2-in. drywall has been installed over a layer of 5/8-in. plywood, for a wall thickness of 1 1/8 in.

**Furring strips and 1x nailers.** An 8-in. wide furring strip of 3/8-in. plywood abuts the underside of the drywall/plywood sandwich, where it is nailed to the faces of the studs. Individual 1x nailers are affixed to the back of the plywood with drywall screws.

The staves were 13 ft. 3 in. long and made from 3x10 stock. After flattening the concave side and squaring one edge, I resawed them on my 14-in. Ryobi bandsaw. This process yielded three 3/4-in. boards from each stave with at least one good face on each piece. Some of the interior sides had a rich cherry-red color that penetrated about 1 in. The interior wood was, for the most part, clean and even-colored, although there was some mineral staining. Unlike the water-tank bottoms, these staves had no rot (they also gave off a pleasant aroma with each cut).

### A coffered-panel design

The paneling that I was copying is 5 ft. high, and consists of 10-in. sq. panels bordered by

4 3/4-in. wide frames and 1 3/4-in. wide moldings. The frames are in the same plane as the plaster, with the panels inset slightly. At the top of the paneling is a 1-in. by 1-in. ogee molding set atop a 2-in. by 1/2-in. strip of wood with a bead along the bottom. The same detail appears on top of all the doors and windows on the first floor. There is evidence that there had once been a dentil below the ogee, but none had survived. The baseboards are 1x10 rustic shiplap with a cap molding.

Until I removed the plaster and the old wainscoting and could see the back of the front-hall wall, I wasn't sure how the paneling in the hall had been done. It turned out that the panels were set between the rough framing so that their faces were





**Old redwood sees the light of day.** As Karpilow uses his brad gun to attach thin redwood panels to their nailers, the color and pattern of the redwood start affecting the room (photo above). Plywood strips between redwood panels (photo right) provide backing for the frame and trim pieces.



flush with the edge of the studs. The  $\frac{3}{4}$ -in. frame members were then nailed to the studs, which made them flush with the plaster above. For this to work, the stud spacing had to correspond to the width of the panels. My panels were predetermined in width, and the dining-room studs didn't match that width. So I needed a different approach. I decided to make the panels  $\frac{3}{8}$  in. thick and overlay them with  $\frac{3}{4}$ -in. thick frames. That gave me an assembly that was  $1\frac{1}{8}$  in. thick. With this starting place, I chose to make the wall above the paneling out of  $\frac{1}{2}$ -in. drywall over  $\frac{5}{8}$ -in. plywood to match the paneling thickness. I drew up elevations of each wall of the dining room and altered the spacing of frames and panels as needed to match the



**Spacers help to speed an accurate layout.** This framework of redwood 1x4s will overlay the wall panels. Here, the author uses spacer blocks cut the same length to mark the positions of upright frame members (photo left). With the uprights in place, the horizontal members are positioned and marked for slotting with a biscuit cutter (photo above).

quirky spacing of the doors, built-in cabinets, windows and fireplace. I wanted to keep the panels as close to 10-in. square as possible.

### Getting down to business

I began by marking a point 5 ft. above the floor to match the hall wainscoting and ran a level line all around the room. I dropped it 1½ in. so that my cap molding would overlap the drywall by that much. I then nailed on the plywood and the drywall (photo left, p. 69).

I milled the staves into 1x frames and ¾-in. panels at my shop. By a stroke of luck, the frame lengths were almost exactly one-fourth of my stave lengths, so there was no waste. I got one frame width and two molding widths out of each board. I ran the moldings (photo to top right, p. 73) on my shaper in two passes with two sets of knives that I ground myself to match the original.

I established the bottom and top lines of the panels and nailed ¾-in. furring strips to the studs. After marking the horizontal spacing of the panels, I screwed nailers to the backside of the plywood (photo "right, p. 69). Now I had a nail base for the redwood panels and plywood filler strips that fall between them (top photos, facing page).

### Laying out the frame

The largest wall section was 8 ft. long. I laid out the frame on the floor using a spacer block to represent the horizontal pieces (photo left, facing page). When I was satisfied with the fit, I cut all the horizontal pieces and positioned them using vertical spacers (photo right, facing page). I then marked each joint for two biscuits and marked the pieces with chalk on the back to keep them in order and slotted them for the biscuits (photo top left). Working right to left with the upper horizontal in place (photos above right, below), I put in the uprights and short sections, nailing them as I went



**Cut the slots.** With the help of a makeshift bench on a pair of sawhorses, the author plows grooves in the sides of the rails with a biscuit cutter. A clamped-on block backs up the cuts.



### Subassemblies unite on the wall

Horizontal members, glued to their left upright with biscuits, are adjusted to their pencil marks prior to being joined with the top rail and the upright already in place (photo above). Chalk marks on the backs of the pieces guard against mix-ups. A little judicious tapping with a hammer and block fine-tunes the pieces to their registration marks (photo left).





along. I put the bottom piece in last, wedging it tight with blocks from the floor (photo left).

Incidentally, I built this long panel in place because it was too big to prefabricate. For smaller frames, I used the same layout procedure, but instead of assembling them on the wall, I clamped them with bar clamps. This way, I not only got tighter joints but also could sand them better.

### **Moldings cover up the rough edges**

After the frames were in place, I was ready for the moldings. I sanded them in lengths using a sanding block I made for that purpose (photo top right, facing page). I cut all the horizontal pieces first because I knew these pieces were unvarying. I knew I would likely have some variation in the verticals because on-site assemblies are never as accurate as shop-built ones, so I cut a sample piece, marked where it fit and cut the necessary parts. Going up or down  $\frac{1}{16}$  in. with my adjustable miter stop (photo top left, facing page) gave me a tight fit all around. I pressed the moldings into place (bottom photo, facing page), then brad-nailed them to the panels.

### **Strip the paint and apply the varnish**

I removed most of the baseboards and casings for refinishing. One hundred years ago, they were surfaced on only one face from stock a full 1 in. thick. So even after running it through the planer and removing the paint, as well as a century's worth of nicks and bruises, I still had material thicker than what is on the market today. I cleaned up the most exposed edges by running them through the table saw. Then I dressed the bevels with a scraper and a rabbet plane.

**Wedges ensure tight glue joints.** One-by blocks between the bottom rail and the floor act as wedges to drive the rails and the uprights together while the glue dries.



**An adjustable stop block for miter cuts.** Minute changes in molding length can be dialed in with the angled stop in the foreground.

In some parts of the room, it was impractical to remove the old moldings. So I used a heat gun and scraper to remove paint and shellac. Then I went over the moldings with scrapers made from old bandsaw blades filed to match their profiles. This tedious exercise included a lot of sanding and filling of old nail holes. When I was done, I wondered if I should just have run all new molding.

I had planned to finish the wainscoting with a waterborne clear finish. But the tests that I made first didn't make me happy. The depth and color of the wood were practically quenched by the dull water-based varnish. I ended up using Zar Satin Quick-drying Polyurethane Varnish (570-344-1202).

We chose a William Morris wallpaper for the upper part of the wall (photo p. 68). This was how the room should have been done in the first place. In that case, however, somebody probably would have painted it white in the '50s. And instead of writing an article, I would have been stripping paint. □

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**Dressing the moldings.** Prior to cutting them to length, Karpilow eliminates mill marks in the moldings with the help of a sanding block sculpted to the negative profile of the molding. In the foreground, precut moldings await installation.

**The moldings frame individual panels.** After he cut them tight to the frame members, Karpilow taps the mitered moldings into place. A couple of 18-ga. brads secure each molding piece to its panel.

