



# Fine Furniture from Reclaimed Wood

How to overcome  
the obstacles without  
losing the character

**BY JOHN TETREAULT**

**T**o a budding woodworker interested in art and in building things, the old barn boards that my father salvaged from historic buildings in my native western Massachusetts held an allure that's hard to describe. They were damaged by weather, pockmarked by insects, scarred with leftover joinery cuts, and had countless other defects that lent each board a character and feel vastly different from new lumber. His unusual finds inspired me to try building with antique wood, and after the first few pieces, I was hooked.

Now as a woodworker, I look at furniture as usable art—a chance to make something beautiful with your hands that can be used in everyday life—and reclaimed wood is by far the best way I've found to guarantee each piece is one-of-a-kind. I've used it to build more than 50 pieces for myself and clients, and I keep coming back to it. Designing furniture from reclaimed wood





## TWO WAYS TO TREAT THE SURFACE

The easiest way to use reclaimed wood is to plane it lightly and treat it like any other boards (above). For even more fun, turn to p. 53 and read about how to leave it unsurfaced and still get square, solid furniture (right).



## Where to find it



Over the last decade, growing environmental awareness has made reclaimed wood much easier to find, both locally and online. With a little creativity and vision, you can give this beautiful material another life.

Craigslist.com, eBay.com, and other websites can connect you with people selling salvaged lumber. There are also dealers who specialize in reclaimed lumber, and particularly rare or nearly extinct species like chestnut. I find most of my antique wood through word of mouth. I keep my eyes peeled for old barns and buildings, and have even helped homeowners clean up sites in exchange for wood. I've also used wood salvaged from house fires, just like the wood used in my coffee table (left). Owners are happy to see the material reused rather than going into a landfill. You can use anything from moldings and trim to structural beams and timbers.

A word of caution: Watch out for bugs. They are notorious for hiding in reclaimed materials. I avoid pieces that look infested, or at least cut out the sections that do. For this reason, I prefer to store reclaimed wood outside, covered, before bringing it into the shop. The damp pieces will still dry up, but it lets me keep an eye out for holes, sawdust, or other telltale signs of bugs.

— J. T.



# Reclaimed lumber 101

## GET IT CLEAN BEFORE DIMENSIONING

Spare your planer by removing hidden hazards like old nails, hardware, dirt, and gravel. Then use a dedicated set of planer knives to take off the finish, if any.



**Inspect closely.** A metal detector can help spot nails or other metal hidden in the wood (left). To protect the surface from dents, leverage pullers against a piece of scrap (center). Then use a wire brush and a vacuum to remove dirt and gravel that could damage a cutterhead (right).



**Plane first.** To get rid of the old finish, Tetreault ran all of the boards through his planer first (above). That dulls the knives, so you might need to change them (right), but this method is still faster and cheaper than chemical strippers.



forces me to flex my art and design muscles because I have to work with what I have in front of me. It's hard to go back and get matching old boards, so I play it a little loose and let the wood guide the size and look of a piece. Plus, deciding where and how to highlight knots, tool marks, or other aspects of the wood's character is among the most rewarding parts of the process.

And as a frugal Yankee, I take a lot of pleasure in reusing materials to make furniture that hopefully will last several lifetimes more. Using reclaimed wood allows me to work with American chestnut or old-growth pine, beautiful species that are lost to us otherwise. And often, because of the extra labor involved, reclaimed wood is much less expensive than new hardwood from a lumberyard. But you may pay a premium for wide boards or extinct species.

To master using reclaimed wood, you'll have to learn a couple of new tricks. The basic technique is to lightly joint and plane the lumber flat, straight, and square, then go back after glue-up to repair some defects. That leaves most the wood's aged character intact, while simplifying layout and joinery. Once dimensioned, reclaimed wood will easily adapt to designs and plans you like. And it's easy to start using it because, aside from a few tweaks, the approach differs just slightly from what most woodworkers already do.

Another option is to skip milling altogether to show off the as-found, unsurfaced look of the boards. You won't have flat, straight or square boards to work with, but you can get around it by cutting or clamping on straightedges to guide layout and tools where needed. It's a bit more challenging, and won't adapt as easily to plans you already have, but using untouched reclaimed boards guarantees truly one-of-a-kind furniture.



## Working with flat boards

Let's start with the more straightforward approach: milling the stock and using it the way you would use new wood, with a few modifications to the process.

I tend to use this approach for tables and other surfaces that frequently will be wiped down or spilled on. Light jointing and planing leaves a surface that's easier to clean, won't make containers tipy, and can be finished, so it resists damage from liquids. But to preserve the priceless character of the material, I approach milling carefully, using a few tricks to spare the surface, and fill holes and cracks.

**Keep milling minimal**—Dimensioning reclaimed wood is a balancing act: Remove too much and you strip away all the patina; remove too little and the boards aren't flat or straight. The key to reaching a happy medium is taking lots of very thin cuts, keeping a close eye on the surface with each pass.

To illustrate my basic approach to working with reclaimed wood, and touch on most of my favorite tips, I built a dovetailed coffee table from four old, chestnut floor boards. As always, when there is finish on the wood, I removed it with my planer. This step often dulls one edge of the knives. I then flattened (jointed) that side by taking extremely thin cuts with a handplane, although I would have used a jointer if I'd had one wide enough. Last, I used the planer to take equally thin cuts from the opposite side, using a fresh set of knives. I made only enough passes to get the wood flat, or comfortably close to it. I removed bumps, but left small depressions in the middle of boards that still allowed me to safely rip them on the tablesaw. Once I got the boards flat enough, without losing the telltale



### DESIGN TIP

*Simpler pieces spotlight the unique character of reclaimed wood, and are also easier to adapt to your lumber and any surprises it gives you along the way.*

dark spots, patina, and surface defects common in reclaimed wood, I stopped.

**Oversize joinery suits the surface**—One way I keep from over-milling the surface of a board is to cut dovetails that stand proud of the corners they join. That way, I don't have to plane the dovetails flush to the surface, and remove more of the patina. For minimalist, simple designs, the oversize, handcut detail can really complement the overall look.

In my coffee table, I joined the top and shelf to the sides with oversize dovetails. I also used them to join the top to the sides of my bookcase (see photo, p. 53), although I needed to use a couple of extra tricks there. The procedure is just like normal dovetailing, except that I add an extra  $\frac{1}{4}$  in. when I'm scribing the shoulder lines. I also generously chamfer the tails and

## MATCH THE JOINERY TO THE MATERIAL

**Big, bold dovetails that stand proud of the surface fit nicely with the reclaimed material, and add to the handmade look.**



**Pencil the intersections.** Dry-fit the piece to mark the overhang (left) and then chamfer down to the lines on the tails with a chisel or block plane (center). Mark and chamfer each pin individually (right), cutting the longer sides first. Chisel in from both sides to avoid tearout.



SEE IT IN MOTION





## DECORATIVE DEFECTS

Here are some attractive ways to fill gaps and cracks.



**Plug holes with scrap.** Chisel random-shaped pegs from offcuts and glue them into nail holes or worm holes (left). Then trim them flush (above).



pins, not only to prevent them from being damaged, but also to add to the rustic-yet-refined look.

**Cracks, defects, and finishing touches**—Before glue-up, I fill and repair holes, bumps, knots, and other defects, paying special attention to the top or any other surface where flatness is critical. For areas that aren't wiped down regularly, like a drawer front or the sides of a cabinet or coffee table, I leave the smaller holes and cracks. Defects highlight reclaimed wood's character, and leaving them in some areas adds to the look without affecting the design.

Next, I surface the boards with a handplane or sand up to P220-grit with a random-orbit sander. Satin polyurethane brings out the beauty of the wood without looking too glossy. I brushed on two coats, sanded with P400-grit, and wiped on a third. □

*John Tetreault is associate art director and a professional furniture maker.*

**Use a contrasting crack-filler.** Darkened epoxy looks more natural than sawdust or clear epoxy once it's finished. Just mix quick-set epoxy with a few drops of India ink, then apply it quickly in any cracks (above). Let the mixture gel for a few minutes, and then scrape off the excess with a razor blade (right).



**Skip the stain.** Low-luster finishes like satin polyurethane bring out the natural look of reclaimed wood.





## The next level: Learn to join lumber that hasn't been flattened

Weathered boards plucked from the side of an old house or barn are not hard to find, and they scream “rustic” like no other wood. But they won't keep that look if you joint or plane them. It's impossible to re-create that naturally acquired character with a finish, so when I want to highlight it, I just use the boards as I found them. Of course, that means having to join workpieces that are warped, deformed, or even roughsawn. But if you start with just one straight surface, preferably where no one sees it, you can add a variety of clamps, jigs, or fences to make square or parallel cuts. Here's how I do it.

**Joint hidden faces**—For cabinets like this bookcase, I start by jointing a perfectly straight edge along the back of the case. The back edge will be unseen, since it's against the wall, but it will let you line up a T-square jig or edge guide to rout grooves or dadoes.

I also joint the bottoms and edges of the shelves and the backsides of the rails

so that I can lay them out squarely and glue their edges so they fit tightly. Like the back edge, those jointed faces aren't visible when the case goes together.

**Rabbets simplify joinery**—I use rabbets in a couple of different ways to build a piece. In the bookcase, I made a glue-tight fit where shelves slot into dadoes by rabbeting across the top ends of both shelves. I scribed the rabbets with a marking gauge and cut them with a handplane. I clamped a fence to the shelf to guide the cut straight.

I also use rabbets to line up and mark dovetails in unsurfaced wood. By planing shallow rabbets across the inside faces of the pin boards and tail boards, I can butt the boards together squarely, and mark the pins from the tails. When the joint goes together, the rabbets stay hidden and are never seen.

**Clamp things straight**—Wide boards often cup or warp, which causes problems when cutting joinery. I get around this by



### JOINT ONLY WHERE NEEDED

Inconspicuous jointing lets you line up square cuts afterward.



**Hide it in the back.** A jointed edge along the back of a case (left) can help line up a jig for routing dadoes and grooves. Paired with a tablesaw sled, the jointed edge also allows you to safely and squarely cut workpieces to length (above).



**Flat bottoms make joinery easier.** Since the bottoms of shelves aren't seen, joint them to help cut even rabbets.



## The next level (continued)

### JIGS FOR RABBETS AND DADOES



**A T-square for dados.** Square the jig from the back edge and then use a thick caul to clamp the whole board flat.

clamping the board between thick pieces of scrap, which pulls the board straight enough to join easily.

**Two tricks for mortising**—Cutting mortises in reclaimed wood can be tricky, because you don't want to mar or tear out the wood surface when marking and cutting the joint. Plus, the surface you're marking is not likely to be flat or straight, which means you could end up with crooked joinery. There are two easy ways to get around that problem.

For a blind mortise (one that isn't seen from the outside), I cut the tenons before the mortises. It's a backward approach from traditional joinery, where mortises are usually cut first. Once I cut the tenons on a piece, I put it in position against its mating pieces and



**Rabbit the shelves to fit.** The jointed bottoms of the shelves create a reference face for scribing perfectly even rabbets (left). Tetrauilt rabbets the shelf using a thick piece of wood to guide a rabbeting block plane (right).



## STRAIGHTEN DOVETAILS IN WOBBLY WOOD



**Clamp the workpieces flat.** Cut a shallow rabbet on the inside faces and once again squeeze the boards between thick pieces of scrap to help line them up evenly for marking the pins.

simply trace around the tenons to mark the mortises.

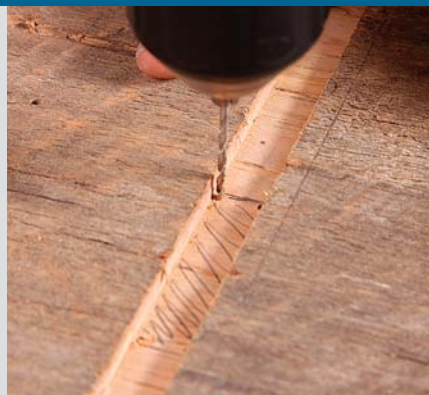
For through-mortises, which will be seen from the outside, it's easier to mark the mortise first, but you should do so in a way that your layout marks get covered up. Usually, that means marking from the inside out.

In the bookcase, for instance, I marked the through-mortises for the shelves on the inside of the dados. Then I drilled pilot holes through the corners of the mortise, and used them to mark and chop out the mortise from the other side. Then I marked the tenons directly from the mortises, like normal.

**Skip the finish**— I don't use any kind of finish when I've built a piece with an original patina. Oil tends to darken it too much and mute the color, and wax fills the nooks and crannies. I figure that the wood has been building its finish naturally for years, and nothing I can do would beat it.

—J.T.

## MARK THROUGH-MORTISES INSIDE OUT



**Drill the corners.** Mark the mortises on the inside, then drill tiny holes to transfer the marks for the corners to the outside (top left). Scribe a line between the pilot holes and chop the mortises from the outside in (left). Then mark the tenon from the mortise (above).

