

# For the Love of Pine

The wood that makes  
you feel superhuman

BY JOSHUA A. KLEIN

There is no wood I'd rather work than Eastern white pine. As a hand-tool woodworker, the ability to plane a chunky curl off a creamy smooth board gives me a sense of power that most folks don't associate with working by hand. There is a reason that pine was used so extensively in historic furniture before the mechanization of the Industrial Revolution: It works like a dream. The good news for us is that these big trees, though massively diminished in the overharvesting and clear-cutting of the early colonists and the subsequent logging industry, are still around, and they're still as workable, so pine remains an optimal choice for furniture, and also for enjoying yourself in the shop.

### Wide boards are accessible and inexpensive

Who doesn't love wide boards? Visiting historic houses or living-history museums, one of the most common remarks I overhear from other guests is how remarkable the wide boards are. It's not uncommon to see boards 20 in. wide in historic homes and furniture. Especially when they're prominently displayed in flooring or tabletops, we can't help but wonder at the size of the tree they came from. But as hard as it is to believe, no one in the 1700s drooled at boards that wide. These boards were practical because they were local, abundant, easy to work, and inexpensive. Wide boards were barely more than the pre-industrial equivalent of plywood—economical, but not out to impress.

Since moderns like us relish the single-board glory of antiques, it's noteworthy that to this day, wide pine remains relatively affordable and available.

### Ease of construction

Craftspeople love wide boards for reasons other than their majesty and economy: Building with them is just so dang quick. When you have access to wide stock, edge jointing is rare. This task is so time-consuming in a hand-tool shop that traditionally craftspeople tried to use the widest stock they could find. And when they did join edges, they weren't particularly fussy about it. Jointing added so much labor in planing square and straight, gluing, and planing flush, that it's typical to find the underside/inside of the boards out of plane with each other and slathered in hardened glue squeeze-out. This no-nonsense approach is what furniture historian Myrna Kaye calls "economy of labor." Only the show surface needed to look good.

Edge joints require surfacing, jointing the edges, gluing, and then resurfacing to flush the boards to each other. In contrast, if you have a wide enough board, you can build a chest out of it without any edge jointing. Think about the time savings on a small tabletop made of one board: Just plane it and cut it to size. Large dining tables can be two boards—only one joint. And the labor-saving benefit of wide stock also applies for those who use machines. However you work your wood, if you've ever spent time edge-jointing and gluing up 8-in.-wide boards to make a top, try a single-board top sometime. It feels like cheating.

What milling you do need to do is much easier on pine than hardwoods. Probably 75% of my planing is done with a heavily set jack plane. With this tool, I can take numerous deep bites without fatigue. When I work in hardwood, however, I have to take about half as much material per stroke. This difference adds up considerably by the end of the project. Sawing is faster, too.

## EASTERN WHITE PINE (*PINUS STROBUS*)



### WHERE IT GROWS



### PROPERTIES

**Specific gravity** at 12% moisture content:  
0.40

**Average weight**, dried:  
25 lb./cubic foot

**Janka hardness:**  
380 lbf

**Radial shrinkage:**  
2.1%

**Tangential shrinkage:**  
6.1%



*Eastern white pine is wide, clear, and cheap, making it an excellent candidate for fast, beautiful, wallet-friendly projects, like this blanket chest made from single boards.*

# Wonderfully workable

Eastern white pine's softness makes it a joy to use. From planing to sawing to joinery to planing again, you'll rarely have to fight the wood to get the results you want.

## SAWING



**Long rip? No sweat.** When ripping 4/4 pine with his 4-tpi rip saw, Klein can progress at about 1 in. per stroke, and it's enjoyable. Ripping hardwoods isn't terrible either, but it does take him about twice as much time. "Pine, by contrast," he says, "makes you feel superhuman."

## MORTISING



**Mortise in minutes.** Pine's softness means even heavy joinery, like deep mortises, is light work. But use hardwood for smaller-scale mortise-and-tenons, like those for chairs, since they're more vulnerable to breakage in soft pine.

## Light weight

Furniture makers don't tend to think of lightness as a beneficial characteristic in wood. For some reason, people seem to believe that furniture should be heavy. I've seen a lot of 20th-century oak blanket chests, and I always feel sympathy twinges in my lower back for the owner. A blanket chest that will sit in one spot, holding family treasures, doesn't need to weigh hundreds of pounds. It should be made of pine.

As an antique furniture restorer, I've moved many pieces out of my clients' homes, into my van, and into my studio for repair before loading them back up to return home. I'm always relieved to be called out to repair a pine piece. The owners also benefit from the weight savings as they use the piece and move it around to meet whatever hospitality need arises. Lightness is also helpful during the construction process. It's no big deal to haul pine

## DOVETAILING



**Soar through dovetails.** Fast sawing and chopping are both at play when cutting dovetails in pine. Come assembly time, the wood's softness lends a hand again, allowing an otherwise tight joint to smush together nicely without splitting the boards.

boards around or to lift an assembly onto a workbench. Every time I've manhandled larger projects of denser hardwoods, I feel it at the end of the day.

But I suspect some readers are wondering, "If we want to build for future generations to admire and appreciate, wouldn't it be better to use something more robust, such as maple or cherry? Won't pine get dented and broken?"

I think it's helpful to think of wood selection in terms of the Goldilocks principle. The ideal wood for any project is one that's hard enough to withstand the use it will see over its life, but soft enough to be easy (and therefore enjoyable) to work. The reality is that many antiques were made of pine and have withstood centuries of use. Six-board blanket chests, chests of drawers, bookcases, benches, and tables of all sorts and sizes are often completely or mostly made of pine. And they're still standing.

## PLANING



**Stay sharp and pine will treat you well.** Pine will crush or tear out if your edges aren't razor sharp. Thankfully, with a honed iron on Eastern white pine, your show surfaces will shimmer off the blade.

# Fine finishes

Pine's notoriously splotchy thanks to its uneven density, but that doesn't mean it's unusable. From subtle coloring to full-on painting, there are numerous routes for success.

Pine even resists abrasion. Consider that pine was one of the go-to woods for drawer sides and runners, the components that receive more wear than any others. Pine drawers survived more than a century or two of regular use, sliding in and out, before they wore down significantly. The ubiquity of pine drawers in historic furniture tells me that modern woodworkers' fear of pine's softness is vastly out of proportion.

Selecting the right wood for a given use is a matter of experience, but I wouldn't recommend trusting only your own experience. Our craft was built on centuries of observation and wisdom. Since pine has been used successfully generation after generation, I am suspicious of modern claims to the contrary.

Some fear that the quality of pine lumber today doesn't match the old-growth boards that were used to make these antiques. I won't dispute that the fast-grown material around now is not the same quality as the old-growth lumber, but good stuff is still available. If you want something denser, take a look at the growth rings on the end grain. Anything less than 10 rings per inch will be pretty soft. I like boards with rings closer to 20 per inch, but I've also built with fast-growth material and found it perfectly sufficient for interior use. Indoor furniture doesn't need the rot resistance of old-growth material; it just needs to be sturdy enough for its purposes.

## Downsides

Despite its upsides, pine is not optimal for all situations. Any softwood kitchen countertop would get pretty ugly after years of hard use; those dings and dents would fill with food and discolor over time. The tops of historic kitchen tables were often scoured and bleached ("scrubbed," as antiques dealers say) from the maintenance necessary in keeping those surfaces hygienic.

Stains and dyes often make pine blotchy. This happens in woods with uneven densities, since they tend to absorb colorants inconsistently, and dark blotches appear in areas that absorb more stain.

**TIP**



**Go darker, not deeper.** You can also successfully color pine with diluted dyes or gel stains that don't penetrate as deep, thereby avoiding highlighting the pine's blotch-prone uneven density.

## PRETREAT



**Apply a touch of colorant and a layer of dark shellac.** One of Klein's preferred methods for working around pine's blotchiness is to go light on the colorant (top) and use a darker shellac (bottom) as either the base layer or the final finish.

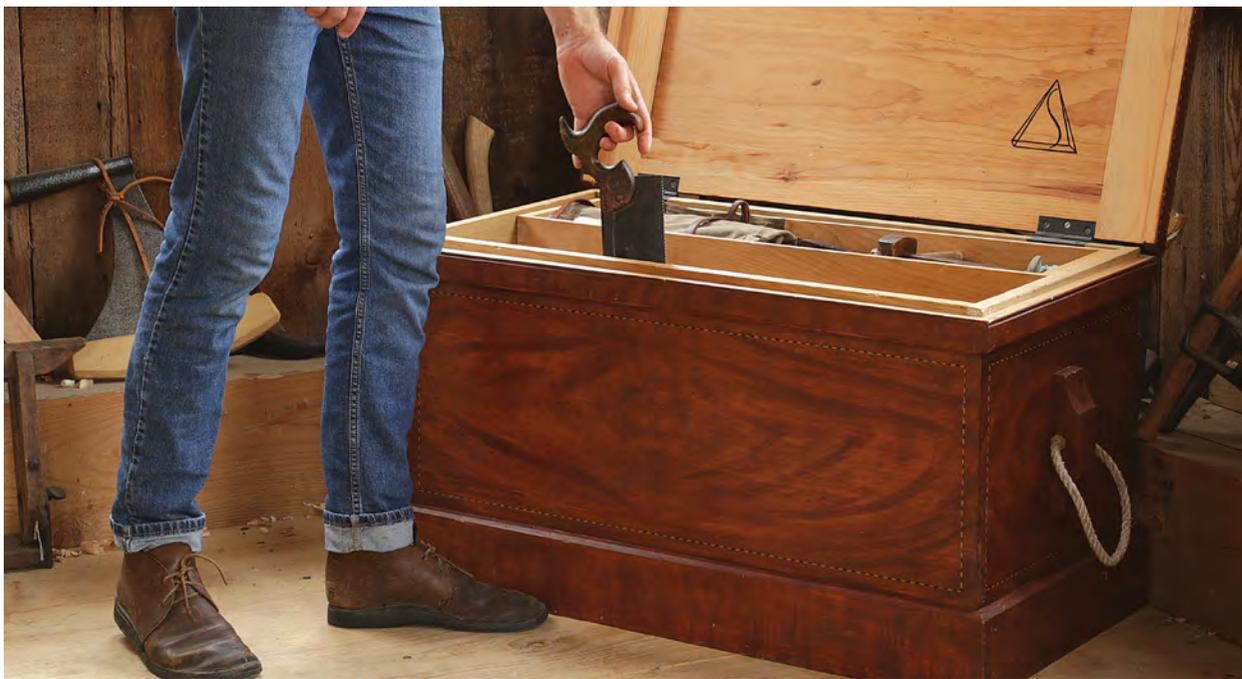
## PAINT



**Painted pine's a traditional option...** Pursuing functional joy, Jim McConnell's chest balances the practicality of pine with the playfulness of painted patterns.



**... that's still evergreen today.** Although his design is more contemporary, Barry NM Dima knew from the outset he was going to use milk paint on the base on this coffee table as a counterpoint to the thick, natural Eastern white pine top.



**Get the grain and paint with grain painting.** Klein's tool chest is Eastern white pine, but you wouldn't know it at first glance. He experimented with grain painting on the outside, using colors and patterns that mimic mahogany. He even painted the banding. This traditional technique let him combine the working benefits of pine with the look of a more expensive wood.

See the photo captions for my solutions to this.

As for strength, though small pine tables were common, smaller-scale joinery would be much stronger in hardwood. Pine's softness means its tenons break more easily than tenons in maple or birch. This is, consequently, why you don't find antique pine chairs; chairmakers knew they should use hardwood.

The softness of pine means there's another important aspect to consider: tool sharpness. Your planes and chisels need to be razor

sharp at all times or the grain will not cut cleanly. The end grain is especially vulnerable to tearout when pared with subpar edges. However, in practice, traditional furniture construction has very few show surfaces with exposed end grain, so its need for sharp edges is not as big a deal as you might think. Plus, in material this soft, your tool edges will last a long time. □

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