A century ago, Dutch Elm Disease (DED) decimated millions of elm trees, many of which adorned American city streets. (Fun fact: “Elm” is the 15th most common street name in the USA.) The encouraging news is that these fast-growing trees are enjoying a comeback. Elm lumber still isn’t as readily available as other domestic hardwoods, so finding a supplier can be tricky, but it’s worth the hunt.

This striking hardwood is affordable and easy to work. Perhaps the biggest challenge is that elm species are often intermixed in kilns and lumber racks. Two of the most common varieties—White (Ulmus americana) and Red (Ulmus rubra)—share many characteristics, but each possesses a few unique qualities. Knowing what sets them apart can help you select the best stock from the stack.

**History in Woodworking**

Elm served as an important utility wood for a couple of centuries, with two unique attributes lending themselves to special applications: First, red elm’s split-resistant interlocking grain made it a prized wood for hoof-resistant barn floor planks. Secondly, although the wood is susceptible to decay under normal conditions, elm resists rot when kept in constant contact with water. This unusual affinity made it a natural choice for barrels, ship keels, and even below-ground water pipes. These days, elm is best reserved for smaller projects, primarily due to its poor dimensional stability.

**Where the wood comes from**

Elms grow east of the Rockies, from Southern Canada to northern Florida. Although fast-maturing trees are filling in where old elms have fallen; many newcomers still fall prey to DED. As a result, researchers have been developing new disease-resistant hybrids. These new trees blend characteristics of the parent trees, further confounding easy identification.

**How to select the best stock**

As shown in the photos, white and red elms live up to their names. White ranges from creamy white to darker brown (the darker heartwood can be easily confused with red). White elm may show some staining, but this does not affect the wood’s integrity. Red elm remains in the darker red-brown spectrum and does not display a major color difference between sap and heartwoods.

Color is important, but be mindful of the grain. The wild patterns of flatsawn boards (often with ribbon-like figure due to alternating grain) are enchanting, but elm’s working characteristics multiply the

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### Elm Quick Take

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>Red</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENSITY</td>
<td>35 lbs./ft³</td>
<td>38 lbs./ft³</td>
</tr>
<tr>
<td>HARDNESS</td>
<td>Soft</td>
<td>Medium</td>
</tr>
<tr>
<td>STABILITY</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>ROT/INSECT RESISTANCE</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>TEXTURE</td>
<td>Coarse</td>
<td></td>
</tr>
<tr>
<td>TOXICITY</td>
<td>Low</td>
<td></td>
</tr>
<tr>
<td>USES</td>
<td>Chair spindles and seats, boats, coffins, sporting equipment, decorative turnings, veneer</td>
<td></td>
</tr>
</tbody>
</table>

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difficulty factor associated with figured wood. Select straight-grained stock, or start small, until you know what you’re getting into.

With elm, careful seasoning and storage are particularly important. Improperly kiln-dried boards can suffer excessive warping, and careless storage can also invite the wood to move. Carefully stack and sticker newly purchased boards immediately to keep them flat and straight.

**Working elm in the shop**

Compared to red elm, white elm is softer. (You can dent a board with a fingernail.) Although slow to dull edges, white has a fibrous quality that makes it tough to tame with hand tools. To avoid tearing and/or leaving a woody surface, make sure your plane irons are sharp and mouths tight. White elm is easier to handle with power tools, but keep edges sharp and take light passes. Take care when power-sanding to avoid introducing dips.

Red elm is only slightly harder, but it makes a practical difference. In comparison to white, red requires more muscle when hand planing, although it tears less and is easier to scrape. Similarly, power tools produce cleaner edges, with less fuzzing. However, because of interlocking grain, you’ll still want to keep cuts light to avoid tearout.

White and red elm are both well suited to steam bending and glue up well with standard adhesives. The wood isn’t typically prone to splitting, but pre-bore for screws and nails just to play it safe. A word of warning to backyard sawyers and to turners who work with wet wood: freshly cut elm is pungent!

**Finishing**

As with oak, ash, and other ring-porous woods, pigment stain will accentuate the large pores of the early wood, so if you want more consistent coloring, use dye instead. The open pore structure also makes it a good candidate for pickling. All topcoat finishes work well on both species. Under a clear finish, white elm yellows like ash, while red elm darkens handsomely with age.
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