

THE WHITE PINE GROUP

The native pines can be classified into two distinct groups according to their leaves, cones, and wood: namely, the white pine group and the yellow pine group, sometimes referred to as the soft pine and the hard pine groups. Of the dozen or so species of the white pine group occurring in the United States, three are of outstanding importance in the lumber industry. They are Eastern white pine (*Pinus strobus*), Western white pine (*Pinus monticola*), and sugar pine (*Pinus lambertiana*). Eastern white pine occurs in the Lake States, Northeastern States, and adjacent portions of Canada, and southward along the Appalachian Mountains as far as northern Georgia. Western white pine is found chiefly in northwestern Montana, northern Idaho, northeastern Washington, and adjacent portions of Canada, but occurs also in limited quantity on both sides of the Cascade Mountains in Washington and Oregon and in the Sierra Nevada Mountains in California. Sugar pine grows in the Cascade, Sierra Nevada, and Coast Range Mountains in southern Oregon and California. There is no absolutely positive means of identifying the wood of these three species microscopically. One familiar with these species, however, can usually distinguish them by the general appearance of the wood. The origin, if known, of a shipment of one of these pines is a highly reliable indication of the species, since there is practically no overlapping of their commercial ranges.

Eastern white pine (referred to in the lumber trade as eastern pine, or northern pine, or simply white pine) is light in weight, soft, even-textured, and easily worked. It does not shrink or swell greatly with changes in moisture content. It is probably the least resinous of all pines. It is used in mill-work, knotty-pine paneling, boxes and crates, coffins, boats, woodenware, and novelties, and finds special application in foundry patterns, shade rollers, drawing boards, and matches. The lower grades are commonly used in light construction.

Western white pine (often referred to as Idaho white pine) has about the same physical characteristics as Eastern white pine. The lower grades of Western white pine are often used

locally for boxes and crates. A considerable quantity of the wood is used in the production of matches. Lumber of the higher grades is shipped to eastern markets where it is used for about the same purposes as Eastern white pine. The lower grades are also used for light-construction purposes. The wood shrinks and swells a little more with changes in moisture content, but on the whole it is as good for most purposes as its eastern relative. Lumbermen can usually distinguish Western white pine by the way it works and the color of its knots, which ordinarily are darker around the edges than are the knots of Eastern white pine.

Sugar pine usually is lighter-colored, changes color less on exposure, has more conspicuous resin ducts, and is slightly coarser-textured than the other two pines. Trees of sugar pine are the largest of the species in the white pine group and furnish a much higher percentage of wide, thick planks of the better grades than any other species of the group. A larger percentage of factory and shop material comes from sugar pine than from Western white pine and Eastern white pine together, and less is sold as common lumber. This is probably because of the high percentage of clear cuttings obtainable from sugar pine. Otherwise, the wood is comparable to Western white pine and Eastern white pine.

Another species of the western pines, which has wood similar in some respects to that of the species of the white pine group although botanically belonging to the yellow pine group, is ponderosa pine (*Pinus ponderosa*). This pine is found throughout most of the forested areas of the Pacific Coast and Rocky Mountain States, in adjacent portions of British Columbia and Mexico, and in the Black Hills. It is the most abundant of the western pines. Commercially it has been known under several names. The lumber trade and the United States Forest Service have adopted the standard name of "ponderosa pine." The wood is one of the lightest in weight of the species of the yellow pine group. The quality of ponderosa pine differs considerably with the region of its growth. In California and Oregon it grows larger than it does in the Rocky Mountain Region. Consequently, a greater percentage of the material from these states is sold in Select and Factory grades, and more of it comes into competition with the white pine group. Most of the lower-grade lumber of this species produced in New Mexico, Arizona, Colorado, and the Black Hills is used locally for house framing, and as common lumber. Ponderosa pine can be distinguished from the species of the white pine group by its distinct, although often

very narrow, band of hard summerwood on the outer portion of each annual ring, especially noticeable in the heartwood and wide-ringed sapwood. Microscopic differences are clear-cut and positive.

The red pine of the Lake States (*Pinus resinosa*), although also belonging to the yellow pine group, is frequently sold with Eastern white pine in the common grades under the name "northern pine." It is somewhat coarser in grain and texture, has more strongly marked annual rings, and is somewhat more resinous than Eastern white pine. Red pine is also known in the lumber trade as Norway pine, Canadian red pine, and hard pine.