

A QUICK METHOD TO DISTINGUISH ASPEN HEARTWOOD AND SAPWOOD

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ABSTRACT

Using ethyl or isopropyl alcohol on dry, sanded aspen (*Populus* spp.) end grain enables one to distinguish heartwood from sapwood. Addition of a dye makes a permanent record.

Keywords: *Populus tremuloides*, *P. grandidentata*, heartwood, sapwood, heartwood-sapwood differentiators.

Scientists occasionally must determine whether a particular section of an aspen board is sapwood or heartwood. Although physical properties may differ, no difference can be detected visually between the types of wood. In the method described here, aspen (*Populus tremuloides* and *P. grandidentata*) sapwood is easily distinguishable from the hardwood because aspen heartwood is less permeable than sapwood.

Alcohol (ethanol or isopropanol) or ace-

tone is brushed on the freshly sanded end grain of a dried board. The permeable sapwood absorbs the alcohol and appears wet for 15 min or more (Fig. 1) before changing to its original dry appearance; the impermeable heartwood absorbs little alcohol and changes to its original dry appearance in a few minutes.

Small amounts of dye, such as crystal violet or methyl orange, can also be added to the alcohol to produce a more lasting contrast than does the alcohol alone. After the alcohol-dye mixture has been applied and dried, the board can be cut $\frac{1}{8}$ to $\frac{1}{4}$ inch back from the end to reveal the stained sapwood and the unstained heartwood.

Wetwood, because of its impermeability, reacts like heartwood.

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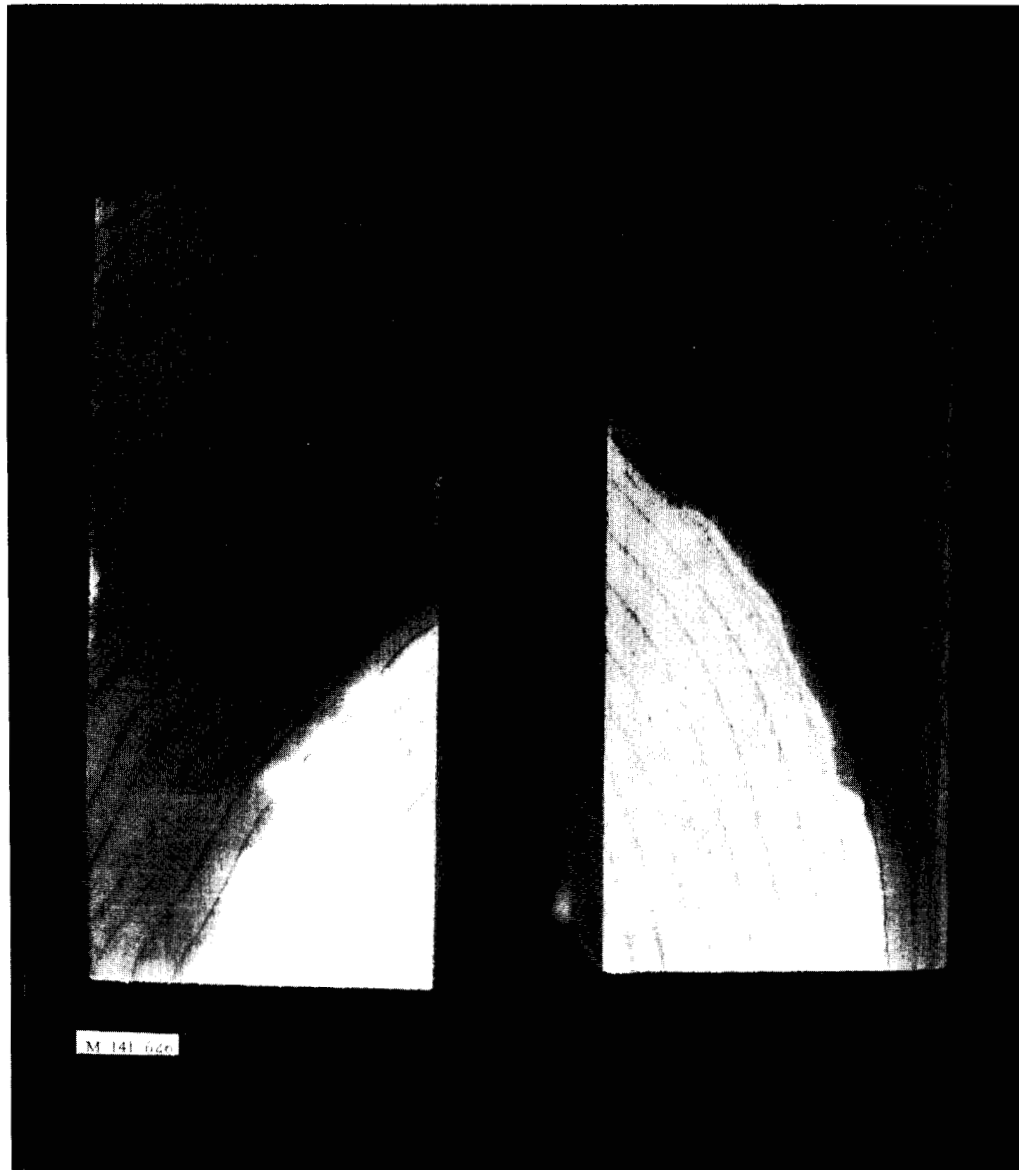


FIG. 1.—End grain view of aspen (*Populus grandidentata*) studs shortly after treatment with pure alcohol. Sapwood is dark; heartwood, light. To improve contrast, the ends were sanded prior to treatment.