

# TECHNICAL NOTE NUMBER 116

FOREST PRODUCTS LABORATORY - U. S. FOREST SERVICE - MADISON, WISCONSIN

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## HOW TO TELL BIRCH, BEECH, AND MAPLE APART

Birch, beech, and maple are very similar in appearance, and have approximately the same weight. Hence, it is comparatively easy to mistake one of them for another. A method which anyone can use to distinguish them is suggested by the U. S. Forest Products Laboratory. The method makes use of the relative size of the pores and rays in the three woods.

If the end grain of birch, beech, or maple is cut smooth with a sharp knife and examined with a hand lens, the pores will be seen as tiny holes distributed fairly evenly over the surface, and the rays will appear as narrow lines of a different shade running at right angles to the growth rings. In beech some of the rays are very distinct even without a lens. The large rays are fully twice as wide as the largest pores. In maple the rays are less distinct, and the largest are about the same width as the largest pores.

In birch the rays are very fine, invisible without a lens. The pores are several times larger than the rays, usually being visible to the unaided eye as minute holes on the end grain and as fine grooves on dressed faces of a board. The pores in birch are considerably larger than the pores in beech or maple.

The appearance of the rays on a "quartered" surface is also distinctive. Here they appear in beech as distinct "flakes," the largest being between  $1/16$  and  $1/8$  inch in height when measured along the grain of the wood. In maple they are considerably smaller, rarely attaining a height of  $1/16$  inch. In birch they are comparatively inconspicuous.