

TECHNICAL NOTE NUMBER 141

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

AGRICULTURAL COLLEGE

A VISUAL METHOD OF DISTINGUISHING LONGLEAF FROM SHORTLEAF AND LOBLOLLY PINE

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There is a distinct difference between the size of the pith of longleaf pine and that of shortleaf and loblolly pine. This difference affords an easy method of distinguishing the southern pines, although obviously the method can be used only on pieces cut from the center of the tree, such as ties and timbers.

The pith, or small, dark, soft core at the center of the tree, averages larger in longleaf than in shortleaf or loblolly pine. In longleaf the pith is over 0.1 inch in diameter; in the other two species it is smaller, usually about the size of the lead in a pencil, except in trees of very vigorous growth, in which it may be as large as in longleaf. The vigor of a tree at the time the pith was formed is indicated by the diameter of the second annual ring. Therefore, where the pith in loblolly and shortleaf is over 0.1 inch in diameter, the diameter of the second annual ring is comparatively large; in fact, it is larger than in longleaf having the same-sized pith.

How to Use the Pith and Second Annual Ring for Identification

1. With a sharp knife carefully smooth the end surface of the pith and surrounding wood. If the pith or second annual ring is not clear, moisten the smoothed surface. If knots are present near the pith, satisfactory measurements cannot be made, and the other end of the timber should be inspected.

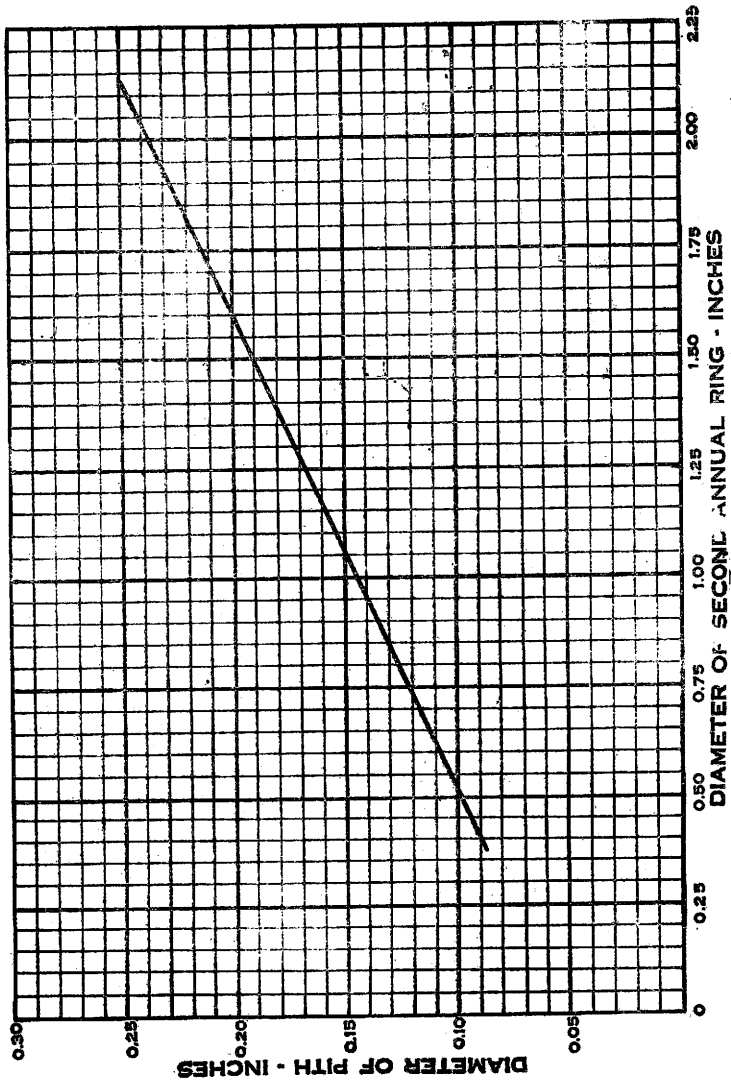
2. If the pith is about the size of the lead in the ordinary lead pencil or smaller, the specimen is not longleaf, and no further measurement is necessary.

3. If the pith is plainly over 0.1 inch in diameter and the growth rings surrounding it are very narrow, the specimen is longleaf.

4. If in doubt as to the species, carefully measure the average diameter of the pith, not including small projections, using a rule graduated in twenty-fifths or fiftieths of an inch. A reading glass or other small lens is helpful but not essential in making these measurements. Then measure the diameter of the second annual ring in tenths of an inch. The first and second rings are usually very distinct, but in some pieces the first annual ring is rather faint, and care must be taken not to mistake the third annual ring for the second. Sometimes false rings are present, but these can always be recognized by the fact that they are not prominent all the way around, and their outer limit is not defined by a sharp line.

5. On the diagram find the point where the horizontal line which indicates the diameter of the pith intersects the vertical line which indicates the diameter of the second annual ring.

6. If the point of intersection falls above the diagonal line in the diagram, the specimen is longleaf, or in rare instances slash or pond pine. If it falls below the line, the specimen is not longleaf, but is shortleaf, loblolly, or some other of the minor southern pines.



Relation of diameter of pith to diameter of second annual ring.