

Techniques to Identify Trees

FACT SHEET 1.2

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INTRODUCTION. The first step in tree identification is knowing that there are distinguishing characteristics that separate one species or group from another. This fact sheet will provide some useful tools to make these distinctions. Several of these distinctions will be described in detail below.

HABITAT, SHAPE & COLOR. Some trees can be found growing on many different types of sites. Most trees, however, grow best on sites that satisfy their specific needs for moisture, light, soil, and biota (all the plant and animal life of a particular region). Other distinctions that can help in identification are shape and color. The shape and color of a tree can make identification possible even at a great distance. Some trees may change color in the fall while others may display a distinctive color or shape to help differentiate them from the next tree.

BARK & BRANCHING PATTERNS. Bark features can be very helpful in tree identification especially when leaves are absent and twigs inaccessible (Image 1). However, bark can vary greatly with age, growth rate and habitat. Key identifying features include: texture, color and color patterns, and color and size of variously shaped spots on young bark.



Image 1. A comparison of two characteristic bark patterns, sugarberry (left) and black cherry (right).

Photo by: Eric Taylor

Branches, twigs, buds, and leaves grow at specific locations on the tree called nodes. Many species grow

in an **ALTERNATE** pattern with one bud or leaf per node (Image. 2). Relatively few species have leaves or buds that occur in pairs at each node (**OPPOSITE**). Fewer species still grow with a **WHORLED** pattern with three or more structures at a node.

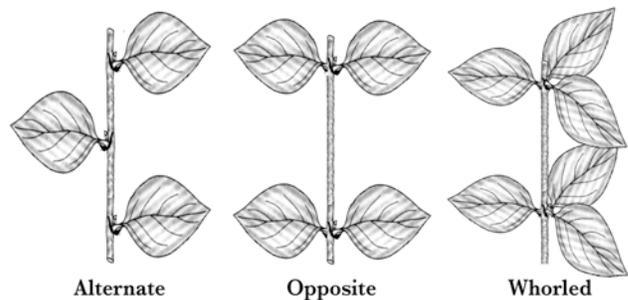


Image 2. Three possible branching patterns of trees.

LEAVES. Leaves are often the easiest and most widely used way to identify a tree. There are many types of leaf traits that give clues in identifying trees. For example, leaf complexity offers very good clues to the species group. Individual leaves can be classified as either simple or compound (Image 3). Simple leaves have a single blade leaf. While compound leaves have two or more leaflets.

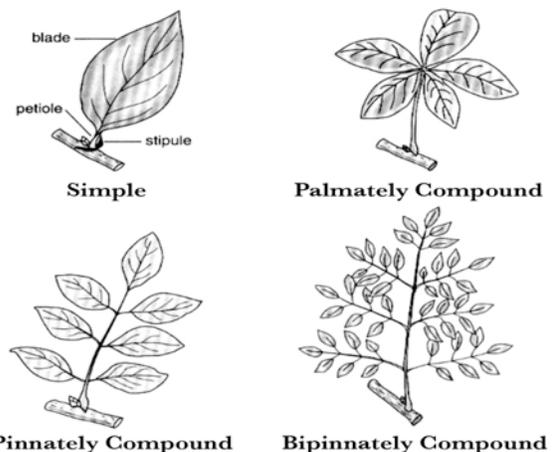


Image 3. Comparison of four different leaf complexities (modified from Harlow et. al. 1996).



The direction in which the veins run along the blade also helps to identify the tree. Veins of a leaf are described as parallel, palmate, or pinnate (Image. 4).

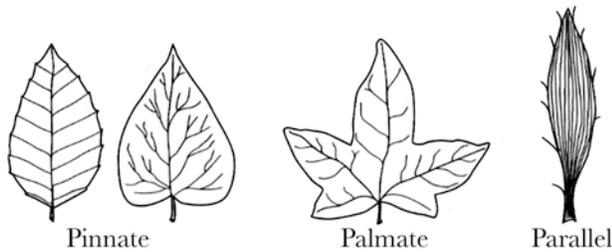


Image 4. Some representative vein patterns of leaves (modified from Harlow et. al. 1996).

The shape of the leaf is very important in helping identify a particular tree (Fig. 5). Leaves can grow on conifers as either scales, single needles, or in groups called fascicles.

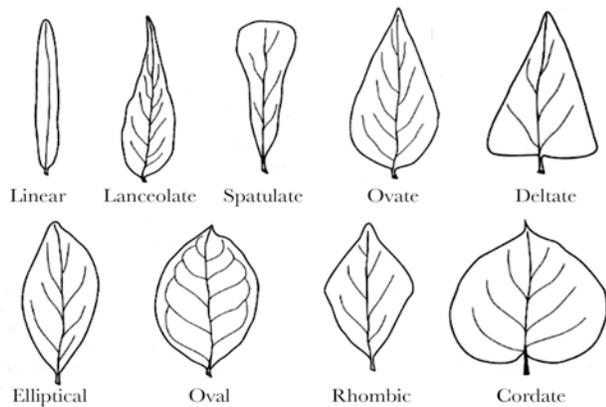


Image 5. Some common leaf shapes (modified from Harlow et. al. 1996)

Leaf margins (edge of the leaf) are also key identifier as to the tree species (Image. 6). The leaf margin can be: smooth (entire); uniformly sharp, finely toothed (serrulate); or maybe indented (lobed). Trees sometimes have much variability in their leaf shape.

Your county Extension office or local state forestry office are good sources of information for tree identification. In addition, a list of helpful resources is provided that may further assist in the tree identification process.

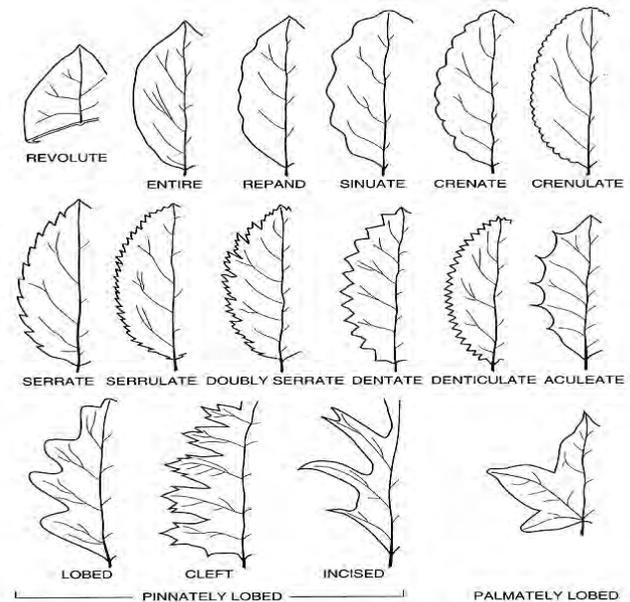


Image 6. Comparison common leaf margins (from Harlow et. al. 1996)

HELPFUL RESOURCES

1. National Audubon Society Field Guide to North American Trees By: Elbert Little
2. Tree Identification By George W. Symonds, George Wellington Dillingham Symonds
3. What Tree is That? <http://www.arborday.org/trees/whattree/?TrackingID=908>
4. What Tree is It? <http://www.oplin.org/tree>
5. Rangeland Plants of Texas Database. <http://essmextension.tamu.edu/plants>

REFERENCES

- Duncan, W.H., and Duncan, M.B., 1988. Trees of the Southeastern United States. The University of Georgia Press, Athens, Georgia 30602
- Harlow, W.M., Harrar, E.S., Hardin, J.W. and White, F.M. 1996. Textbook of Dendrology. Eighth edition. McGraw-Hill. New York.
- Nixon, E. S. 1985. Trees, Shrubs, & Woody Vines of East Texas Forest Trees of Texas, How to Know Them... Bulletin 20, Texas Forest Service April, 1963 Eighth Edition, Ninth Printing, July 1993.

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