

Binomial nomenclature

Making an accurate identification using scientific names, plus a quick preview of a Dichotomous Key

All species on earth are given a two-part name: a generic name first (genus), then a specific name (species). This system is called binomial nomenclature and allows scientists throughout the world to communicate clearly in their work. The first name is capitalized, the second is lower case and the entire name is put into italics or underlined.

Scientific names are designed to give an idea about the organism's relationship to other organisms and be descriptive of the organism's characteristics. For instance, *Callinectes sapidus* is the scientific name for the crab commonly known as the Blue Crab. The scientific name means 'beautiful swimmers' in reference to their beautiful blue color and their ability to swim using their back paddles.

Activity

Have students use the key to work down to each leaf drawn on the page. Make sure they notice the characteristics that were used to lead you to the specific leaf. Then ask each student to look up the scientific name of each tree the leaf comes from. You may use a field guide or go to <http://plants.usda.gov/>. Students should correctly write the genus and species below the common name on the sheet. Students might also look up what the latin words mean and discover what the scientific name is telling you about the tree.

LEAF IDENTIFICATION
TAXONOMIC KEY

A. Leaves shaped like needles:

Go to B.

A. Leaves NOT shaped like needles

Go to C.

B. 3 leaves in each bundle

Loblolly Pine

B. 5 leaves in each bundle

White Pine

C. Leaves shaped like a pointed oval.

Go to D.

C. Leaves NOT shaped like an oval.

Go to E.

D. Leaves have teeth on the edge of the leaf.

Go to F.

D. Leaves have a smooth edge without teeth:

Dogwood

E. Leaves shaped like a heart:

Redbud

E. Leaves not shaped like a heart

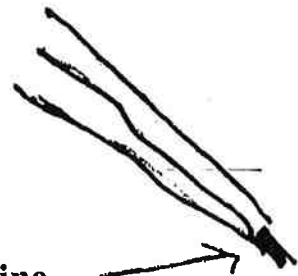
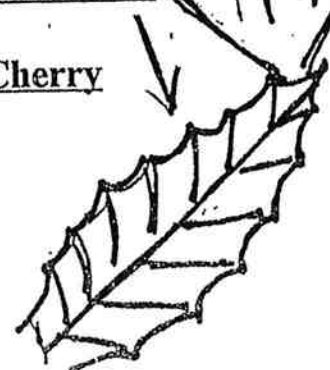
Go to G.

F. Leaves with straight veins from the midrib each ending in a single tooth without any teeth between:

American Beech

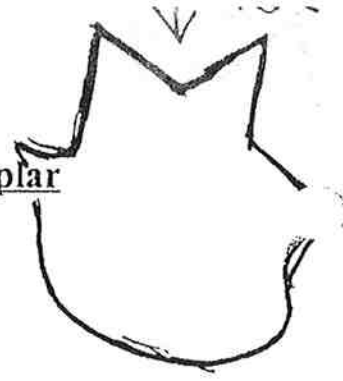
F. Leaves with many fine teeth along the edge.

Black Cherry



G. Leaves with a notch at the tip

Tulip Poplar

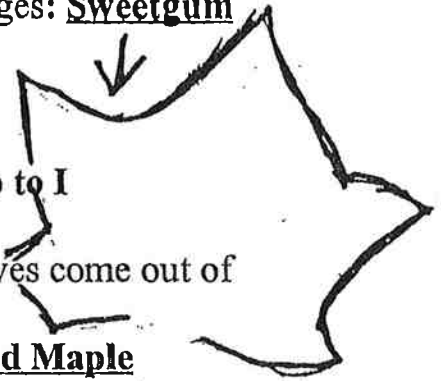


G. Leaves without a notch at the tip:

Go to H.

H. Leaves shaped like a star with five points and toothed edges: Sweetgum

Go to I



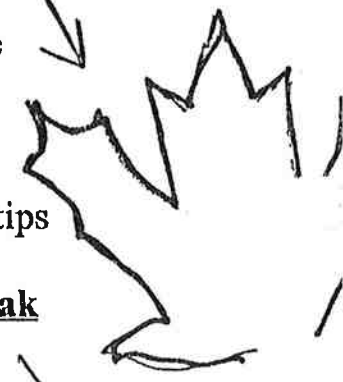
H. Leaves NOT shaped like a star:

I. Leaves with 3 (or sometimes 5) pointed lobes and leaves come out of the twig across from each other:

Red Maple

I. Leaves with more than 3 to 5 lobes and leaves do NOT come out across from each other:

Go to J



J. Leaves with 7 to 9 lobes and lobes are rounded without pointy tips

White Oak

J. Leaves with 7 to 9 lobes and lobes are pointy with bristle tips.

Red Oak

