

Tree Identification

Identifying trees is a lot like identifying people. You can easily recognize a close friend even if you only catch a glimpse. However, if you meet a room full of strangers, you need to concentrate on individual characteristics before you can tell them apart.

It is the same with trees. When you know a tree well, you will be able to name it whether you see its leaves, its fruit, its flowers or even its shape.

Tree identification keys can help us learn to identify trees by narrowing down the possibilities. Each step along the key uses a characteristic such as leaf arrangement to split all possible tree types into smaller groups until we are left with a small number of possible tree types.

Recommended Resources

The Sibley Guide to Trees. Sibley, David Allen. 2009.

Smithsonian Handbooks: Trees. Coombes, Allen J. 2002. ISBN 078948989.

Trees to Know in Oregon. Oregon State University Extension Service. 2005. ISBN 1931979049.

Oregon State University Department of Agriculture Landscape Plants database. <http://oregonstate.edu/dept/ldplants/>

This amazing database features images and information on over 1,700 landscape plants (mostly woody). All images were taken near the OSU campus in Corvallis, which means that they feature typical growth forms found in our area.

Virginia Tech Dendrology database

<http://dendro.cnre.vt.edu/>

University of Florida Tree Fact Sheets

http://hort.ifas.ufl.edu/database/trees/trees_scientific.shtml

Detailed descriptions of hundreds of species put together by Professor Ed Gilman.

Additional Resources

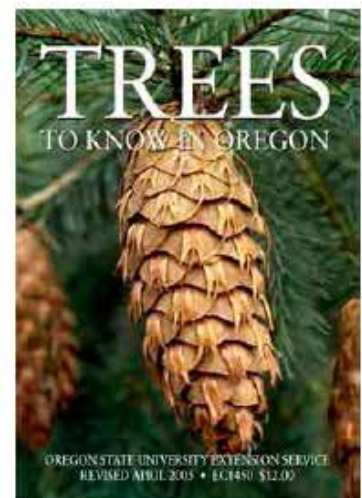
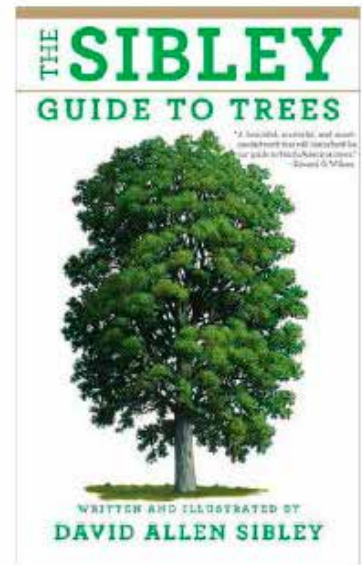
Many other great tree books on tree identification exist. Here are a few more of our favorites:

Durr's Encyclopedia of Trees and Shrubs. Durr, Michael A. 2011.

Northwest Trees: Identifying and Understanding Our Native Trees. Arno, Stephen F. and Ramona P. Hammerly. 2010.

Trees for All Seasons: Broadleaved Evergreens for Temperate Climates. Hogan, Sean. 2008.

Trees of North America and Europe. Phillips, Roger. 1978.



What to Call a Tree

Common names are like nicknames – what we call them in passing. Some trees have more than one common name, which is why we use their scientific name to identify who they are. Scientific names are what we use when we want to communicate with others without confusion.

Name	Genus	Species
Common	Maple	Norway
Scientific	<i>Acer</i>	<i>platanoides</i>



Leaf Type

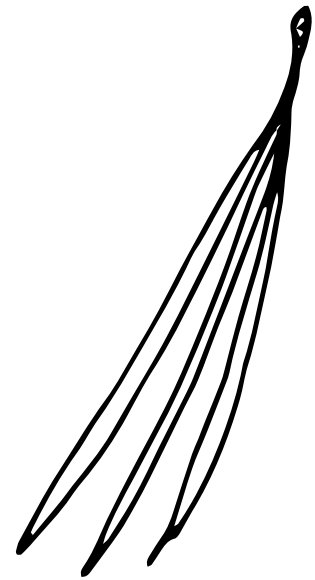
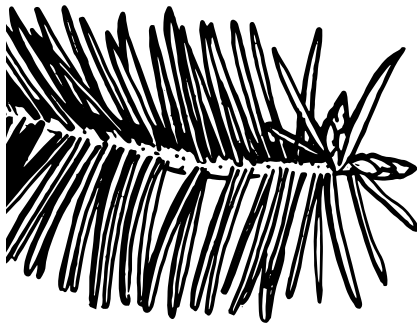
Needles or Scales (Conifer)

Most are evergreen, which means they retain leaves year-round, but some are deciduous.

Primarily cone-bearing

Gymnosperm = naked seed

Softwoods



Since evergreen trees do not lose their leaves they are able to provide environmental services year-round, such as cleaning our air and water and pulling carbon out of the atmosphere.

Conifer Leaf Types

Needle-like Leaves - leaves are long and slender.

Examples: Spruce, Pine, Douglas-fir, Fir, True Cedars, Coast redwood

Scale-like Leaves - leaves are small and overlapping.

Examples: Giant Sequoia, False Cedars (Western redcedar, Port Orford Cedar, Incense Cedar)



Top: Needle-like leaves

Bottom: Scale-like leaves

Leaf Type con't.

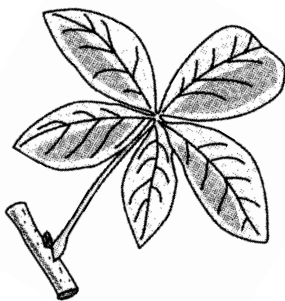
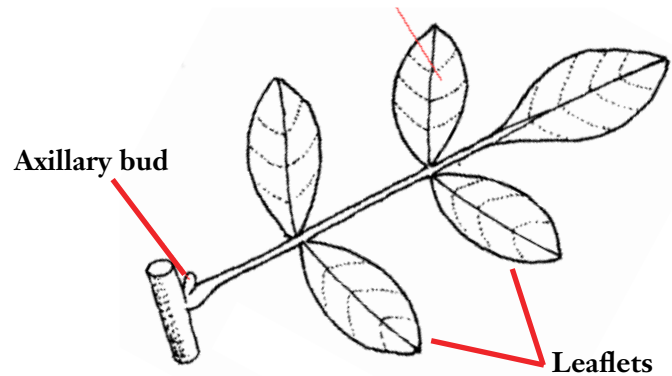
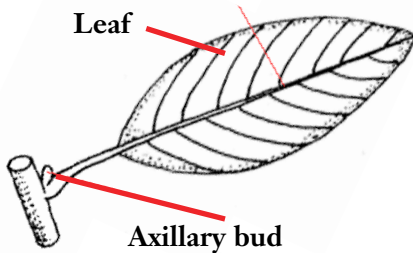
Broadleaf

Most are deciduous, which means they shed leaves each fall, but some are evergreen.
Various forms of fruit, flower, catkin etc.
Angiosperm = seed is enclosed (fruit)
Hardwoods

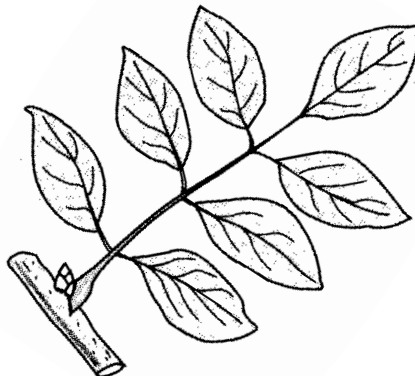


Broadleaf Leaf Types

A good way to figure out if the tree has a compound leaf is if there are several leaflets but you follow them back to where the bud is on the branch... This entire part is the leaf. In a compound leaf you won't find buds with every leaflets. The key here is where the bud is, one bud per leaf.



Palmately Compound



Pinnately Compound



Bipinnately Compound

Vocabulary

Alternate - leaves that are staggered or not placed directly across from each other on the twig.

Blade - the flat part of a leaf, or leaflet, characteristic of broadleaf trees.

Bract - a modified leaf that bears a flower.

Broadleaf - a tree with leaves that are flat and thin and generally shed annually.

Bud scar - the marks remaining after bud scales drop in spring.

Compound leaf - a leaf with more than one blade. All blades are attached to a single leafstem. Where the leafstem attaches to the twig there is a bud.

Conifer - cone-bearing tree.

Deciduous - shedding all leaves annually.

Entire - a leaf margin with smooth, untoothed edges.

Evergreen - trees with needles or leaves that remain alive and on the tree through the winter and into the next growing season.

Invasive - plant known to reproduce rapidly and quickly spread over a large area.

Leaf - primary, photosynthetic organ of a plant that is connected to a stem by a petiole.

Leaf base - bottom part of the leaf blade.

Leaf scar - the mark left on the twig where the leaf was previously attached.

Lenticel - small opening in the bark that permits the exchange of gases.

Lobes - projections that shape a leaf.

Margin - the edge of a leaf.

Midrib - the primary rib or central vein of a leaf.

Needle - slender leaf of a conifer.

Opposite - 2 leaves that are directly across from each other on the same twig.

Palmate - blades or lobes or veins of the leaf arranged like fingers on the palm of a hand.

Persistent - remains on the tree for more than one year.

Petiole - the leafstalk that connects the blade(s) to the twig.

Pinnate - type of compound leaf, with leaflets along each side of a common axis.

Samara - winged fruit.

Simple leaf - a single leaf blade with a bud at the base of the leafstem.

Sinus - indentation between lobes on a leaf.

Spurs - stubby, often sharp twigs.

Teeth - notches on the outer edge of a leaf.

