FORESTRY 101

Maples of Kentucky

by Laurie Taylor Thomas

Maples are some of the best known and most loved hardwood trees of North America. They are economically important, and they typify autumn with their beautiful reds, oranges, and yellows. The maple family Aceraceae* consists of two genera—Dipteronia that has two species exclusive to China and *Acer*, which comprises up to 200 species worldwide. The *Acer* genus is a mix of trees and shrubs scattered throughout the northern hemisphere. They grow from Alaska and Canada to the mountains of Guatemala in North America, with 13 species indigenous to the United States and six maple species that grow to tree size in Kentucky. In fact, red maple (*Acer rubrum*) is the most numerous tree in Kentucky's forests, making up 12.2% of all trees in the state.

Importance of Maples

Environmentally

Maples are often a foundational species of ecosystems and a major component of the northern temperate forests. Not only do they provide a variety of economically important forest products, they also provide food, shelter, and other benefits for many organisms. Maple buds, twigs, and fruits are a food source for birds and mammals including northern cardinal, rose-breasted grosbeak, white-tailed deer, and squirrels. The trees also provide nesting cavities for birds such as screech owls, pileated woodpeckers, common flickers, and wood ducks. Additionally, the leaves host around 300 species of moths and butterfly larva.

Economically

Maples are economically important for both their wood products as well as their non-timber forest product of maple syrup. The wood of sugar maple is the most valuable of the maples; it is also referred to as hard maple because the wood is hard, durable, and strong. It is used for furniture, veneer, flooring, sporting goods such as bowling pins and baseball bats, and musical instruments. This hardwood is widely used for collegiate and professional basketball courts. The wood of red maple as well as boxelder and silver maple is much lighter in weight and softer in texture and is commonly referred to as "soft maple." The wood of these species is used for boxes, rough construction, pallets, and crates. All maples can be tapped to produce maple syrup, but sugar maple sap generally has the highest sugar content, which makes it important to the maple sugar and syrup industry of eastern North America.

Maple Identification Tips

Red maple and sugar maple are two of the most numerous trees found in our forests in Kentucky, however there are several more maples we can find in our forests including, silver maple, boxelder, black maple, and striped maple. Learning some basic identification tips for maple can be handy when out in our woodlands.

Leaf Arrangement

Maples have oppositely arranged leaves and buds. Other trees in our forest with oppositely arranged leaves and buds are ash, dogwood, and buckeye. The mnemonic MADBuck (maple, ash, dogwood and buckeye) helps us remember trees with oppositely arranged leaves and buds.

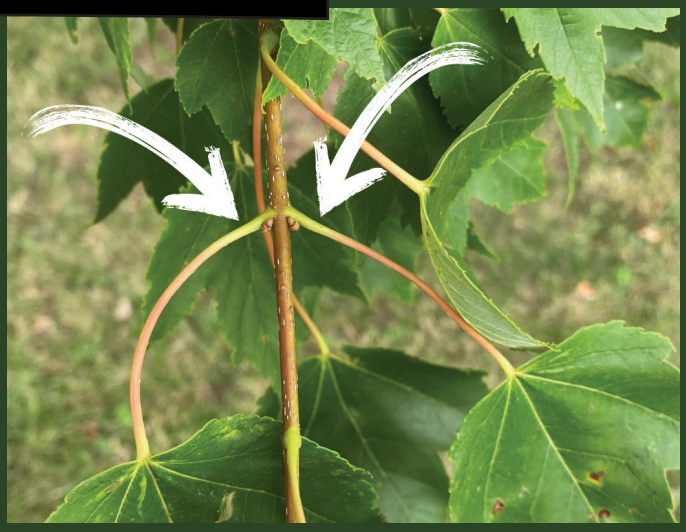
Leaf Margins

Maples have leaves with lobed margins. The number of lobes varies with maple species. Sugar and silver maple generally have five lobes, and red, black, and striped maple generally have three lobes.

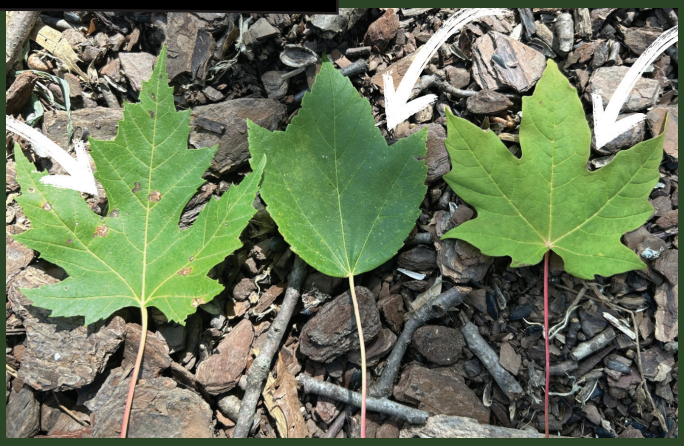
Fruit

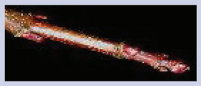
Maples have a double samara, which is a winged fruit. The size of the samara, its attachment, and when it ripens varies with maple species.

Leaf Arrangement



Leaf Margin



Maple	Leaves	Fruit/Samara	Bud
Sugar Maple	 • 5 lobes • Entire margins • Rounded sinuses	 • Horseshoe shaped • Ripen in fall	 • Brown, slender • Pointed • Lenticles
Red Maple	 • 3 lobes • Serrated margins • V-shaped, shallow sinuses	 • Wide V-shaped • Ripen in spring	 • Red shiny • Blunt • Lenticles
Silver Maple	 • 5 lobes • Serrated margins • V-shaped, deep sinuses	 • V-shaped • Ripen in spring • 2 ½" or bigger	 • Like red maple but stouter • Red, shiny • Lenticles
Boxelder	 • Compound leaf • 3 to 5 leaflets • Serrated margins	 • V-shaped • Ripen in fall	 • Green to purple, stout • Fuzzy buds
Black Maple	 • 3 lobes • Entire margins • Shallow sinuses • Wilted look	 • Horseshoe shaped • Ripen in fall	 • Like sugar maple • Brown, slender • Pointed • Lenticles
Striped Maple	 • 3 lobes • Serrated margins • Goose-foot	 • Wide V-shaped • Ripen in late summer/early fall	 • Reddish/brown • Red bud scales • Bud scales valvate

Kentucky Maple Specifics by Species

Sugar Maple (*Acer saccharum*) is slow growing and can live to 300 to 400 years old and grow 80 to 120 feet tall and up to three feet in diameter. It grows best in moist woods, lower slopes in coves, and ravines with moist, well-drained loamy soils. It is shade tolerant but sensitive to urban pollution. Sugar maple is the state tree of New York, West Virginia, Wisconsin, and Vermont.

Red Maple *(Acer rubrum*) is one of the most widely distributed trees in eastern North America and the most numerous tree in Kentucky. It can thrive on a wide range of soil types, textures, moisture, pH, and elevation. Trees reach maturity at 70 to 80 years, and it seldom lives longer than 150 years. It is relatively fast growing and shade tolerant; it is commonly used in urban environments as a shade tree.

Boxelder (*Acer negundo*) is the most widespread maple tree in the United States. Trees typically have poor form with many sprouts along the trunk and the only maple with a compound leaf form. It is fast growing and short-lived, typically living only 75 to 100 years. Boxelder grows on a wide variety of sites, but mostly is found in riparian communities along streams, rivers, and ponds.

Silver Maple (*Acer saccharinum*) is a bottomland species; found growing along large rivers and on river islands, but unlike red maple, it does not grow well on dry sites. Silver maple is also known as river and water maple. It is moderately tolerant to intolerant of shade, fast growing, and has been widely used as an urban shade tree. Trees can grow up to 100 feet tall.

Black Maple (*Acer nigrum*) resembles sugar maple in habit, range, quality and use of wood. It grows rapidly in early life, then slowly and may live 200 years. It is less common than sugar maple in Kentucky.

Striped Maple (*Acer pennsylvanicum*) is widely distributed over the northeastern quarter of the United States and southeastern Canada, and along the Appalachian Mountains, it is found at higher elevations in Eastern Kentucky. It is a small tree to large shrub and can grow 30 to 50 feet tall with leaves that resemble a goosefoot.

For more information and identification tips about maple species found in Kentucky, check out the University of Kentucky Forestry and Natural Resources website for Common Trees of Kentucky: https://forestry.ca.uky.edu/common_ky_trees. The webpage has short videos for many trees found in Kentucky.

Photo courtesies: Sugar Maple: Jason Sharman, Vitalitree, Bugwood.org; Red Maple: Royal Tyler, Pro Pest and Lawn Store, Bugwood.org; Boxelder and Silver Maple: Shutterstock; Black Maple: Rob Routledge, Sault College, Bugwood.org; Striped Maple: Rob Routledge, Sault College, Bugwood.org
*Aceracea is now included in the Sapindaceae family.

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