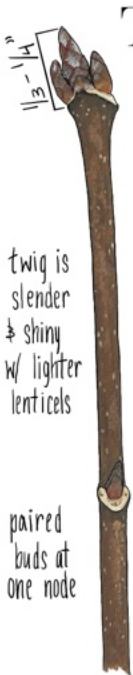


Sugar Maple

Acer saccharum



Twig & Bud

terminal bud flanked by two lateral buds

twig is slender & shiny w/ lighter lenticels

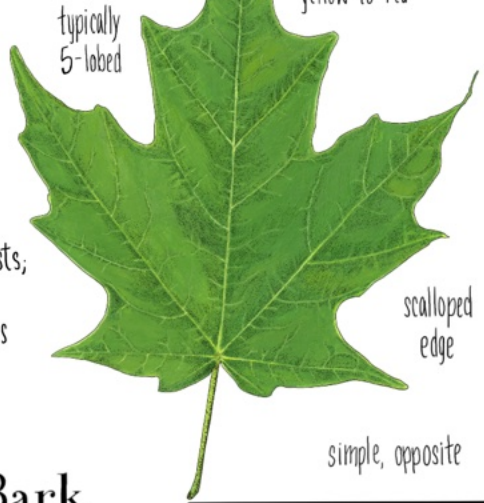
paired buds at one node

buds are small, sharply pointed, dark brown & whitish hairy towards the tip

Habitat

rich mesic soil; dominant in northern hardwood forests; also planted in yards & along streets

Leaf



fall foliage is bright & colorful, ranging from yellow to red

typically 5-lobed

scalloped edge

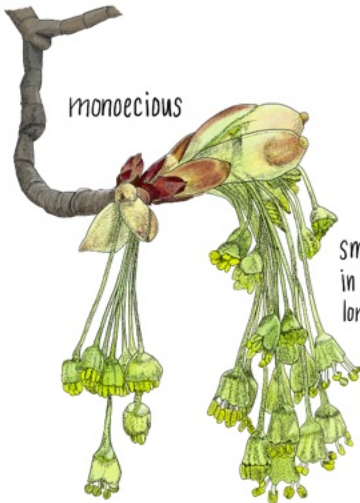
simple, opposite

4-6 inches

Bark

young trees: smooth, gray bark; shallow vertical cracks & finely cracked surface, like old paint; mature trees: vertical strips of bark begin to curl away on one side, growing thicker & more plate-like over time

Flower

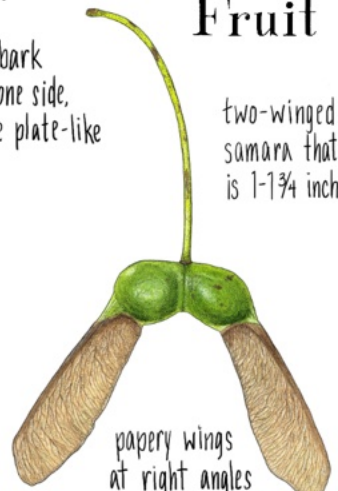


monoecious

small flowers grow in clusters & hang from long, slender stalks that are 1-3 inches long

appear in early spring with or slightly before the leaves

Fruit



two-winged samara that is 1-1 3/4 inch

papery wings at right angles or less than 90°



TREE OF THE MONTH

Sugar Maple • *Acer saccharum*

ALSO KNOWN AS: HARD MAPLE, ROCK MAPLE

Sugar maple (*Acer saccharum*) is a long-lived deciduous tree in the Sapindaceae, or soapberry, family that can live to be 300-400 years old. It's a symbolic and elemental tree to the forests and culture of the northeastern US and southeastern Canada, best known for its sap, the key ingredient to maple syrup, and its bright fall foliage. It commonly grows to a height of 80 feet, at times reaching 120 feet. Its crown tends to be evenly proportioned with an egg-shaped silhouette. The branches, leaves, and twigs grow in an opposite pattern.

Sugar maple is primarily an upland species and does best on rich, moist, well-drained soils throughout the northeastern US, parts of the midwest, and southeastern Canada. It is one of the dominant forest trees in its range. Its commercial significance due to its sap and hardwood leads to the common cultivation of sugar maple forest stands (i.e., sugar bushes). It's also commonly planted in yards and along streets.

Sugar maple leaves have an iconic and readily recognizable shape, and it's used as the centerpiece of the Canadian flag. The leaves are simple and oppositely arranged with pointed lobes (typically 5) and a scalloped edge with rounded sinuses. The top and bottom of the leaves are smooth. The leaves can look very similar to that of Norway maple (*Acer platanoides*). One way to tell them apart is the color of sap at the petiole when a leaf is plucked from a twig. The Norway maple has milky white sap, and sugar maple's is clear and inconspicuous.

The bark on young trees is gray to brownish-gray bark and starts out smooth, eventually forming shallow vertical cracks and a finely crackled surface, similar to old paint. As the tree matures, vertical strips of bark separate from the trunk and begin to curl up on one side, breaking into irregularly shaped sections and growing thicker and more plate-like over time. When an individual reaches middle to old age (~100+ years), the vertical strips begin to slowly detach and fall away.

Sugar maple twigs are a warm brown color with paired (opposite) buds. The twig is slender and shiny with lighter lenticels. Like all maple species, the leaf scars at a single node either abut or are connected by a thin line. The buds are small, sharply pointed, and dark brown, with a white pubescence towards the tip. The uppermost buds (terminal buds) are always flanked by two lateral buds.

Sugar maples are monoecious, meaning an individual tree produces both male and female flowers. The small flowers of sugar maple grow in dangling clusters that hang from long, slender stalks and appear in early spring with or slightly before the emerging leaves.

Like all maples, sugar maple produces a two-winged samara, a winged achene that contains one seed and ripens in fall. The papery wings are at right angles or less than 90° and turn brown while the seeds are still green. Sugar maple seeds are familiar to many, often called "helicopters," due to how the winged seeds spin to the ground in a circular motion like helicopter blades.

lobe (of a leaf): having rounded or pointed parts that stick out from the midrib
sinus: a space or indentation between two lobes or teeth on a leaf's margin
petiole: the stalk of a leaf that joins it to the twig
leaf scar: the mark left on the twig when a leaf falls off

lenticels: raised pores in the stem of a woody plant that allow gas exchange; appear as tiny dots on twigs
pubescence: fine covering of soft, short hair on the surface of a plant part
lateral bud: a bud that grows on the side of a stem
achene: a small, dry, one-seeded fruit that does open to release the seed



OPPOSITE BRANCHING PATTERN



ALTERNATE BRANCHING PATTERN



WHORLED BRANCHING PATTERN

Sugar maple is a keystone species in the forests of the northeastern US, Midwest, and eastern Canada with a high ecological importance, providing food and shelter for many species. A keystone species is an organism that defines an entire ecosystem by playing a vital role in the structure and function of its ecosystem. Put simply, the sugar maple is the glue that holds a habitat together, and without it, the forests of the northeastern US and eastern Canada would be dramatically different.

Sugar maple's species epithet, *saccharum*, comes from the Greek word *Sakcharon*, meaning "sugar." The word *Saccharum* was given to sugarcane by Linnaeus in 1753. The genus name *Acer* comes from the Latin word meaning "sharp" and refers to the hardness of maple wood.



Tree of the Month is sponsored by Berkshire Environmental Action Team, a 501(c)(3) nonprofit organization located in Pittsfield, MA. Find more Trees of the Month at www.thebeatnews.org.