

Sugar Maple

Acer saccharum

Common name:

Sugar Maple, Hard Maple, Rock Maple, Bird's Eye Maple, Sweet Maple, Sugartree

Pronunciation:

A-ser sak-KAR-um

Family:

Sapindaceae, Aceraceae

Genus:

Acer

"The most magnificent display of color in all the kingdom of plants is the autumnal foliage of the trees of North America. Over them all, over the clear light of the Aspen and Mountain Ash, over the leaping flames of Sumac and the hell-fire flickerings of Poison Ivy, over the ... paint of the many Oaks, rise the colors of one tree -- the Sugar Maple -- in the shout of great army. Clearest yellow, richest crimson, tumultuous scarlet, or brilliant orange -- the yellow pigment shining through the over-painting of the red -- the foliage of the Sugar Maple at once outdoes and unifies the rest. It is like the mighty, marching melody that rides upon the crest of some symphonic weltering sea and, with its crying song, gives meaning to all the calculated dissonance of the orchestra.... There is no properly planted New England village without its sugar maples."

"The early colonists, both English and French, learned the art of sugaring, of course, from the [Indians] for whom maple sugar was the only sweet. The Indians had their sugar camps, just as the white man, though it was usually, no doubt, the women who did the work. Their method was to slash a gash in the tree, when the sap was rising, and insert a hollow reed stem or a spile of hollow Sumac twig or a funnel of bark. The sap was then allowed to pour from the spile into a bark bowl or bucket or a gourd shell, and this in turn was emptied into a large vessel of Elm bark or a tree trunk hollowed out to form a trough. Having [initially] no metal vessels to endure direct contact with the fire, the Indians let the sap freeze and took the ice took off the ice from time to time (thus, in effect, concentrating the syrup) or they boiled it by dropping hot stones into the sap troughs. Some of the hot syrup might then be poured out on the snow for the children, who ate it as a sort of candy. But for future use the sugar was stored in bark boxes."

(excerpts from Donald Culross Peattie, *A Natural History of Trees of Eastern and Central North America*)

Quick ID Tips:

- 3-5 lobed leaf with pointed but rounded tips
(Hint: look closely at leaf tips - Norway Maple has sharp-pointed, bristle tips)
- Samara fruit is horseshoe-shaped; wings not spread wide
- Bark is irregular, sometimes scaly with fairly wide ridges; trunk bark may appear slightly twisted
- Lower branches seem sometimes to swoop out and then arch upward

Details:

- This iconic New England tree is deciduous and typically grows to 80 ft. or more with ascending branches and noticeably upright, slender twigs.
- Young Sugar Maples have smooth, gray-brown trunk bark that, with age, becomes furrowed with long irregular thick plates or ridges. On old trees, the bark splits into deep channels and the bark may flake off the trunk. Norway maple has tighter, neatly furrowed bark.
- Leaves are opposite, simple, 5' long and across, 3-5 lobed with narrow and deep sinuses. Leaf tips are pointed but rounded; leaf base is slightly indented. Leaf margins may have a few, slightly coarsely teeth, and the leaf is generally dark green above (but variable), pale green to light green below.
- Fall leaf color is striking -- luminous green in center of tree and brilliant yellow, burnt orange, and bright red at branch tips.
- Flowers are pale, greenish yellow, dangling on long 1-3" stalks in early spring and appearing slightly before the leaves emerge. Norway Maple flowers are a brighter yellow.
- Fruit is a paired, winged samara, relatively small (< 1" long), glabrous, and somewhat horseshoe shaped. Fruit develops over the summer and matures in Sept.-Oct., just before leaf fall. Seeds overwinter in leaf litter and sprout early in the following spring.
- Winter tree form shows long shoots, but the side shoots are not short as in Red Maple. Winter buds are said to resemble an upside-down sugar cone.
- This tree prefers sun to part shade and can be seen in the forest under a canopy, but it grows quite slowly in shady locations. Common in well-drained, moderately moist, fertile soil on slopes and uplands. Does not thrive in wet soils or swamps, in compacted or restricted areas, and is notably susceptible to salt and acid rain injury.
- Hardy in USDA Zones 4-8. Native from the Canadian Maritime provinces and southern parts of Ontario and Quebec, and New York, south to Georgia, Mississippi, and Texas.

- *saccharum*: Latin name for sugar cane. Maple syrup is made from the sap of this tree. A typical tap tree of 12 inches DBH produces about 10 gallons of sap per season. About 40 gallons of sap are boiled down to make 1 gallon of syrup.
- Native Americans used a freezing method to concentrate the sap (see quoted passage from Peattie above). Squirrels use a similar method to concentrate the sugars in the sap. The leaking sap is not licked but allowed to freeze on the trunk; the freezing separates water from the sugary syrup. The squirrels skim off the water and lick the concentrated sugar syrup for winter nutrition when other food resources are scarce.
- To distinguish Sugar Maple from Norway Maple (*Acer platanoides*), see photos below.



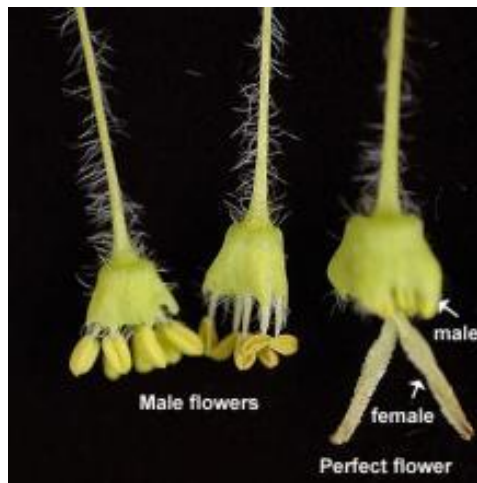
tree habit, summer



arched lower branches



spring flowering



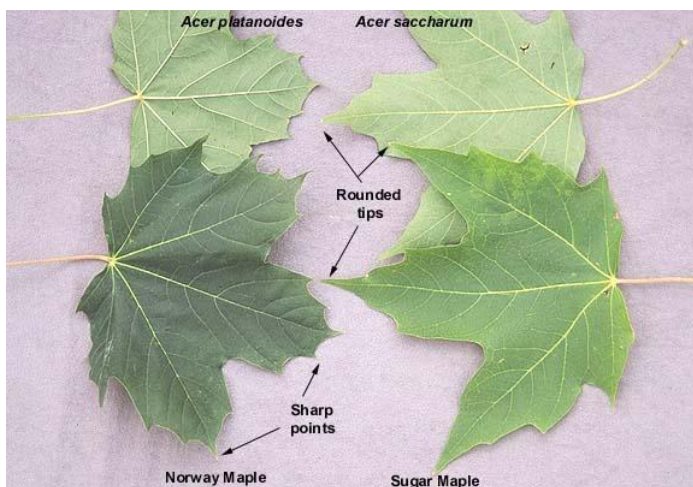
flowers



developing fruit



leaves



leaf comparison with Norway Maple



fruit and bud comparison with Norway Maple



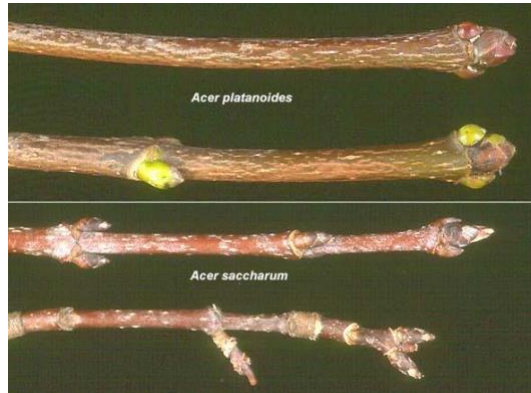
fall color



trunk bark



winter bud



bud comparison

Sources:

- Oregon State University Landscape Plants, <https://landscapeplants.oregonstate.edu/plants/acer-saccharum>
- Wikipedia, https://en.wikipedia.org/wiki/Acer_saccharum
- Charles Fergus, *Trees of New England, A Natural History* (Globe Pequot Press 2005)
- David Sibley, *The Sibley Guide to Trees* (Knopf 2009)