

# MAPLES\* *The Important Distinctions*

	<b>Red Maple</b> <i>Acer rubrum</i>	<b>Sugar Maple</b> <i>Acer saccharum</i>	<b>Silver Maple</b> <i>Acer saccharinum</i>
<b>BARK</b>			
<b>TEXTURE</b>	<b>Older trees:</b> ridged and broken into plate like scales. <b>Young trees:</b> smooth.	<b>Older trees:</b> rough and deeply furrowed. <b>Young trees:</b> smooth and slightly fissured.	<b>Older trees:</b> somewhat furrowed, separates into thin plates. <b>Young trees:</b> smooth.
<b>COLOR</b>	Dark gray on older trunks, light gray on young trees	Gray on older trunks, light gray on young trees	Dark gray on older trunks, gray on young trees
<b>LEAVES</b>			
<b>LOBES/SHAPE</b>	3–5 lobes. sides of terminal lobe converge, notches between lobes V-shaped	3–5 lobes, sinuous, sides of terminal lobes flare outward, notches between lobes rounded	5 lobes, rarely 3; lobes long and narrow like fingers on a hand
<b>MARGIN</b>	Irregularly doubly toothed	Sparsely toothed	Irregularly and sharply toothed
<b>SURFACE</b>	Under-surface slightly white	Under-surface pale green	Under-surface silvery white
<b>FLOWER</b>			
<b>APPEARANCE</b>	Scarlet or yellow-red, appears before the leaves	Greenish-yellow, appears with the leaves	Greenish-yellow or pinkish, appears long before the leaves
<b>BUDS</b>			
<b>LENGTH</b>	Terminal bud— $\frac{1}{8}$ inch	Terminal bud— $\frac{1}{4}$ inch	Terminal bud— $\frac{1}{8}$ inch
<b>SHAPE</b>	Blunt-pointed, as long as broad	Sharp-pointed, many scales showing	Blunt-pointed, slightly ridged
<b>COLOR</b>	Dark red	Purplish-brown to gray	Bright red above, green below
<b>FRUIT</b>			
<b>SHAPE</b>	Paired, slightly divergent	Paired and slightly divergent	Paired, but with one usually abortive
<b>SEED BODY</b>	Oval in outline	Round	Football-shaped
<b>WING</b>	Reddish; $\frac{3}{4}$ inch long	1 inch long	Strongly divergent, 2 inches long and hooked

	<b>Striped Maple</b> <i>Acer pensylvanicum</i>	<b>Mountain Maple</b> <i>Acer spicatum</i>	<b>Norway Maple</b> <i>Acer platanoides</i>
<b>BARK</b>			
<b>TEXTURE</b>	Marked with whitish stripes running lengthwise on trunk	Smooth when young; shallowly furrowed when older	Smooth when young; regularly furrowed on older trees
<b>COLOR</b>	Reddish-brown or dark green	Reddish-brown to gray	Gray when young, gray-brown on older trees
<b>LEAVES</b>			
<b>LOBES/SHAPE</b>	3 lobes, shaped; like a duck's foot, thin	Usually 3 lobes, sometimes 5	5–7 lobes, blade wider than tall, stems exude a milky sap when broken
<b>MARGIN</b>	Edges finely and sharply-toothed	Coarsely-toothed	Sparsely toothed
<b>SURFACE</b>	Under-surface pale green; pubescent	Prominently sunken veins on the upper surface	Very dark green; some cultivars red or deep purple
<b>FLOWER</b>			
<b>APPEARANCE</b>	Bright yellow, appears after leaves are full grown	Yellow-green in long clusters after the leaves are full grown	Yellow-green, appear before the leaves
<b>BUDS</b>			
<b>LENGTH</b>	Terminal bud— $\frac{1}{2}$ inch	Terminal bud— $\frac{1}{4}$ inch	$>\frac{1}{4}$ inch
<b>SHAPE</b>	Distinctly stalked with 2 scales showing	Slender and pointed, slightly stalked	Turban-shaped, blunt-pointed, large scales
<b>COLOR</b>	Bright red	Green to red	Green to purple
<b>FRUIT</b>			
<b>SHAPE</b>	Paired and moderately divergent	Paired, slightly divergent, ascending clusters	Paired, flattened
<b>SEED BODY</b>	Large smooth depression in seed body	Wrinkled depression on seed body	Flattened
<b>WING</b>	Reddish-brown; $\frac{3}{4}$ inch long	Slightly divergent; $\frac{1}{2}$ inch long	Strongly divergent, leathery; 2 inches long

\*Key does not include boxelder. Boxelder (page 84–85) is the only maple in Maine with compound leaves.





## RED MAPLE *Acer rubrum* L.



**R**ed maple—also known as soft, white or swamp maple—occurs throughout the state. A rapid grower and the most abundant of the maples, it is typically found in swamps and poorly drained sites, but also occurs elsewhere. The red maple is a medium-sized, slender tree that becomes 50–60 feet high, and 1–2 feet in diameter. The branches are upright, forming a somewhat narrow head. Usually the trunk is not divided.

The **bark** on young trees is smooth and light gray. On old trunks, it is dark gray, ridged and broken into plate-like scales.





*Red maples produce bright red flowers followed by abundant seeds in the springtime.*

The **leaves** are opposite, 3–5 inches long, with 3–5 lobes and margins that are irregularly double-toothed. The upper surface is light green; lower surface is white. The sides of the terminal lobe converge toward the tip; and the notches between lobes are V-shaped. In fall, the leaves turn scarlet and orange.

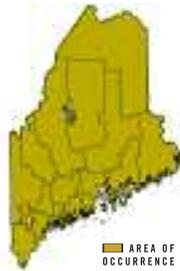
The **flowers** are produced in clusters on stalks before leaf buds open. Males are yellowish-red while females are bright scarlet. The red maple is one of the first trees to flower in spring.

The **fruit** is winged, ripens in spring or early summer, and germinates as soon as it falls. Wings are only slightly divergent, about  $\frac{3}{4}$  inch long. The seed body lacks a depression.

The **twigs** are straight, stiff, do not have a rank odor when broken, and are red on both surfaces. Buds are red and often clustered.

The **wood** is close-grained, heavy, moderately strong, easily worked but not durable, although it will take a good polish. It is used mainly for pulp and firewood, but also for pallets, furniture stock, canoe paddles and turnery products. As sugar maple becomes more expensive, more mills are using red maple. It is also commonly used for landscape plantings.

MAINE REGISTER OF  
BIG TREES 2008  
Red Maple Circumference: 183" Height: 69'  
Crown Spread: 67' Location: Richmond





## SUGAR MAPLE *Acer saccharum* Marsh.



**S**ugar, rock or hard maple is found abundantly throughout the state on moist, rocky slopes, but grows best on moist, upland soils. In the forest, it grows to 60–70 feet and a diameter of 20–30 inches. The top is short and spreading. In the open, the branches begin 8–10 feet up, forming an egg-shaped head when the tree is young and a broad, rounded top when older. It makes an attractive street or ornamental tree, but it is sensitive to road salt. Maple sugar and syrup are made largely from the sap of this tree, although sugar is present in the sap of all maples.

*Historically, sugar maple was used to make parts for sleighs, sleds, pungs (low, one-horse box sleighs) and buggy shafts.*





**Bark** on young trees and large branches is smooth or slightly fissured and pale. Some trees have oval light-colored blotches on the bark. Older trees are deeply furrowed and light to darker gray. **Leaves** are opposite, with 3–5 lobes, springly-toothed, 3–5 inches long, dark green above, pale green below. Sides of the terminal lobe are parallel or divergent; and notches between lobes are u-shaped. In autumn, leaves turn various shades of red, scarlet, orange or yellow.

**Flowers** are greenish-yellow, pendulous, appear on long, slender, hairy stalks and in clusters, with the leaves. The **fruit** is paired, round with wings that are about 1 inch long and slightly divergent. It ripens in the fall. The **twigs** are brown with sharp-pointed brown buds.

The **wood** is heavy, close-grained, strong and hard. It is used for furniture, flooring, tool handles, veneer, railroad ties, novelties, dowels, woodenware, canoe paddles, firewood and pulp. “Birds-eye” and curly-patterned maple is in high demand in the furniture and veneer industry. Historically, sugar maple was used to make parts for sleighs, sleds, pungs (low, one-horse box sleighs) and buggy shafts.



MAINE REGISTER OF  
BIG TREES 2008  
**Sugar Maple**  
**Circumference:** 213"  
**Height:** 80' **Crown Spread:** 64'  
**Location:** Palermo

*Sugar maple buds are sharp-pointed and have scales that have a dark margin.*





## SILVER MAPLE *Acer saccharinum* L.



*In Maine, silver maple is most common along major rivers.*

**A**bundant in some localities, silver maple is a common tree, found throughout the state except along the coast. It grows largely on sandy banks along streams, usually attaining a height of 60–80 feet and a diameter of 2–3 feet. The trunk normally separates into 3 or 4 upright secondary stems, devoid of branches for some distance. The branches are long and slender, often pendulous.

The **bark** on young trees is smooth, gray, slightly tinged with red. On old trees, it is reddish-brown, furrowed, and separated into large thin scales that are loose at the bottom. Twigs are chestnut brown and shiny.

The **leaves** are opposite, deeply five-lobed; and the edges are irregular and sharply toothed. The upper surface is pale green, the lower, silvery white. They turn a pale yellow in fall.





The **flowers** are on very short stalks and in clusters. They are greenish-yellow or sometimes pinkish, opening early, long before the leaves appear.

The **fruit** is paired, winged and ripens in spring. Frequently, one of the pair does not fully develop. The **twigs** are curved upward at the tip, orange or red-brown above and green below, slender, with a bitter taste and a rank odor when broken.

The **wood** is softer than that of the hard maple, close-grained, not durable and easily worked. It is used to a limited extent for pulp.



*Silver maple has large globe-shaped flower buds and smaller vegetative buds.*

MAINE REGISTER OF BIG TREES 2008  
Silver Maple Circumference: 316" Height: 89'  
Crown Spread: 75' Location: Leeds





## STRIPED MAPLE *Acer pensylvanicum* L.



*The striped maple is a shade-loving tree that is usually found growing with other hardwoods.*

**S**triped maple or moosewood is common throughout the state. It is a shade-loving tree that is found growing with other hardwoods, or occasionally with conifers, on rich, moist soils or rocky slopes. Of little value except for its beauty, it rarely exceeds a height of 25 feet and a diameter of 8 inches. The branches are slender and upright, and the top narrow and often short.

The **bark** on the trunk is reddish-brown or dark green, and marked by whitish lines running lengthwise, which turn brown after a time. The **leaves** are three-lobed toward the apex, resembling a goose foot, opposite, finely toothed, pale green, 5–6 inches long and about as broad. In fall they turn light yellow.





*The white and green-striped bark of the striped maple distinguishes it from any other native tree.*

The **flowers** are bright yellow in slender drooping racemes that open the end of May or early June, when the leaves are fully grown. The **fruit** is paired, with wings moderately divergent, fully grown in late summer. It has a smooth, oval depression in the seed body. The **twigs** are smooth, reddish or greenish; the buds are valve-like, stout, stalked and without hairs.

The **wood** is close-grained, light and soft. During spring when the cambium layer is active, it is easy to make a whistle from the smaller branch sections.



MAINE REGISTER OF BIG TREES 2008  
Striped Maple\*  
Circumference: 30"/31" Height: 45'/50'  
Crown Spread: 21'/20'  
Location: Harpswell /Monhegan Island \*Tie





## MOUNTAIN MAPLE *Acer spicatum* Lam.



**M**ountain maple occurs throughout Maine and is especially common in the northern part of the state. It grows as a small bushy tree, seldom over 30 feet in height. At times, the tree forms fairly dense thickets, due to its habit of growing in clumps. It grows best in a wet habitat or on damp, northern slopes. The slender twigs grow in a somewhat upright position.

*The mountain maple grows as a small bushy tree, seldom over 30 feet in height.*





*Facing page, far left: Mountain maple leaves have deeply impressed veins on the upper surface.*



The **bark** is reddish-brown to gray, thin and somewhat furrowed.

The **leaves** are opposite, three-lobed, shiny above, somewhat hairy below. They have rather coarse teeth and prominently sunken veins on the upper surface.

The **flowers** appear in June in long, hairy, yellow-green clusters after the leaves are full grown.

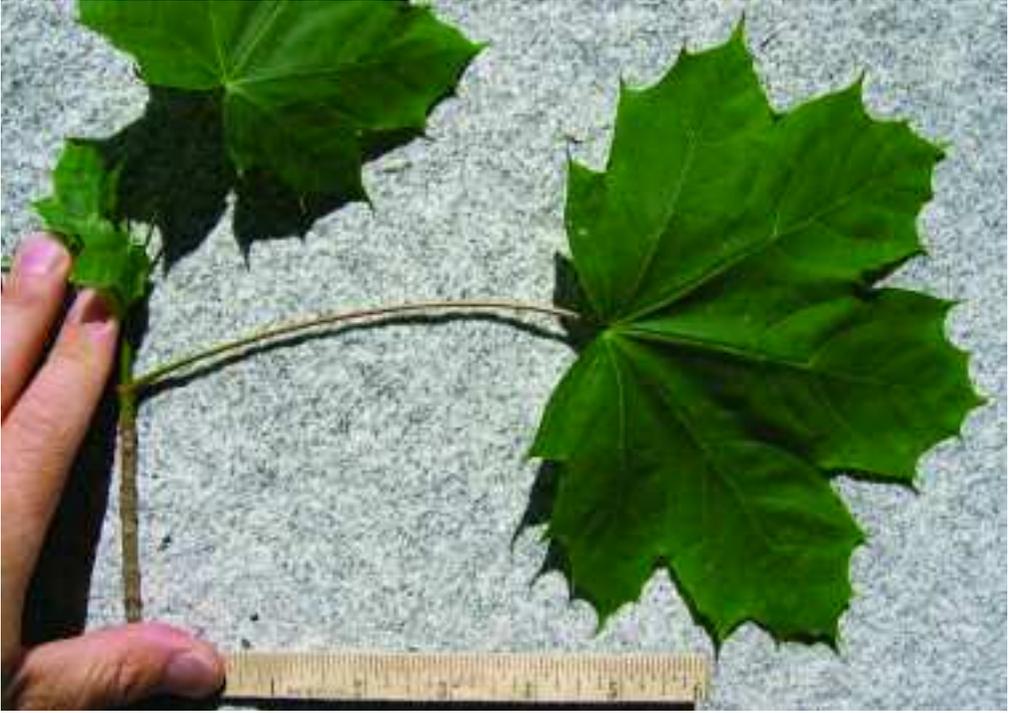
The **fruit** is paired, with wings

slightly divergent, and occurs in ascending clusters. It has a wrinkled depression on the seed body and ripens in early fall.

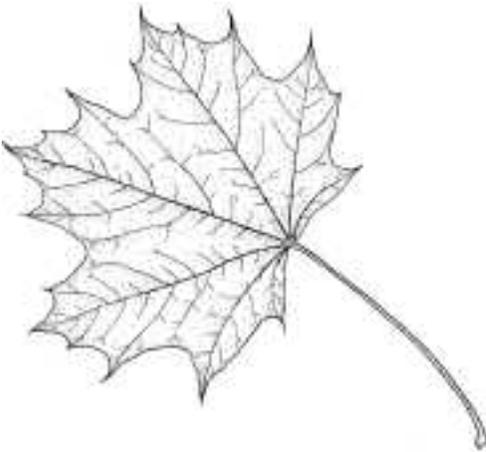
The **twigs** are hairy, green, red or reddish-brown, not striped; and the pith is brown. The buds are hairy, valve-like, green, and only slightly stalked, slender and pointed.

The **wood** is close-grained, soft, light and not used commercially.





## NORWAY MAPLE *Acer platanoides* L.



*Norway maple is not native to Maine. Because of its aggressive nature, it is considered to be a serious potential threat to our native flora and further planting of it is discouraged.*

**N**ative to continental Europe, Norway maple thrives in a wide variety of conditions, grows rapidly and casts a deep shade. Because of its aesthetic appeal and ease of propagation, it has been planted across Maine as a street and shade tree. It has escaped into the wild around many of our cities and towns, particularly in the southern half of the state. Because of its aggressive nature, Norway maple is considered to be a serious potential threat to our native flora and further planting of it is discouraged.

The **bark** of young trees is gray and smooth. Bark of older trees is gray-brown to almost black, and broken into long, interlacing vertical furrows.

Norway maple drawing by Anna Anisko, used with the permission of the Pennsylvania Flora Project, Morris Arboretum of the University of Pennsylvania.





The **leaves** are opposite, with 5–7 lobes, and very dark green. The leaf blade is usually broader than it is long. Early in summer, the petiole will exude a white milky sap when broken. This characteristic is not shared by any of our native maples.

The **flowers** are bright yellow-green and appear in spring before the leaves.

The **fruits** are paired and diverge at a wide angle from each other. Each fruit has a leathery wing attached. The fruit and wing are about 2 inches long, flattened, light brown and mature in the fall.

The **twigs** are stout and brownish. The buds are large and green to purple with large bud scales.

The **wood** is occasionally used for firewood.



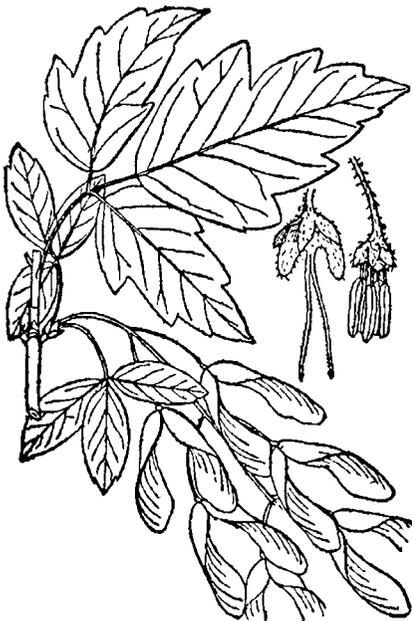
*Norway maple fruit has a flattened seed body and a leathery, 2 inch wing.*

MAINE REGISTER OF BIG TREES 2008  
Norway Maple Circumference: 166" Height: 70' Crown Spread: 86' Location: South Berwick





## BOXELDER *Acer negundo* L.



**B**oxelder, or ashleaf maple, is apparently not native to Maine, but has been planted as an ornamental tree throughout the state and has escaped in localized areas near habitation. It was introduced along the St. John River in Aroostook County. It reaches a maximum height of 50 feet and diameter of about 2 feet in Maine. It is a short-lived, fast-growing, brittle tree, prone to wind and ice damage. It can become invasive.

*Boxelder is a short-lived, fast-growing, brittle tree, prone to wind and ice damage. It can become invasive.*





*Boxelder twigs are purple and covered with a whitish waxy bloom.*

The **bark** is light gray and smooth on young stems, becoming roughened and shallow-fissured on older trees.

The **leaves** are opposite, compound, usually 3–7 leaflets per leaf, rarely nine. The leaflets vary greatly in shape, often lobed and unlobed leaflets are found on the same leaf. Leaflets are occasionally divided into individual blades.

The **flowers** open just before the leaves in the spring and are yellow-green. They have no petals.

The **fruit** attains mature size in summer, ripening in autumn. It consists of a double-winged pair of seeds. Wings are only slightly divergent; and the seed body is wrinkled, three times longer than broad.

The **twigs** are smooth, rather stout, green or maroon, and covered with a white, chalky bloom. The bark yields a pungent odor when bruised.

The **wood** is light, soft, creamy white, often tinged with green, weak and close-grained. Occasionally it is used for pulp.



MAINE REGISTER OF  
BIG TREES 2008

**Boxelder**

**Circumference:** 115"

**Height:** 85'

**Crown Spread:** 66'

**Location:** Wilton

