

Black Oaks - The Important Distinctions

	North. Red Oak <i>Quercus rubra</i>	Scarlet Oak <i>Quercus coccinea</i>	Black Oak <i>Quercus velutina</i>	Bear Oak <i>Quercus ilicifolia</i>
B A R K	Texture Slightly ridged.	Ridges small and irregular.	Deeply fissured. Ridges very dark.	
	Color Dark gray to black; inner-reddish.	Inner - pale red or gray.	Inner - deep orange or bright yellow.	Gray to dark brown.
L	Length 5 - 8 inches.	3 - 6 inches.	5 - 6 inches.	3 - 5 inches.
E A V	Color Surface - Dull, dark green; below - yellow-green.	Surface - bright green and shiny; below - paler.	Surface - dark green and shiny.	Surface - dark green; below- white or gray.
E S	Surface Smooth beneath.	Smooth beneath.	Hairy beneath.	Hairy beneath.

Black oak group: leaf lobes sharp-tipped, acorns mature in two years and are hairy inside.

Black Oaks - The Important Distinctions (continued)

	North. Red Oak <i>Quercus rubra</i>	Scarlet Oak <i>Quercus coccinea</i>	Black Oak <i>Quercus velutina</i>	Bear Oak <i>Quercus ilicifolia</i>
A C O R N	Size 2 - 4 times longer than cup.	Twice as long as cup.	Twice as long as cup.	Small nearly hemispherical, striped above middle.
	Cup Saucer-like, with scales fused.	Bowl-like, with shiny scales.	Bowl-like, with dull scales.	Shallow.
B U D S	Shape Conical, smooth.	Small, rounded.	Large, decidedly angled.	Small, short, blunt - pointed.
	Color Chestnut brown.	Light brown.	Yellowish - gray.	
	Scales Silky at tip.	Hairy at tip only.	Coated with matted wool-like hairs.	Loose scales.

Black oak group: leaf lobes sharp-tipped, acorns mature in two years and are hairy inside.

White Oak - The Important Distinctions

	White Oak <i>Quercus alba</i>	Bur Oak <i>Quercus macrocarpa</i>	Swamp White Oak <i>Quercus bicolor</i>	Chestnut Oak <i>Quercus prinus</i>
B Texture	Ridges broad, flat, flaky.	Deeply furrowed, flaky.	Deeply fissured; broad, flat ridges, flaky.	Furrowed.
A Color	Light gray.	Grayish.	Grayish - brown.	Reddish brown to dark brown.
R Length	4 - 7 inches.	6 - 12 inches.	4 - 6 inches.	4 - 8 inches.
K Color	Surface - bright green.	Surface - dark green.	Surface - dark green.	Surface - yellow - green.
L Surface	Upper dull.	Upper shiny.	Upper dull.	Upper shiny.
E Shape	Lobes rounded, cleft to midrib.	Violin-shaped; lobes rounded.	Slightly lobed.	Narrowly elliptical; shallow rounded lobes.

White oak group: leaf lobes rounded, acorns mature in one year and lack hairs inside.

White Oak - The Important Distinctions (continued)

	White Oak <i>Quercus alba</i>	Bur Oak <i>Quercus macrocarpa</i>	Swamp White Oak <i>Quercus bicolor</i>	Chestnut Oak <i>Quercus prinus</i>
A	Size	2 - 4 times longer than cup.	3 times as long as cup.	3 times as long as cup.
C				Long and wrinkled.
O	Cup	Short stalked.	Margins slightly fringed with scales, long stalked.	Hairy, moderately long stalked.
R				
N				
B	Shape	Broadly ovoid, blunt pointed.	Roundish, blunt pointed.	Broadly ovoid, sharp pointed.
U				
D	Color	Dark red - brown.	Brown.	Yellowish brown.
S	Scales	Without scales.	Small, without hairs.	Without hairs.

White oak group: leaf lobes rounded, acorns mature in one year and lack hairs inside.

NORTHERN RED OAK

Quercus rubra L.

Northern red oak occurs statewide and is the most common species of oak in Maine. It is found mainly in the southern half of the state. Best growth is attained on rich upland soils.

It grows to a height of 60-80 feet and a diameter of 2-3 feet, forming either a narrow or broad head. The branches are stout, horizontal or upright.

The **bark** on the trunk of old trees is dark gray or nearly black, and is divided into rounded ridges. On younger trees and branches it is smooth and greenish-brown or gray. The inner bark is reddish. The **leaves** vary in shape, are 5-8 inches long, alternate; dull, dark green above, yellow-green below, and have bristle-tipped lobes.



The **flowers** appear in May, while the leaves are only partly grown. The **fruit** ripens the second year. The acorn is broad, large, 1-1 1/4 inches long, and up to 4 times longer than the shallow cup. The inside lining of the acorn is densely hairy. Its tannic acid content makes it bitter. The **twigs** are smooth, greenish- to reddish brown, and have a star-shaped pith.

The **wood** is hard, strong and heavy. It is used for furniture, interior finish, shipbuilding, planks and frames, lobster traps, flooring, implements, piling, cross-ties, timbers, pallets, and dowels.

Q. rubra var. *borealis*

It has a smaller acorn, $\frac{3}{4}$ - 1 inch long, and only three times longer than the cup.

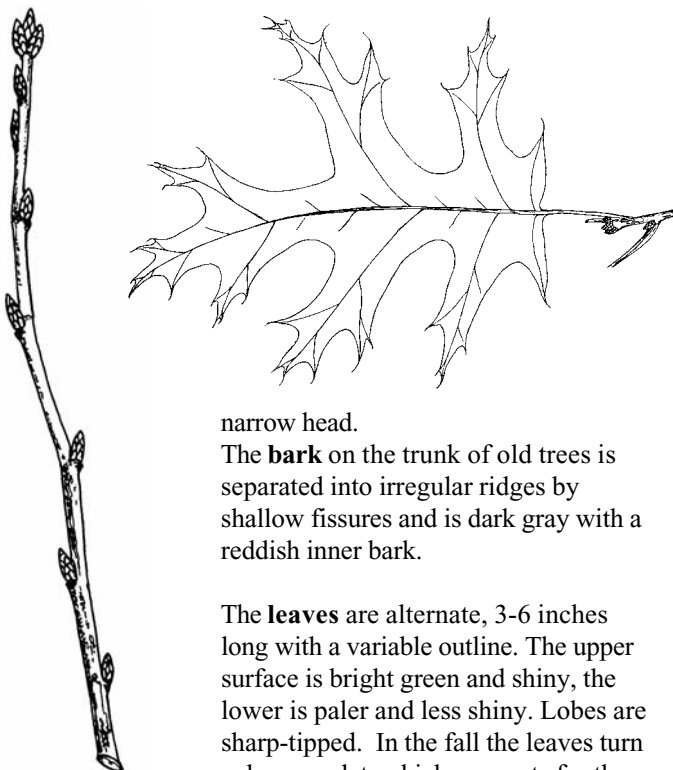


SCARLET OAK

Quercus coccinea Muenchh.

Scarlet oak occurs locally and rarely in the southern tip of Maine. It grows on the dry soil of ridges and uplands in York, Cumberland and Androscoggin Counties.

Scarlet oak in Maine is a smaller sized tree than red oak, growing to a height of 30-50 feet and 1-2 feet in diameter. The branches are slender and form an open,



narrow head.

The **bark** on the trunk of old trees is separated into irregular ridges by shallow fissures and is dark gray with a reddish inner bark.

The **leaves** are alternate, 3-6 inches long with a variable outline. The upper surface is bright green and shiny, the lower is paler and less shiny. Lobes are sharp-tipped. In the fall the leaves turn a deep scarlet, which accounts for the

common name of the tree.

The **flowers** appear in May when the leaves are only partly developed.

The **fruit** ripens the second year. The acorn is about $\frac{1}{2}$ inch long, about twice as long as the cup, and is from $\frac{1}{3}$ - $\frac{1}{2}$ enclosed by the cup. It is quite bitter.

The **wood** is hard, strong, heavy, but coarse grained. It is used to a limited extent for interior finish, shipbuilding, planks and frames, flooring, piling, cross-ties, timbers, pallets, and dowels.

BLACK OAK

Quercus velutina Lam.

Black or yellow oak is found in southern Maine from Lincoln and southern Oxford Counties southward. It grows on dry ridges and gravel uplands. It is common near Fryeburg. The branches are slender and the head is narrow and open. It grows to a height of 50-60 feet and a diameter of 1-2 feet.



The **bark** is smooth and dark gray or brown on young stems. On old trees it is divided by deep fissures into broad, rounded ridges and is dark, almost black. It is rougher than red oak. The inner bark is characteristically bright orange or bright yellow. It is used for tanning.

The **leaves** are alternate, 5-6 inches long, the upper surface glossy, dark green, varying much in shape and general outline, usually 7 lobed with bristle points. Under surface generally hairy with more obvious, rusty hairs in axils of veins. The **flowers** appear in May when the leaves are only partly grown. The bitter **fruit** matures the second season. The acorn is $\frac{1}{2}$ - $\frac{3}{4}$ inch long, almost twice as long as the cup and one-half enclosed by it.

The **twigs** are smooth; buds are densely hairy, angled and yellowish-gray. The **wood** is hard, heavy, strong, and coarse grained. It is used for the same purposes as scarlet oak.

BEAR OAK

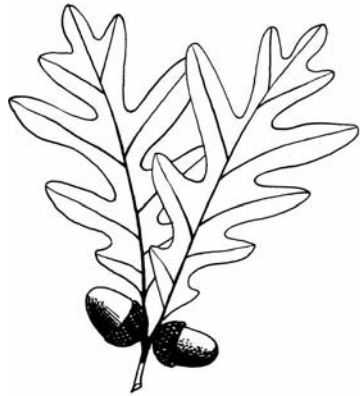
Quercus ilicifolia Wangenh.

Bear or scrub oak is found from Hancock County southward along the coast and in southern Maine. It is a small, shrubby tree, less than 20 feet high. It is common on the sand barrens of southern Maine, eastern Hancock County, and on rocky ridges and barren ledge sites along the coast. Its principal distinguishing feature is leaf shape. The 2nd lobes from the base are much larger than others.

WHITE OAK *Quercus alba* L.

White oak, which gets its name from the color of the bark, occurs naturally in southern and central Maine as far north as Oakland in northern Kennebec County. It is specifically found in coastal Knox County and southern Franklin and Oxford Counties. It grows on sandy land, gravelly ridges, and moist bottom lands, but makes the best growth on rich, heavy, upland soils.

In good situations, height of 60-70 feet and a diameter of 3-4 feet. When not crowded by other trees the bole is short, the limbs are large and diverging, and the head is broad and rounded. In the forest it has a long bole and a narrow head.



The **bark** on the trunk is separated into thin, irregular flakes and varies from light to ashy-gray.

The **leaves** are usually 9 lobed, round-lobed, slightly cleft, or cleft nearly to the mid-rib, alternate, 4-7 inches long, bright green above, pale green or whitish beneath. They sometimes remain on the tree during the winter.

The **flowers** come out in May when the leaves are half grown.

The **fruit** ripens in September of the first year. The acorn is about $\frac{3}{4}$ inch long, from 2-4 times longer than the cup, and about $\frac{1}{4}$ enclosed by it. The fruit is edible. Indians pounded it into a flour and bleached out the tannin with hot water. The **twigs** are gray to purple; buds are blunt pointed and scales are without hairs.

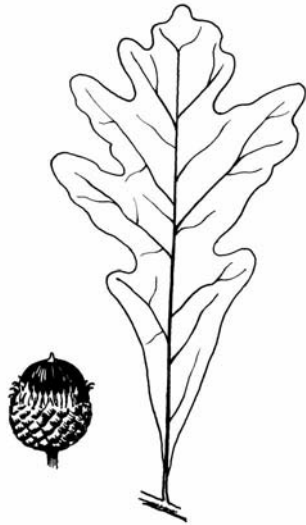
The **wood** is strong, heavy, hard, and durable. It is used for ship and boat building, ties, tight cooperage, posts, poles, piling, agricultural implements, interior finish, furniture, flooring, and in limited quantities for pulp.



BUR OAK

Quercus macrocarpa Michx.

Bur oak is found in the southern two-thirds of the state and is locally plentiful in central Maine. It is quite common along the Sebasticook River, the lower Penobscot basin, and east into Hancock county. It grows in low, rich bottom lands, and is rarely found on dry soil. It has a broad top of wide spreading branches. The trunk is often clear of limbs for $\frac{2}{3}$ or more of its length. It attains a height of 60-70 feet, and a diameter of 2-3 feet. The **bark** is grayish, deeply furrowed, and broken into plate-like irregular scales. The **leaves** are roughly violin-shaped in outline, have rounded lobes, but mostly not as deeply cut as the white oak. The upper end of the leaf is widest. They are alternate, dark green and shiny on the upper surface; the lower, pale green or silvery white. The **flowers** appear in May when the leaves are partly formed. The **fruit** matures the first year and is usually solitary. It varies much in size and shape. The acorn is about $\frac{3}{4}$ inch long, and about $\frac{1}{2}$ enclosed by the cup. The margin of the cup is fringed with long, hairlike scales. The fruit is edible. The **twigs** have corky wings or ridges. The **wood** is very durable, hard, heavy, and strong. It is used for the same purpose as white oak, except for plywood, furniture, flooring and implements.



CHESTNUT OAK

Quercus prinus L.

Chestnut oak only occurs in the southern tip of Maine. It is found on Mt. Agamenticus in the town of York and has been reported from Oxford County. Trees grow 12 inches or more in diameter and about 40 feet in height. The leaves are similar to those of chestnut, narrowly elliptical, with shallow rounded lobes, yellow-green above, hairy below. The large fruit is edible, ellipsoid, and the cup encloses $\frac{1}{2}$ the acorn.

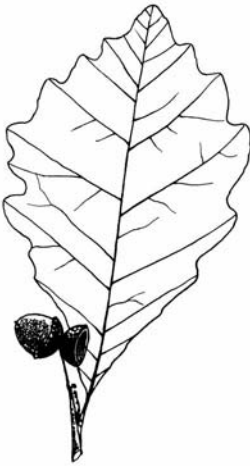
SWAMP WHITE OAK

Quercus bicolor Willd.

Swamp white oak is not abundant, but occurs in small, widely scattered groves in York and Androscoggin Counties. It grows in moist, fertile soil on the borders of swamps and along streams.

Swamp white oak grows to a height of about 50 feet and a diameter of 2-3 feet. The limbs are small, usually pendulous. The head is narrow, open, and round-topped.

The **bark** on old trees is deeply furrowed, divided into broad, flat ridges, flaky, and grayish brown in color. On young trees and branches it is smooth and separates into papery scales which hang loosely.



The **leaves** are alternate, 4-6 inches long, slightly lobed. The upper surface is dark green, shiny. The lower, pale white or tawny.

The **flowers** appear in May when the leaves are not more than half grown.

The **fruit** matures the first season. The acorn has a long stalk, is about one inch long, three times as long as the cup and about $\frac{1}{3}$ enclosed by it.

The **twigs** have a yellowish or a light orange to reddish-brown bark.

The **wood** is strong, heavy and hard and is used for the same purposes as the white oak.

