





HAWTHORN Crataegus spp. L.

awthorn, or thorn-apple, occurs in Maine as a low spreading tree or shrub that rarely reaches a height of more than 15–18 feet. There are approximately 22 different species found in the state. Hawthorns can usually be recognized by the small apple-like fruits and the thorns on the branches. In the past, hawthorns were planted as hedges in place of fencing.

The **bark** is dark brown to ashy gray and somewhat scaly.

The **leaves** are alternate, doubly-toothed, and usually somewhat lobed, thin and dark green.

The **flowers** appear about the first of June in flat, showy white clusters.

The **fruit**, which is $\frac{3}{4}$ inch in diameter, resembles a small apple. The flesh is thin, mealy and encloses 1–5 rounded nutlets. It is used for jellies and bird food.

The **twigs** are slender, rigid and usually armed with long thorns. They form a compact crown due to their zigzag method of growth.



The fruit of the hawthorn is used for jellies and bird food.

The **wood** is heavy, hard and close-grained. It is used to some extent for handles and other small articles.









SERVICEBERRY Amelanchier spp. Medik.



Serviceberry wood is occasionally used for tool handles, small implements and fishing rods.

pproximately seven species of serviceberry or shad bush grow as shrubs or small trees in Maine. Of these, two species—Allegheny serviceberry *Amelanchier laevis* Wieg. and downy serviceberry *Amelanchier arborea* (Michx. f.) Fern.—commonly grow to be small trees 30–40 feet in height and 6 to 8 inches in diameter. Allegheny serviceberry, is the more common of the two. They are both found in open hardwood stands or along the margins of open areas throughout much of the state.

The **bark** of serviceberry is smooth, gray to light violet-brown with darker vertical stripes; older bark is slightly fissured longitudinally and twisted.

The **leaves** of Allegheny serviceberry are half grown at flowering time, and have a reddish or purplish tinge. When downy serviceberry leaves are just unfolding, they are green and densely hairy beneath. Mature leaves of both species are alternate, dark green







Serviceberry buds are long and sharp-pointed; the lateral buds hug the twig.

above and lighter green below, 1½-3 inches long, 1–1½ inches wide, elliptic to ovate with a rounded or heartshaped base.



The **flowers** are white and sweetsmelling with 5 petals. The serviceberry flowers before other trees and is very easy to spot along the edges of fields and streams in spring.

Serviceberry **fruit** is berry-like, ripens in early summer, is ½3–½ inch in diameter, and red to dark purple when mature and edible. Serviceberry **twigs** are slender, red-brown and finely hairy when young, becoming smooth as the twigs grow. The buds are long, sharp pointed, reddish or pinkish, and filled with silky hairs.

The **wood** is occasionally used for tool handles, small implements and fishing rods. It is heavy, hard, strong, close-grained and dark brown tinged with red.







MOUNTAIN ASH Sorbus spp.



Showy mountain ash is usually better balanced in outline than the American mountain ash and has a well-rounded crown.

There are two native species of mountain ash found in Maine: the American mountain ash Sorbus Americana Marsh, also called roundwood, and the showy or Northern mountain ash Sorbus decora (Sarg.) Schneid.

American mountain ash occurs statewide; it is not a true ash, but is closely related to the apple. It rarely reaches over 20 feet in height. It is particularly common in mountainous regions and along the coast. The leaves are alternate, compound 13–17 inches long, tapered, and have 11–17 finely toothed leaflets. The leaflets are 2–4 inches long, 5/8–1 inch wide, and without hairs.

The small creamy-white **flowers** are borne in cymes. The berry-like **fruit** is bright red, and about ½ inch in diameter. These remain on the tree late into the winter; they make good bird





food. In the past, they were sometimes used as an astringent in medicine. The bud scales are hairless and sticky. The pale brown **wood** has little value because it is soft and weak.

Showy mountain ash is most commonly found in northern and western parts of the state. It is usually better balanced in outline than the American mountain ash and has a well-rounded crown. The **leaves** are alternate, compound, and differ from the preceding species in having leaflets which are only 1½–3 inches long, and ½–1½ inches wide. The **fruit** is larger, up to ½ inch in diameter, and matures later in the season. The outer **bud** scales are sticky; the inner scales are hairy.



This photo is of American mountain ash fruit. Showy mountain ash fruit is larger.













SHAGBARK HICKORY Carya ovata (P. Mill.) K. Koch

Shagbark hickory

wood is primarily

used to make pallets.

hagbark hickory is most commonly found in southern Maine on moist but well-drained soil. It has a cylindrical head and a straight, gradually tapering trunk. It reaches a height of 70 feet and a diameter of 2 feet.

The **bark** is light gray on the trunk and separates into long, loose plates, giving it a shaggy appearance.

The **leaves** are compound, alternate, 8–14 inches long; most often there are 5 leaflets, rarely seven. The 3 terminal leaflets are the largest. Leaflet margins are serrate.

The **fruit** has the thick outer husk deeply grooved at the seams. The husk separates along these grooves when ripe. The fruit is globose and is borne singly or in pairs. The edible kernel is sweet. The **twigs** are hairy or smooth and olive-gray to dark red-brown. Pith is star-shaped in cross section. Bud scales are hairy.



The **wood** is very strong, close-grained, heavy, hard, tough and flexible. It was formerly used in the manufacture of agricultural implements, axe and tool handles, carriages and wagons, especially the spokes and rims of the wheels. Its principal uses are now pallets, pulp and firewood.

Shagbark hickory is easily distinguished by its bark, which separates into long, loose plates.





MAINE REGISTER OF BIG TREES 2008

Shagbark Hickory*
Circumference: 116"/133"
Height: 84'/72'
Crown Spread: 60'/58'
Location:
Falmouth/Westbrook
*TIE





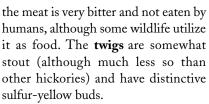


BITTERNUT HICKORY Carya cordiformis (Wangenh.) K. Koch

A lthough common further south, bitternut hickory is rare in Maine, occurring only in the extreme southwestern corner of the state at the southern tip of York County. Bitternut hickory will grow on a variety of sites, but makes its best growth on moist bottomland soils.

The **bark** of young trees is silvery-gray and smooth; older trees have gray bark with tight, shallow, interlacing furrows. The bark remains tightly attached on old trees and does not become shaggy. The **leaves** are 8–10 inches long, alternate, pinnately compound with 7–9 leaflets. The terminal leaflet is similar in size to the adjacent ones.

The **flowers** occur in spring; male flowers are in catkins and female flowers are in a terminal spike. The **fruit** is a nut; it is nearly round and only slightly flattened. It is covered by a thin green husk with 4 small wings descending from a sharp point to the middle. As the name bitternut implies,



The **wood** is hard; further south, it used for making tool handles, furniture, paneling and pallets, as well as for fuel. It is a choice wood for smoking meats. In Maine, due to its rarity, the wood is not used commercially.









BLACK WALNUT Juglans nigra L.

Black walnut is not native to Maine, but is planted occasionally as an ornamental tree. In forested situations in its native range, it can grow to be up to 100 feet tall with a long straight trunk free of branches. In Maine, it is usually planted in the open and exhibits an open-grown form with wide-spreading branches. Black walnut's natural range extends over a large portion of the eastern United States from western Vermont and Massachusetts to southeastern South Dakota, south into Texas and the Florida panhandle.

The **bark** is brown, with furrowed ridges forming a diamond pattern. If the bark is cut with a knife, the cut surface will be dark brown. The leaves are alternate, pinnately compound 12–24 inches long with 10–24 leaflets; a terminal leaflet is often lacking. The **fruit** is round and composed of a nut enclosed in a thick green husk. The **twigs** are stout, light brown, with a chambered pith. The **buds** are large and tan.

The wood is so valuable that, in



some parts of the country, trees have been stolen in the dead of night from front lawns and city parks. It is a rich, dark brown and takes a good polish, making it valuable for furniture, cabinets and gunstocks. Much of the wood harvested today is turned for veneer.

The **nuts** are edible, but must be gathered before the animals harvest them all. Ground nut shells have had numerous uses, including as a carrying agent for insecticidal dusts and for cleaning aircraft engine parts; while the fruit husks have been used to make fabric dye.

MAINE REGISTER OF BIG TREES 2008 Black Walnut

Circumference: 158"

Height: 100'

Crown Spread, 971

Crown Spread: 87'
Location: Limerick







Butternut Juglans cinerea L.



utternut, also known as white walnut, occurs naturally or in cultivation to some extent statewide. It grows on rich, moist soil and on rocky hills, especially along fencerows. It frequently has stout, spreading limbs extending horizontally from the trunk to form a low, broad, rounded head. It grows to 30-40 feet high and a diameter of 1-2 feet. Currently, butternut is under severe threat from butternut canker, Sirococcus clavigignenti-juglandacearum. This fungus was most likely introduced from outside of North America and is now killing butternuts throughout much of Maine.

The **bark** of young trees and of the branches is gray. On old trees, it is broadly ridged on the trunk and light brown.

The **leaves** are compound with a terminal leaflet, alternate, 15–30 inches long, and consist of 11–17 leaflets. The leaflets have serrate margins.

takes a high polish.







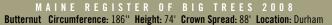
The **fruit** is composed of a nut enclosed by a fleshy husk covered with sticky hairs. It is about $2\frac{1}{2}$ inches long and oval shaped. Fruit is produced in drooping clusters of 3-5. The nut is thick-shelled with sharp ridges on the surface. American Indians used the oil from the nuts to make butter. Brown dye was made from the husk.

The **twigs** are stout, greenish and hairy, with chocolate-brown, chambered pith. The large leaf scars have a conspicuous, buff-colored hairy pad at the top; the buds are also hairy.

The **wood** is coarse-grained, light, soft and weak. It is sometimes used for furniture and cabinetwork and takes a high polish.













HORSECHESTNUT

Aesculus hippocastanum L.

ot related to the native chestnut, the horsechestnut comes from Asia and the Balkan Peninsula and is generally planted as a shade and ornamental tree.

It is symmetrically round or oval in outline with a stiff branch habit. The tips of the branches curve slightly when mature. It has heavy, luxuriant, deep green foliage which changes to bronze in early autumn. The large, opposite leaves with 5-7 leaflets, are arranged palmately on a single stalk; and distinguish it from any of Maine's native trees. With the pyramids of white flowers blossoming in the early spring and the large, bur-like, leathery husk enclosing one or more smooth, mahogany-colored nuts, the horsechestnut is not easily confused with any other species. The nuts are poisonous when ingested. It makes a good shade





tree, but requires rich soil for best development. It is prone to a leaf blight.

The **buds** are large, sticky and nearly black. The **wood** is soft, light and close-grained. In Europe, it is used for carving and veneer. In the past in the U.S., it was burned as firewood.











American Sycamore

Platanus occidentalis L.

There are historic records of American Sycamore occurring along streams and on rich bottom lands in southern Maine. Currently there are no known native populations in the state. However, sycamore is planted here as an ornamental. Farther south and west it grows to be an enormous tree, often 4-6 feet in diameter and 120 feet tall, trees in Maine however do not attain great size.

The **bark** on the trunk and large limbs is greenish-gray and flakes off in broad scales exposing white patches beneath.

The **leaves** are simple, alternate, 3–5 lobed and light green. The base of the leaf-stalk is hollow, swollen and covers the bud.

The **fruit** head generally occurs singly, is round and about 1 inch in

diameter. It contains a large number of small wedge or shoenail-shaped nutlets, and usually remains on the tree until spring.

The **twigs** are zigzag in shape and are encircled by conspicuous stipules. The winter buds have a single, wrinkled, cap-like scale.

The **wood** is hard, firm, very perishable when exposed to the weather, and liable to warp. In the past, it was used for furniture and interior finish of houses.



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American Sycamore Circumference: 160" Height: 105' Crown Spread: 93' Location: Waterford





BLACK TUPELO Nyssa sylvatica Marsh.

While black tupelo wood is

While black tupelo wood is heavy, fine-grained and very tough, it is not durable and is used principally for pulp.

lack tupelo, or blackgum, is found in Sagadahoc, Androscoggin, Cumberland and York counties and as far north as Southern Oxford County and Waterville in Kennebec County. However, it is not commonly found except in very wet areas. Trees 2 feet in diameter are found in the town of Casco on an island in Sebago Lake. Large specimens have also been reported on the south side of Pleasant Mountain in Denmark on a flat, open, wet area. Easily distinguished at a distance by its numerous slender horizontal branches, the tree rarely reaches more than 50 feet in height. It occurs in rich moist soils, such as swamps or borders of rivers. Black tupelo can live to a very old age. Trees over 500 years old have been found in New Hampshire.

The **bark** on young trees is smooth, grayish and flaky, later becoming reddish to grayish-brown. On old trees, it forms coarse blocks or ridges.



The **leaves** are alternate, oval to obovate, 2–5 inches long, wedge-shaped at the base and pointed at the tip. The edges are usually entire. The leaves are dark green, shiny above, occasionally hairy below, and turn bright crimson in autumn.

The **fruit** is dark blue, fleshy, approximately ½ inch in length, and borne in clusters of 1–3 on long, slender stems. The fruit has an acid taste, but is edible.

The **twigs** are moderately stout with a diaphragmed pith.

The **wood** is heavy, fine-grained, very tough but not durable. It was formerly used for the hubs of wheels and soles of shoes. It is now used principally for pulp.









Black tupelo has a characteristic horizontal branching pattern.







BLACK LOCUST Robinia pseudoacacia L.



The locust is a rapid grower, frequently attaining a height of 20 feet in 10 years, but increasing much more slowly thereafter.

lack locust is not a native of this state, but is extensively planted. It is abundant in some localities, and is found mostly near dwellings or on abandoned farmlands, where it often becomes naturalized. The locust is a rapid grower, frequently attaining a height of 20 feet in 10 years, but increasing much more slowly thereafter. It reaches a height of about 50 feet and a diameter of 8-20 inches. The branches are small, brittle, occasionally multi-angled, and at first are armed with stipular spines. The top is narrow and oblong. It is one of the last trees to send out foliage in the spring.

The **bark** on old trees is dark brown, deeply furrowed and broken into small scales.

The **leaves** are alternate, once compound, 8–14 inches long, with 7–19 leaflets that are about 2 inches long with an entire margin and a slightly notched tip.









The **flowers** are borne in loose racemes 4–5 inches long. Showy and very fragrant, they appear in June.

The **fruit** is a smooth, flat, dark purplish-brown pod about 3–4 inches long, containing 1–8 bean-like seeds.

The **wood** is heavy close-grained, strong, and very durable when in contact with the soil. It is used for fence posts, firewood and planking for boats. In the past, it was used to make pegs for use with glass insulators.





The buds of the black locust are almost completely hidden.

MAINE REGISTER OF BIG TREES 2008 Black Locust Circumference: 205" Height: 80' Crown Spread: 66' Location: Belfast







HONEYLOCUST Gleditsia triacanthos L.

Maine, but has been frequently planted in urban areas in the southern and central portions of the state. The trees most commonly planted and those that have escaped cultivation in Maine are a thornless variety, *Gleditsia triacanthos* f. *inermis* (L.) Zabel.

Honeylocust has somewhat pendulous, slender, spreading branches that form an open, broad, flat-topped head. It attains a height of 75 feet and a diameter of 20 inches. Simple or (usually) three-forked spines, 1½–3 inches long or longer, occur on the branches and trunk; but spines are lacking on the commonly planted variety.

The **bark** is divided into long, narrow ridges by deep fissures; and the surface is broken into small scales that are persistent. The **leaves** are alternate, both once and twice compound, 4–8 inches long and have from 18–28 leaflets. The margins of the leaflets are finely blunt-toothed.

The **flowers** are borne in slender clusters 2–2½ inches long. They appear in June when the leaves are about fully-grown. Staminate and pistillate flowers are produced separately on the same tree.

The **fruit** is a shiny, reddishbrown, flattened pod 8 inches or more in length. The pod is curved, with irregular wavy edges, and is often twisted. The walls are thin and tough.

The **twigs** are smooth and distinctly zigzag in shape. Winter buds barely protrude from the leaf scar.

The **wood** is coarse-grained, hard, strong, and very durable in contact with the soil. It is used for firewood and boat decking in Maine. In the past, it was used to manufacture the wooden pegs that glass insulators were screwed onto when glass insulators were used with telegraph, telephone and electrical power lines.

MAINE REGISTER OF BIG TREES 2008

Honeylocust Circumference: 178" Height: 50' Crown Spread: 80' Location: Bath











SASSAFRAS Sassafras albidum (Nutt.) Nees

S assafras occurs in southern Maine in eastern Cumberland, southern Oxford and York counties, and is sometimes planted for ornament. Excellent specimens may be seen in the York Village cemetery.

The **bark** on young stems is thin and reddish-brown. On older stems, it becomes thick and scaly. The inner bark is very fragrant and sometimes chewed.

The **leaves** are alternate, very hairy when they first appear, losing the hair at maturity except on the midrib. They are light green and of 3 shapes: entire, mitten-shaped and three-lobed.

The **flowers** open in early spring with the first leaves, in racemes containing about 10–15 flowers.

The **fruit** ripens in September and October and is a blue, lustrous drupe that is supported on a fleshy, red stalk.

The **twigs** are green in color, smooth and aromatic when broken.

The **wood** is soft, weak, brittle, very aromatic, light brown and very durable in the soil. Historically, the roots and bark were distilled for oil of sassafras, used to perfume toiletries. The oil has been banned from use in foods in the US.





MAINE REGISTER OF BIG TREES 2 0 0 8
Sassafras Circumference: 82" Height: 66' Crown Spread: 21' Location: York





NANNYBERRY Viburnum lentago L.

annyberry occurs statewide as a shrub or small tree reaching a height of 10–30 feet. It frequently is found growing in moist soils, often along the borders of swamps or streams.

The **leaves** are opposite, ovate, abruptly pointed, with fine sharp teeth. The upper surface is a lustrous deep green. The undersurface is lighter. The petiole is conspicuously flanged with a warty, wavy margin.



The dark blue **fruit** ripens in fall. It is about ½ inch long, ellipsoid, edible, sweet, tough-skinned, with a nipple-like tip. The fruit occurs in small drooping clusters on red-stemmed stalks, and does not shrivel or shrink when ripe.

The terminal **buds** are shaped like a pair of rabbit ears and bulge at the base. The 2 large bud scales extend beyond the end of the bud. They are nearly smooth and are purplish-brown to lead-colored. The smooth **twigs** of the season are gray to gray-brown. The **wood** is orange-brown and emits an unpleasant odor.









WITCH-HAZEL Hamamelis virginiana L.

Titch-hazel occurs as a small tree or shrub in most parts of Maine except in the far north. It is found on borders of the forest in low rich soil or on rocky banks of streams.

The bark is gray-brown and somewhat scaly on older stems. The leaves are alternate, broadly obovate, nonsymmetrical at the base, and have a wavy margin.

It has bright yellow flowers with thread-like petals in autumn or early winter. The fruit is a woody capsule, usually two in a cluster. The seeds are discharged fiercely when ripe.

The twigs are gray, zigzag, with gray or rust-colored hair and scalpelshaped buds.

An extract from the bark is mixed with alcohol and used as an astringent.



MAINE REGISTER OF BIG TREES 2008

Witch-hazel Circumference: 18" Height: 32' Crown Spread: 17' Location: Rockport







STAGHORN SUMAC

Rhus hirta (L.) Sudworth

taghorn sumac is a shrub or small tree that grows throughout most of the state. It can grow to about 25 feet tall and about 8 inches in diameter, although it is usually smaller. Occurring mostly on disturbed sites such as road sides and old fields, staghorn sumac sprouts readily from the roots. It often forms thickets that have a characteristic domed-shaped appearance with the tallest stems in the center. Unlike the unrelated poison sumac, staghorn sumac is not poisonous to the touch.

The **bark** is grayish-brown and has numerous lenticels. The **leaves** are 16–24 inches long, alternate, pinnately compound with 11–31 opposite, serrate leaflets. The leaves turn a brilliant red in fall. The **flowers** form in early summer in large, compact, yellow panicles 2–8 inches long. The **fruit** ripens in August as a spire of showy, red, velvety berries that often remain into the

winter. The **twigs** are stout and very hairy. The winter **buds** are not covered by scales.

The **wood** has a greenish cast with dark grain. It is not used commercially except for small specialty items. Because the wood has a chambered pith which can be easily cleaned out, it was used for sap spiles (tubes for collecting sap in a sugarbush).









Mountain Laurel Kalmia latifolia L.

ountain laurel is an erectstemmed low shrub or small tree that grows in rocky woods or on low ground. Mountain laurel occurs rarely in southern and western Maine and is listed as a species of special concern.

The **leaves** are evergreen, green on both sides, elliptical, up to 3 inches long and 1 inch wide. They are flat, thick and leathery with an entire margin, and narrowed at both ends. Arrangement is mostly alternate, grouped at the tip of the twig, sometimes opposite and rarely in threes.

The **flowers** are pink with variations possible. They are borne in erect, terminal clusters.

The **fruit** are globose, woody capsules borne on erect, hairy, sticky stalks that are many times longer than the diameter of the capsules. The capsules have long, persistent styles.

The **twigs** are rounded and sticky at first, but later become smooth.







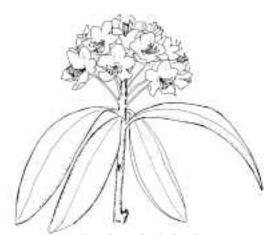
Rosebay Rhododendron

Rhododendron maximum L.

Rosebay rhododendron, or great laurel, is a shrub or straggling tree up to 30 feet high. It is a very rare species found locally in parts of Somerset, Franklin, Cumberland and

York counties in damp woods or near pond margins. It is listed as a threat-ened species in Maine.

The **leaves** are evergreen, ovate to oblong, alternate, entire, 4–8 inches long, thick and leathery, with the margin frequently rolled under. They are smooth and dark green above, pale below. The **flowers** are bell-shaped and occur in dense clusters. They are generally white with a pinkish tinge with other variations possible. The **fruit** is an oblong, woody capsule covered with sticky hairs. It is borne terminally in erect clusters on stalks several times longer than the capsule. The **twigs** are hairy.

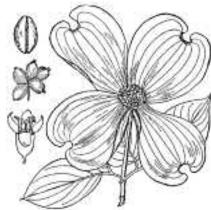


Rosebay rhododendron is listed as a threatened species in Maine.









FLOWERING DOGWOOD Cornus florida L.

I lowering dogwood is an unusually beautiful shrub or small tree and occurs naturally only in York County. Planted specimens generally are only hardy in the southern and coastal areas of the state. Unfortunately flowering dogwood is under serious threat from Dogwood anthracnose *Discula destructive*, a non-native fungal disease.

Flowering dogwood reaches a height of 12–20 feet. The **bark** is gray and smooth on younger stems; on older trees it becomes black and finely blocky, as if broken into small squares. The **leaves** are opposite, entire, ovate to elliptic, bright green and smooth above, pale green with hairs on the veins beneath. They are 3–6 inches long.

The **flowers** are conspicuous and appear early in the spring. They are greenish-white or yellowish and are arranged in dense umbels surrounded

by 4 large, white, petal-like bracts which give the appearance of large spreading flowers. The **fruit** is a bright red, ellipsoid drupe about ½ inch long that occurs in clusters.

The **twigs** are smooth, greenish and angular. The buds are covered by two valve-like scales. The flower buds are large and button-shaped.

The **wood** is hard and close-textured. In the past, it was widely used for the manufacture of shuttles for textile weaving. It is not used commercially in Maine due to its rarity.



MAINE REGISTER OF BIG TREES 2008

Flowering Dogwood Circumference: 35" Height: 37' Crown Spread: 30' Location: Portland







Alternate-leaf Dogwood

Cornus alternifolia L. f.



A lternate-leaf or blue dogwood occurs throughout the state as a shrub or small tree up to 20 feet tall.

The **leaves** are alternate, entire, elliptic-ovate and tend to be crowded at the ends of the twigs. They are $2\frac{1}{2}-4\frac{1}{2}$ inches long, yellowish-green, smooth above and have appressed hairs beneath.

The creamy white **flower** clusters appear in June after the leaves have developed. The **fruit** is a bluish-black drupe, somewhat round, about ½ inch in diameter, that ripens in September and October.

The **twigs** are often lustrous and greenish-brown. Dead twigs become bright yellow-green.







RED OSIER DOGWOOD Cornus sericea L.

Red osier dogwood is an abundant colonial shrub usually less than 10 feet tall. On very rare occasions it



may reach the size of a small tree. It occurs throughout the state. It grows on the edges of fields and streams, and in wet areas. It readily invades fields, where it is considered a pest.

The **leaves** are opposite, entire, lance-shaped to elliptic to ovate, 2–4 inches long and whitened underneath, with 5–7 lateral veins.

The **flowers** are in flat-topped clusters. The **fruit** is white and ½–½ inch in diameter. The **twigs** are bright red to green and minutely hairy. They are used for handles for cemetery baskets. The **buds** lack scales and are densely hairy.



Red osier dogwood has opposite leaves and bright red twigs.