



# The Canopy: Trees





## AMERICAN BASSWOOD/LINDEN *Tilia americana*



- ✿ **Status:** Native
- ✿ **Habitat:** Rich woods, valleys, gentle slopes.
- ✿ **Height:** Up to 100 feet tall.
- ✿ **Bark:** Smooth, gray, ridged when old.
- ✿ **Twigs:** Alternate, stout, zigzag, greenish-gray, smooth or downy.
- ✿ **Buds:** Reddish-brown, ½ inch long, lopsided. No terminal bud.
- ✿ **Leaves:** Alternate, large, up to 8 inches long, sharply toothed. Unequally heart-shaped at base.
- ✿ **Flowers:** 5 cream-colored, fragrant yellow petals. Approximately ½ inch across.
- ✿ **Flowering Period:** Early summer.
- ✿ **Fruit:** Stalked cluster of small, pale green nuts, attached to a leafy wing.

## AMERICAN BEECH *Fagus grandifolia*

- ✿ **Status:** Native
- ✿ **Habitat:** Rich woods, uplands, well-drained lowlands.
- ✿ **Height:** Up to 90 feet tall.
- ✿ **Bark:** Smooth and light blue-gray when young and old.
- ✿ **Twigs:** Alternate, slender, greenish-brown, hairy.
- ✿ **Buds:** Slender, sharp-pointed, approximately ¾ inch long, chestnut brown with overlapping scales.
- ✿ **Leaves:** Alternate, simple, egg-shaped, pointed, with parallel veins terminating in teeth. Shiny, papery-smooth, up to 5 inches long. Dry leaves remain on tree in winter. Yellow in autumn.
- ✿ **Flowers:** Inconspicuous, slender catkins in a rounded head, both sexes occur on the same tree.
- ✿ **Flowering Period:** April through May.
- ✿ **Fruit:** Prickly, 4-valved fruit capsule bearing 2 triangular nuts. Nut is sweet and edible.



## AMERICAN HORNBEAM/ IRONWOOD/BLUE BEECH *Carpinus caroliniana*



- ✿ **Status:** Native
- ✿ **Habitat:** Rich woods, forested wetlands, edges of streams and rivers.
- ✿ **Height:** Up to 40 feet tall.
- ✿ **Bark:** Smooth, gray-green, furrowed, fluted (muscular), wavy.
- ✿ **Twigs:** Slender, dark reddish-brown, shiny and smooth or slightly hairy.
- ✿ **Buds:** Oval, reddish brown, angled, scaly.
- ✿ **Leaves:** Alternate, simple, oblong, sharply and finely doubly-toothed margins, up to 4 inches long and 2 inches wide, entirely smooth above, slightly downy beneath. Orange or scarlet in autumn.
- ✿ **Flowers:** Very small male and female flowers occur in separate spikes. Male catkins 1 inch; female small, appearing with leaves.
- ✿ **Flowering Period:** April through May; before leaf-out.
- ✿ **Fruit:** Nutlet in the axil of a 3-lobed, leaf-like bract, the bracts clustered in a loose, terminal spike up to 2 inches long.

## BLACK BIRCH/SWEET BIRCH *Betula lenta*

- ✿ **Status:** Native
- ✿ **Habitat:** Rich woods.
- ✿ **Height:** Up to 60 feet tall.
- ✿ **Bark:** Smooth, dark brown. Long horizontal lenticels resembling cherry. Older trees with very dark thick plates.
- ✿ **Twigs:** Smooth, slender, light reddish-brown with very fine horizontal lines. Smells and tastes of wintergreen.
- ✿ **Buds:** Sharp, reddish brown, long terminal bud absent on long shoots. Bud scales downy on margins.
- ✿ **Leaves:** Alternate, simple, heart-shaped, sharply double- or single-toothed, smooth above with tufts of white hair on the veins beneath, dull, dark green. Wintergreen odor and taste.
- ✿ **Flower:** Male and female flowers occur in separate catkins on the same tree; male catkins present during the winter.
- ✿ **Flowering Period:** April through May.
- ✿ **Fruit:** Catkins cylindrical, short, scales smooth.



## BLACK CHERRY *Prunus serotina*



- ✿ **Status:** Native
- ✿ **Habitat:** Rich woods, on many sites.
- ✿ **Height:** Up to 60 feet tall.
- ✿ **Bark:** Dark reddish-brown, smooth, with narrow, horizontal lenticels on young trees, becoming roughened and scaly on older trees. Resembles black birch.
- ✿ **Twigs:** Slender, reddish-brown, often gray and peeling. Rancid odor and taste. Often with black knot swellings on branches, with narrow, lenticels.
- ✿ **Buds:** Bright, light reddish-brown, 4 scales appear as none. Terminal bud larger than laterals.
- ✿ **Leaves:** Alternate, simple, elliptic. Smooth and shiny above, finely-toothed turning inward. Brown wool on 1/3 of midrib beneath. Yellow to brown in autumn.
- ✿ **Flower:** White, 5-petalled elongated clusters appearing when leaves are ½ grown, in clusters at the ends of twigs, up to 4 inches long.
- ✿ **Flowering Period:** April through May.
- ✿ **Fruit:** Edible cherries, dark reddish-purple, becoming black with small stone. Appearing June-October.

## BOX ELDER/ASH-LEAVED MAPLE *Acer negundo*

- ✿ **Status:** Native
- ✿ **Habitat:** Forested wetlands, lowlands, floodplains.
- ✿ **Height:** Up to 40 feet tall.
- ✿ **Bark:** Thin, grayish to light-brown, with furrowed narrow ridges similar to Norway maple.
- ✿ **Twigs:** Stout, green to purplish-green, brightly colored, often red. Covered with whitish bloom the first year, which readily rubs off.
- ✿ **Buds:** Short-stalked, reddish, usually wooly or downy, whitish, densely hairy.
- ✿ **Leaves:** Opposite, compound, palm-like with 3-5 veiny leaflets up to 5 inches long, on short stalks. Very variable in shape, sharp margins with coarse teeth. Light green above, pale green and hairy along veins beneath. Stalk swollen at base.
- ✿ **Flower:** Small, yellowish to greenish. Male and female flowers occur in drooping clusters on separate trees, appearing slightly before leaf-out.
- ✿ **Flowering Period:** April through May; at or before leaf-out.
- ✿ **Fruit:** A typical flattened, v-shaped, winged samara.



## EASTERN COTTONWOOD

### *Populus deltoides*



- ✿ **Status:** Native
- ✿ **Habitat:** Floodplains, streambanks, valleys.
- ✿ **Height:** Up to 100 feet tall.
- ✿ **Bark:** Greenish-yellow on young trees, gray and furrowed on older trees.
- ✿ **Twigs:** Smooth, yellow-brown, moderately stout.
- ✿ **Buds:** Brown, shiny, approximately ½ to 1 inch long, 6-7 scales, heavy, sticky, fragrant, yellow resin inside.
- ✿ **Leaves:** Alternate, simple, large, triangular, coarse rounded teeth, up to 6 inches long and often nearly as wide. Dark green and shiny above, lighter beneath with veins prominent on both surfaces. Stems flattened at base of leaves. Leaves from sprouts very large. Yellow in autumn.
- ✿ **Flower:** Drooping, loosely grouped catkins. Male and female flowers occur in drooping spikes on separate trees. Before the leaves unfold, the male crowded into rather thick, reddish spikes, the female crowded into narrower, greenish yellow spikes.
- ✿ **Flowering Period:** April through May.
- ✿ **Fruit:** Short-stalked capsule with 4 partitions, approximately ¼ inch long.

## EASTERN HEMLOCK

### *Tsuga canadensis*

- ✿ **Status:** Native
- ✿ **Habitat:** Rich woods, ravines, forested wetlands.
- ✿ **Height:** Up to 100 feet tall.
- ✿ **Bark:** Cinnamon-red to gray, tinged with purple, narrow ridges.
- ✿ **Twigs:** Alternate, yellow to grayish brown, very hairy, flattened.
- ✿ **Buds:** Approximately ½ to ¾ inch wide, oval, chestnut brown, hairy scales.
- ✿ **Needles:** Narrow, approximately ½ inch long. Short, shiny dark-green above, tapering, whitish-green with 2 white lines beneath, appearing as a broad stripe. Stalked at base, persistent comb-like arrangement on twig.
- ✿ **Fruit:** Small oval cones, ½ to ¾ inch long on slender stalks. Cone scales as wide as long. Male cones are small structures in clusters in leaf axils and do not persist. Female cones have brown scales, are at twig ends, and persist.





## EASTERN WHITE PINE *Pinus strobus*

- 🌲 **Status:** Native
- 🌲 **Habitat:** Forested wetlands, bogs, ravines, cool shady north slopes.
- 🌲 **Height:** Up to 120 feet tall.
- 🌲 **Bark:** Smooth, thin, greenish when young, becoming dark brown, deeply-furrowed, and blocky when older.
- 🌲 **Twigs:** Smooth, slender, green or light yellowish-green, resinous.
- 🌲 **Buds:** Sharp-pointed, yellowish-brown.
- 🌲 **Leaves:** In clusters of 5 (the only five-needled pine in the East), soft, slender, bluish-green. Retained to end of the second growing season. 3 year needles yellow in October. 2-5 inches long.
- 🌲 **Fruit:** Large, tapering, cylindrical cones, falling when ripe (August-September). Require two seasons to mature. 4 to 8 inches long.

## GREEN ASH *Fraxinus pennsylvanica*

- 🌲 **Status:** Native
- 🌲 **Habitat:** Forested wetlands, floodplains, streambanks.
- 🌲 **Height:** Up to 80 feet tall.
- 🌲 **Bark:** Young twigs gray, thin, hairless. Older stems gray with shallow grooves, ridges, and furrows.
- 🌲 **Twigs:** Stout, gray, terminal bud present, conical; the first pair of lateral buds placed some distance below the terminal.
- 🌲 **Leaves:** Opposite, pinnately-compound with 5-9 (usually 7) leaflets. Shiny green on top, occasionally hairy on bottom with saw-toothed margins. Bright yellow in autumn.
- 🌲 **Flower:** Inconspicuous, small cluster of greenish, petal-free, stalked flowers with male and female flowers occur on separate trees.
- 🌲 **Flowering Period:** April to June; as leaves emerge.
- 🌲 **Fruit:** Samara with a broad wing and indistinct seed portion.



## RED MAPLE *Acer rubrum*



- ✿ **Status:** Native
- ✿ **Habitat:** Forested wetlands, rich woods, edges of lakes, ponds, streams, and rivers.
- ✿ **Height:** Up to 75 feet tall.
- ✿ **Bark:** Smooth, gray, often satiny on young trees becoming darker, scaly, rough, separating and forming long scales, often up-curling in older trees.
- ✿ **Twigs:** Current years growth red. Older twigs light gray, smooth.
- ✿ **Buds:** Sharp, dark red, with prominent overlapping scales.
- ✿ **Leaves:** Opposite, simple, usually 3-lobed (sometimes 5) with sharp angles between lobes, and with sharp irregular teeth. Dark green above, gray-green beneath, approximately 3-4 inches long. Yellow or scarlet in autumn.
- ✿ **Flower:** Red or yellow with petals appearing long before the leaves emerge. Male and female flowers occur on separate trees.
- ✿ **Flowering Period:** March through May, before leaf-buds open.
- ✿ **Fruit:** A double-winged, v-shaped red samara, up to 1 inch long. Matures in late spring, falls and germinates at once.

## RED OAK *Quercus rubra*

- ✿ **Status:** Native
- ✿ **Habitat:** Bottomlands, moist slopes.
- ✿ **Height:** Up to 90 feet tall.
- ✿ **Bark:** Smooth, greenish-brown on young stems, becoming broken into ridges, reddish-brown, hard, with deep furrows when older. Inner bark reddish.
- ✿ **Twigs:** Alternate, strongly ridged or fluted. Reddish brown or black, smooth.
- ✿ **Buds:** Smooth, brown, blunt-pointed, in clusters at ends of twigs. Larger than other oaks except black. ¼ inch long, rounded on the sides. Terminal buds have slight rusty hairs.
- ✿ **Leaves:** Spikes on tips of lobes. Mostly 3 pairs, V-shaped space between lobes (typically 7-11), triangular in outline, smooth on both sides.
- ✿ **Flower:** Long spreading strings.
- ✿ **Fruit:** Acorn maturing in second year. Cup embracing 1/3 to ½ the acorn. Oval to cylindrical, short, shallow. Acorns, large, bitter, inedible, insides pale yellow.



## SHAGBARK HICKORY

### *Carya ovata*



- ✿ **Status:** Native
- ✿ **Habitat:** Rich woods, valleys, upland slopes.
- ✿ **Height:** Up to 100 feet tall.
- ✿ **Bark:** Smooth when young, splitting into long plates that curve outward, free at both ends when older.
- ✿ **Twigs:** Reddish-brown, very stout, tough and hard to break. Solid pith.
- ✿ **Buds:** Dark brown, long-pointed, approximately ½ inch or more wide. Scales remaining over winter.
- ✿ **Leaves:** Alternate, compound, 4-6 inches long, 5 (rarely 7) leaflets, with the 3 upper leaflets much larger and longer than the lower terminal leaflet. Slightly toothed, with a tuft of hair on each tooth.
- ✿ **Flower:** Male and female flowers occur on same tree. Male flowers are 3-branched catkins, female flowers are in short spikes.
- ✿ **Flowering Period:** Early spring; before leaf-out.
- ✿ **Fruit:** Thick globe-like husks split away when ripe. Nut with 4 angles, whitish brown shell, thick, sweet kernel.

## SILVER MAPLE

### *Acer saccharinum*

- ✿ **Status:** Native
- ✿ **Habitat:** Forested wetlands, floodplains, edges of streams and rivers.
- ✿ **Height:** Up to 80 feet tall.
- ✿ **Bark:** Smooth, gray (like beech) in young trees breaking into long thin scaly plates, curving away at ends when older.
- ✿ **Twigs:** V-shaped, point upward at tip, drooping. Orange-brown to red. Bad odor when bruised.
- ✿ **Buds:** Terminal bud small, blunt, red.
- ✿ **Leaves:** Opposite, simple, approximately 5 inches wide. Deeply cleft, 5-lobed, sharply toothed. Green above, silver-white beneath. Very silvery under water. Downy beneath when young. Pale yellow in autumn.
- ✿ **Flower:** Small, red or greenish yellow. No petals, occurring long before the leaves. Some trees have only male flowers.
- ✿ **Flowering Period:** February through May; before leaf-out.
- ✿ **Fruit:** Occurring in late spring. The seed germinates at once; flattened, winged fruit, the largest of the native maples, up to 2 inches long.



## SWAMP WHITE OAK *Quercus bicolor*



- ✿ **Status:** Native
- ✿ **Habitat:** Forested wetlands, floodplains, edges of streams and rivers.
- ✿ **Height:** Up to 70 feet tall.
- ✿ **Bark:** Flaky, light grayish-brown peeling in ragged papery scales. Furrowed at base of tree in long, flat, scaly ridges.
- ✿ **Twigs:** Slender to stout, straw-brown to yellow-green. Bark peels from twig (only oak where this occurs).
- ✿ **Buds:** Small, round, terminal buds orange-brown, blunt-pointed, smooth. Lateral buds small and crowded.
- ✿ **Leaves:** Alternate, simple, oval, light-green above with hairs beneath, widest above the middle, strongly tapered toward the wedge-shaped base. Margin shallowly lobed. Yellow or brown in autumn.
- ✿ **Flower:** Male and female flowers occur separately on the same tree, the male in catkins the female in short spikes.
- ✿ **Fruit:** Oval, light-brown nut approximately 1 inch long, enclosed for about ½ its length by a cap. Occurring singly or often in pairs at the end of a short stalk. Some of the cups usually persist in winter.

## SYCAMORE/PLANETREE/BUTTONBALL *Platanus occidentalis*

- ✿ **Status:** Native
- ✿ **Habitat:** Floodplains, edges of streams and rivers.
- ✿ **Height:** Up to 100 feet tall.
- ✿ **Bark:** Creamy white on young branches, turning red-brown-gray, then breaking in large thin plates exposing whitish inner bark, giving a white-washed appearance.
- ✿ **Twigs:** Slender, smooth, yellow-brown, slightly zigzag, swollen at joints.
- ✿ **Buds:** No terminal bud. Lateral buds long, conical, resinous, shiny, dark, red-brown, covered by a single cap-like scale. Pointing outward, enclosed by bases of leaf stalks until the leaves fall.
- ✿ **Leaves:** Alternate, simple, large, with 3-5 pointed lobes, maple-like, pubescent beneath when young, with long pointed teeth.
- ✿ **Flower:** Small, inconspicuous. Male and female flowers occur separately in round heads on the same tree.
- ✿ **Flowering Period:** April through June.
- ✿ **Fruit:** Large round balls approximately ¼ inch long and 1 inch wide, with bristly hairs at base, containing many seeds. Occurring singly on long stalks. Remains on tree until spring.



## TAMARACH/LARCH

### *Larix laricina*



- ✿ **Status:** Native
- ✿ **Habitat:** Bogs, forested wetlands, wet peaty soils.
- ✿ **Height:** Up to 80 feet tall.
- ✿ **Bark:** Thin, reddish brown, scaly. Young branches grayish or pale orange-brown.
- ✿ **Twigs:** Smooth, brownish, many leaf scars.
- ✿ **Buds:** Dark reddish-brown, round, resinous.
- ✿ **Leaves:** Deciduous needles, pale blueish-green, approximately 1 inch long, flexible, triangular. Yellow in autumn before dropping off.
- ✿ **Flower:** Occur separately as small cones on the same tree. Male flowers are yellow. Female flowers are rose red; both appearing in March through April.
- ✿ **Fruit:** Small oval cones  $\frac{1}{2}$  to  $\frac{3}{4}$  inch wide with 20 scales. Cone scales concave, smooth, often shining, longer than broad, chestnut brown, smooth on the outside.

## WHITE ASH

### *Fraxinus americana*

- ✿ **Status:** Native
- ✿ **Habitat:** Rich woods, valleys, slopes, forested wetlands, floodplains, edges of streams and rivers.
- ✿ **Height:** Up to 100 feet tall.
- ✿ **Bark:** Light or dark gray. Smooth when young, grooved when older. Longitudinal ridges forming diamond-shaped patterns, separated by narrow interlacing ridges.
- ✿ **Twigs:** Opposite, light greenish-brown with small white lenticles and a slight bloom. Solid pith.
- ✿ **Buds:** Rounded, rusty to dark-brown, rough, hairy. First pair of lateral buds at the same level, directly below the terminal.
- ✿ **Leaves:** Opposite, pinnately compound, stalked, oval to lanceolate, 8 to 12 inches long with 5 to 9 leaflets (mostly 7). Smooth or slightly wavy-toothed. Yellowish to maroon in the autumn.
- ✿ **Flowers:** Small, inconspicuous, male and female flowers occur on separate trees, appearing with the leaves. Purplish, in crowded clusters.
- ✿ **Flowering Period:** April through May; before leaf-out.
- ✿ **Fruit:** Cylindrical, light-brown, enclosing a seed and a flattened, elongated wing, 2-3 times long as the body. 1-2 inches wide, in drooping clusters.



## WHITE OAK *Quercus alba*



- ✿ **Status:** Native
- ✿ **Habitat:** Rich woods, adjacent slopes, edges of streams and rivers.
- ✿ **Height:** Up to 90 feet tall.
- ✿ **Bark:** Gray, thin on young trees and flaky, irregularly-plated or grooved when older.
- ✿ **Twigs:** Purplish-gray to greenish-red, moderately stout, smooth.
- ✿ **Buds:** Blunt, smooth, brownish at tips of twigs in clusters.
- ✿ **Leaves:** Alternate, simple, 4-10 prominent rounded lobes variable in depth. Reddish to violet in autumn. Brown dead leaves remain on tree in winter.
- ✿ **Flowers:** Both sexes occur on the same tree. Male flowers in clusters of hanging beads. Female flowers are few, in angles of new leaves. Greenish, yellowish, or reddish.
- ✿ **Fruit:** Maturing in one season. Acorn cup with wart-like scales. Cup shorter than nut. Sweet and edible.

## WHITE SPRUCE *Picea glauca*

- ✿ **Status:** Native
- ✿ **Habitat:** Rich woods, adjacent slopes, edges of streams and rivers.
- ✿ **Height:** Up to 70 feet tall.
- ✿ **Bark:** Thin, scaly, grayish-brown, silvery on freshly exposed areas.
- ✿ **Twigs:** Pale gray to yellow-brown, no hairs or fuzz.
- ✿ **Buds:** Oval, ragged, brown, smooth.
- ✿ **Leaves:** ½ to 1 inch, blueish-green, slight-bloom, pungent odor when crushed, sharp line of white dots in each groove. Tendency to mass toward the upper side of the twig.
- ✿ **Flowers:** Occur separately as small cones on the same tree. Male flowers are yellowish red. Female flowers are greenish red/purplish.
- ✿ **Cone:** Cylindrical, 2 inches long. Immature cones have thin scales, and are soft and flexible. Mature cones are light chestnut brown.



# YELLOW BIRCH

## *Betula lenta*



- ✿ **Status:** Native
- ✿ **Habitat:** Forested wetlands, floodplains, ravines, cool, rich woods of higher elevations.
- ✿ **Height:** Up to 100 feet tall.
- ✿ **Bark:** Peeling in thin ribbon-like strips when young that roll back in curls. Shiny yellow or silvery gray, rough and platy when older.
- ✿ **Twigs:** Stout, bronze or bright-brown, shiny. Smooth or sparsely hairy. Wintergreen odor and taste.
- ✿ **Buds:** Sharp, reddish-brown, oppressed, terminal bud absent, oval, with chestnut-brown scales.
- ✿ **Leaves:** Alternate, simple, long, oval, sharply double-toothed. Dull and dark-green above, lighter beneath with slight hairs in veins, base rounded to near heart-shaped, up to 5 inches long.
- ✿ **Flower:** Male and female flowers in separate catkins on the same tree. Male catkins present in winter. Male flowers are yellow, small, narrow in a drooping catkin at branch tips. Female flowers are green and in broader upright catkins placed back from the tip that matures into a brown cone.
- ✿ **Flowering Period:** April through May.
- ✿ **Fruit:** Catkins rounded, round, scales somewhat hairy, erect on twig,  $\frac{3}{4}$  inch long, persist into winter.