

A photograph of a forest path covered in fallen leaves, with several large tree trunks and a wooden fence in the background. The text "Pennypack Trust Arboretum" is overlaid in white.

Pennypack Trust Arboretum

Index of Tree Species

Select the tree common name to quick-navigate to its page.

[American Beech](#)

[American Holly](#)

[Northern Spicebush](#)

[Bitternut Hickory](#)

[Shagbark Hickory](#)

[Black Gum/Black Tupelo](#)

[American Basswood/Linden](#)

[Eastern White Pine](#)

[Norway Spruce](#)

[Flowering Dogwood](#)

[Sassafras](#)

[Black Cherry](#)

[Eastern Redbud](#)

[Hackberry](#)

[Tulip poplar](#)

[White Oak](#)

[Red Oak](#)

[Box Elder](#)

[Common/Downy Serviceberry](#)

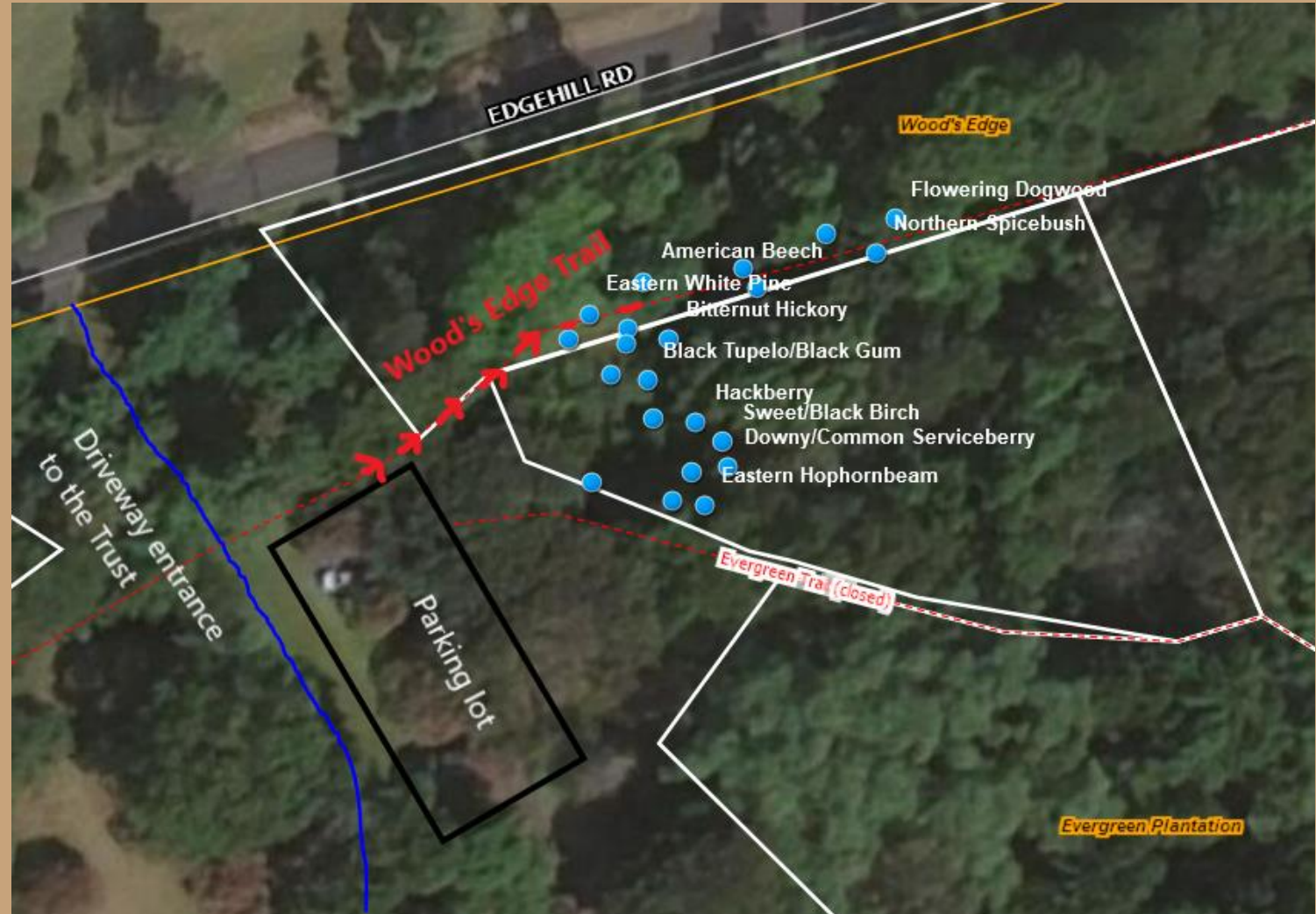
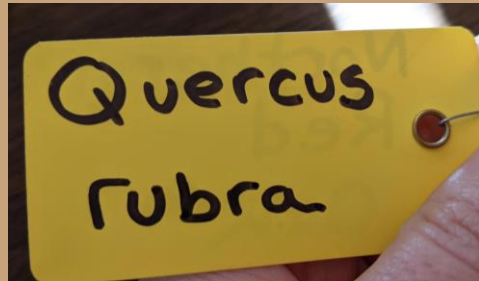
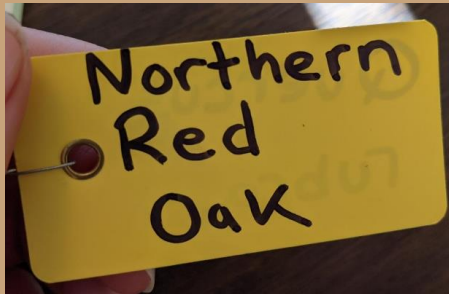
[Sweet/Black Birch](#)

[American Hophornbeam](#)

Explore the ReForester Arboretum

- **How do I find the Arboretum?**

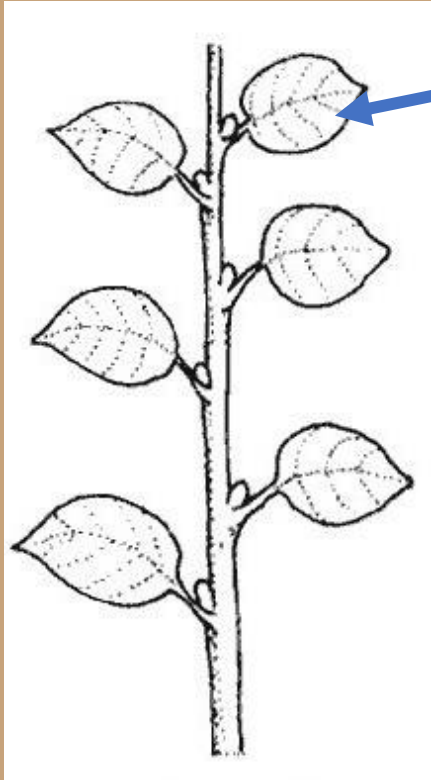
Next to the Edge Hill Rd parking lot, enter the Wood's Edge trail and navigate to each live tree specimen, which will be marked with blue flagging and a yellow name tag. For the most accurate navigation, open a draft of ReForester Survey123 form and use the map function to locate each of the blue specimen points.





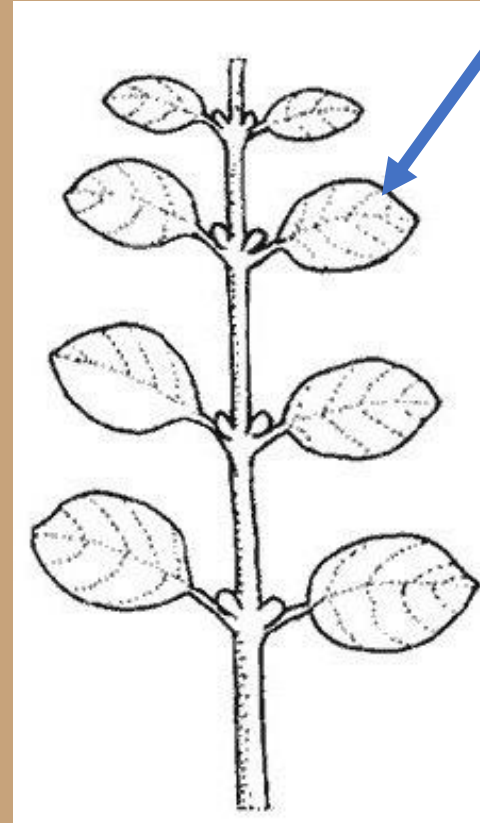
Bud/Leaf arrangement

Each is
One Leaf



Alternate

Most common for families and genera



Opposite

Less common. Maples, ashes, most dogwoods

Compound leaves

Leaflet



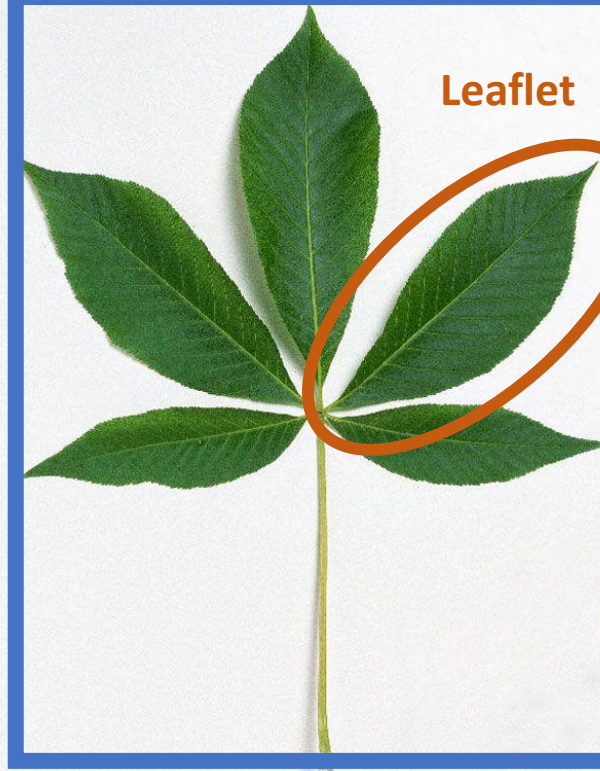
Pinnately Compound

Leaf is split into leaflets that are opposite each other like a feather

One Leaf



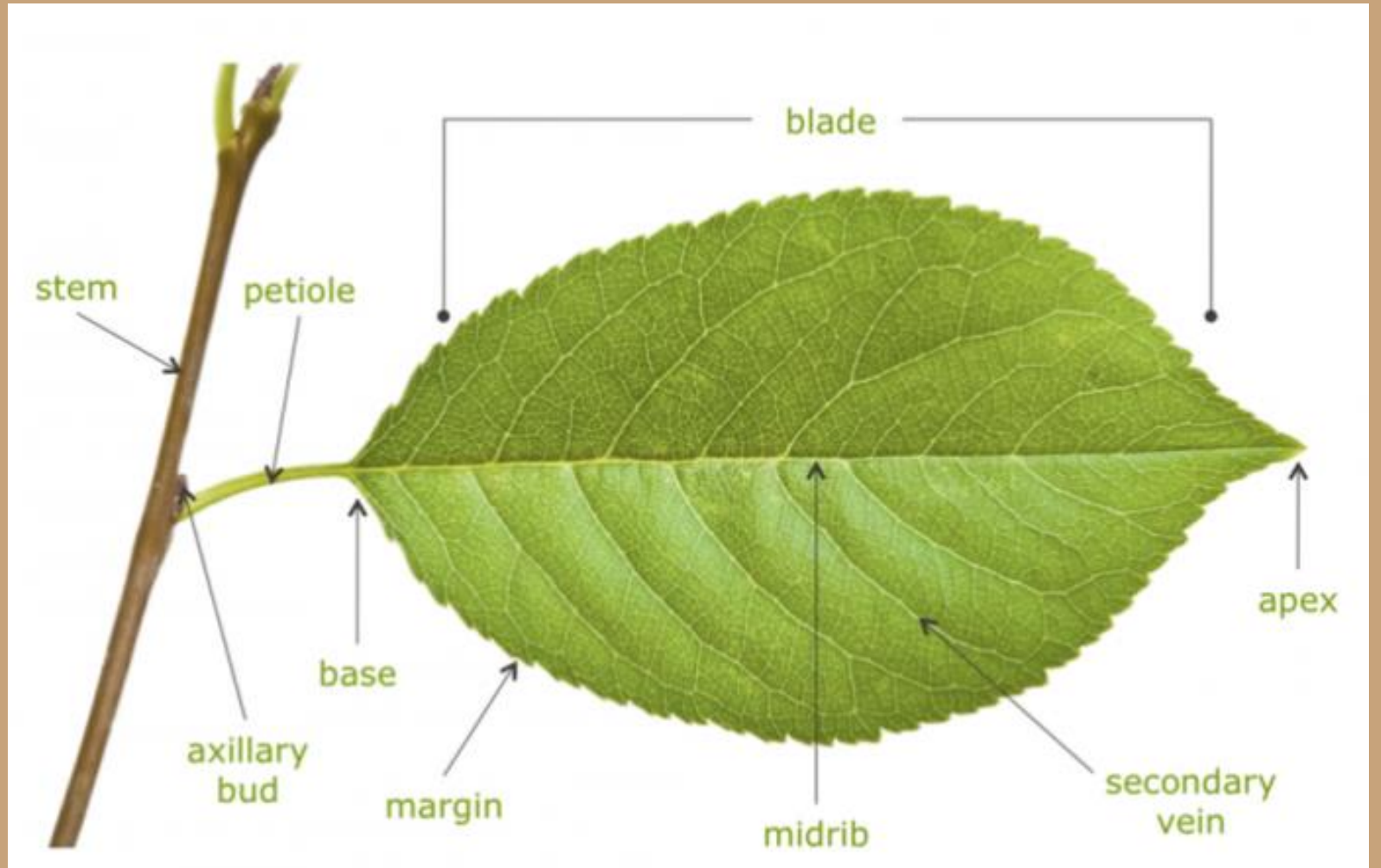
Leaflet



Palmately Compound

Leaf is split into leaflets that are radially arranged coming from one point, like a hand

Tree Anatomy



Buds



Imbricate

(overlapping scales)



Valvate

(scales form a clam shell)



Naked

(no scales)

American Beech

(*Fagus grandifolia*) Family: FAGACEAE

Buds: Sharply pointed, light brown with visible scales on the twig in a zig-zag pattern.

Leaves: Alternately arranged. Simple, elliptical shape, toothed margin and distinct parallel veins. Bright green on top, duller green below. Leaves turn yellow in Fall. Dried brown leaves often persist on trees throughout winter.

Bark: Very smooth, gray, even when tree is older.

Fruit: Light brown, with a spiky husk.



American Holly

(*Ilex opaca*) Family: AQUIFOLIACEAE

Evergreen tree. Slow-growing from a single trunk.

Leaves: Alternate, simple, rigid feel, elliptical shape. Apex (tip) has a spine. Leaf margins usually toothed with spines at the tip. Upper part of the leaf shiny dark green, underside is a duller light green.

Bark: Smooth, light gray color.

Flowers/Fruit: Whitish green flowers growing in a cyme. Shiny, red berries growing in clusters along branches.



Northern Spicebush

(*Lindera benzoin*) Family: LAURACEAE

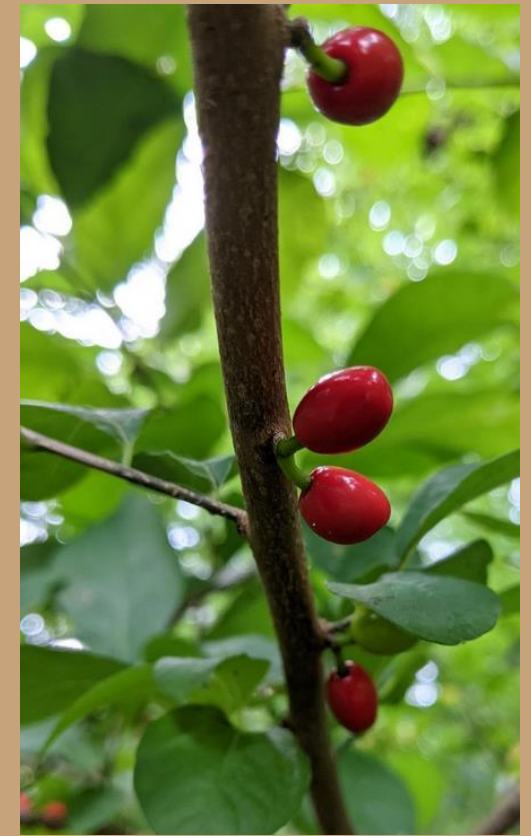
A native deciduous shrub with a maximum height of 5m (15 ft). Very abundant at Pennypack Trust in the lower shrub layer of the forest. Twig and leaves produce a **strong, spicy scent** when crushed.

Buds: Small, and round. Alternately arranged. They look like little green peppercorns.

Leaves: Alternate, simple leaves with a smooth margin. Elliptical shape, narrower at the base and growing wider towards the tip, which tapers to a point. Yellow autumn foliage.

Twigs/Bark: Gray-brown color with raised white lenticels. One Reforester shared they look like salted pretzels.

Flowers/Fruit: Small, yellow, growing in clusters in Spring before leaf out. Fruit is a bright red drupe appearing in Autumn.



Bitternut Hickory

(*Carya cordiformis*) Family: JUGLANDACEAE

Native tree. Look for the yellow "candle flame" buds and silvery trunk/branch color on young trees.

Buds: Valvate (clam-shaped), bright sulfur yellow color, looks like a candle flame.

Leaves: Alternate, pinnately compound with either 7 or 9 leaflets. Dark green above and paler green below. Pointed leaf tip and toothed margins.

Bark: Gray/gray-brown (sometimes with yellow tinge). Smooth or fine furrows that often interlace.

Fruit: Round nut enclosed in a thick, green scaly husk about the size of a ping-pong ball. Husk ridges raised. Autumn.



Shagbark Hickory

(*Carya ovata*) Family: JUGLANDACEAE

Native deciduous tree.

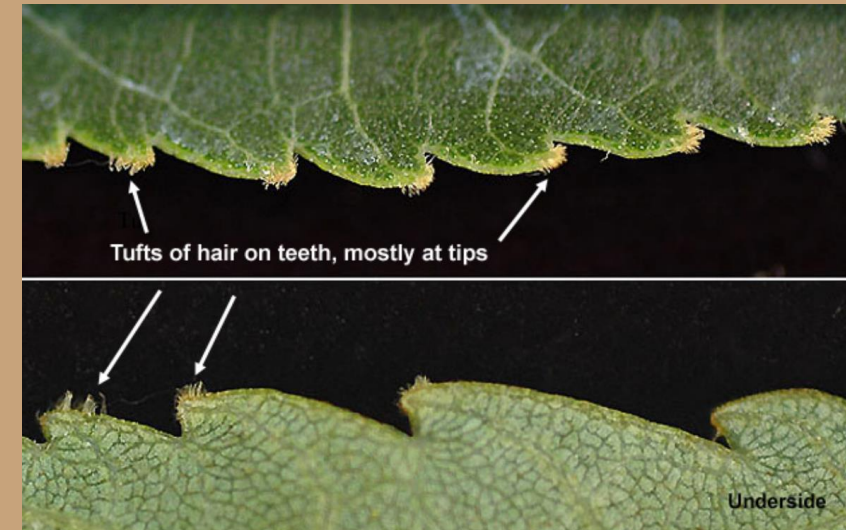
Buds: Terminal bud conspicuously large with dense tan hairs. Distinct three lobed leaf scar. *Terminal bud outer scales persistent.*

Leaves: Alternate, pinnately compound leaves. Leaves elliptical in shape, with serrated margins and a gradually tapering tip. Usually 5 leaflets (sometimes 7) with the terminal leaflet distinctly larger. Look for tufts of thin *hairs on the leaf margin teeth* to differentiate from other hickories. No hair on the underside of the leaf.

Twigs: Stout, brown with white lenticels (giving it a salted pretzel appearance).

Bark: Initially smooth and gray when young. Becoming dark gray and separating into "shaggy" plates with age.

Fruit: Thick, green woody hull containing an egg-shaped kernel. Autumn.



Black Tupelo/Black Gum

(*Nyssa sylvatica*) Family: ACANTHACEAE

Native. Deciduous tree up to 60ft in height.

Leaves: Alternate (sometimes appears whorled). Glossy, dark green leaves with abruptly pointed tips. Short, stubby buds on tan-colored twigs. Look for half round (crescent moon) bud scar under buds.

Fruit: Dark purple berries in Summer.



American Basswood/Linden

(*Tilia americana*) Family: MALVACEAE

Small deciduous tree. Native.

Buds: Often distinctly red (sometimes more chestnut brown or green) with one or two scales. Alternately arranged on twig. Plump shape and asymmetrically attached to the twig (see photo).

Leaves: Alternate, simple. Large leaf with small serrations along the margin. Leaf tip abruptly narrows. Leaf base either heart-shaped or square. Dark green above and pale green below. 3-5 veins arising from the base of the leaf.



Bark: Gray-brown, with flattened furrows.

Flowers: Light yellow, drooping in clusters. Spring.



Black Cherry

(*Prunus serotina*) Family: ROSACEAE

Native tree, 45-120 ft tall. Young twigs often have a bitter almond aroma when scratched.

Buds: Hairy terminal bud. Buds are bluntly pointed and reddish green in color occurring on slender twigs that are reddish brown in color with a silvery flush.

Leaves: Alternate, simple, oval shaped. Waxy texture on top, paler green underneath. Leaf margin slightly toothed, curved inward. Pinkish stems and stipules where the leaves meet the twigs. Leaves become yellow or pale orange in the Fall.

Bark: Shiny smooth purple-gray bark with distinct white lenticels (white "pores" for gas exchange). Bark becoming less smooth and shiny with age and lenticels become more subtle, horizontal lines

Flowers/Fruit: White flowers on a raceme occurring in mid-Spring. Maturing into red, juicy drupes with a stone seed (like little cherries) that mature into a black-purple color in late Summer-early Fall.



Eastern White Pine

(*Pinus strobus*) Family: PINACEAE

Evergreen conifer (up to 160ft tall), the only native pine in North America with *five needles per bundle*. Sweet pine scent when needles are crushed.

Needles: Arranged in bundles (fascicles) of five. Long and pliable. Turning orange when dropped, often covering the ground underneath the tree in a thick mat of dried needles.

Twigs/Bark: Twigs are often sticky to the touch with sap. Red-brown color, slender and smooth. Bark is a gray brown color developing deep furrows with purple-colored scaly plates.

Cones: Pale brown hanging downwards, 3 to 7 inches long. Ellipsoid shape, not globular. Seeds winged.



Norway Spruce

(*Picea abies*) Family: PINACEAE

The tree branches angle downwards, giving the tree a droopy appearance.

Needles: Dark green, blunt tipped.

Twigs: Orange brown, minimal flaking.

Bark: Reddish-brown, becoming grayer and more cracked with age.



Flowering Dogwood

(*Cornus florida*) Family: CORNACEAE

Small native tree (up to 36 ft tall), often in the understory. Branches grow in a leaning fashion from a trunk with a distinct blocky pattern.

Leaves: Opposite and simple. Broadest at the base with an elliptical shape abruptly narrowing into a tip. *Distinct lateral venation curving upwards to the leaf tip*. Margins entire. Leaves grow straight upwards as if reaching for the sky. Dark green upper surface with small short hairs, underside paler gray colored, often with small hairs. Reddish-purple color in the Fall.

Flowers/Fruit: Flowers in Spring. Appears to have a "white flower" with a green yellow center. The center is actually the many flowers clustered together, surrounded by four white, petal-like bracts. Fruit a shiny red drupe growing in clusters (late Summer).

Bark: Scaly block pattern, usually light gray (sometimes darker) in color.



Sassafras

(*Sassafras albidum*) Family: LAURACEAE

A native tree capable of growing large (up to 60ft), but around the Trust will be mostly small and shrub-sized with knobby, distinctly green twigs with white dots (called lenticels). **Strong citrusy aromatic scent** when parts are crushed. You should find an example of an adult and sapling on the Survey 123 map!

Leaves: Alternately arranged. Leaf shape varies considerably, even on one individual. Leaf margins can be entire or have multiple lobes. The multitude of small veins on the leaf surface give it a wrinkly appearance. Stalks (petioles) attaching leaves to stem often has a reddish flush.

Twigs: Slender, bright green, smooth surface with raised white dots (lenticels).

Flowers and Fruit: Clusters of pale green-yellow flowers in Spring. Fruit glossy, dark blue drupes (fleshy) suspended on a red cup in late Summer.

Bark: Young saplings bright green until matured into a large tree. Brown and furrowed, cinnamon colored under layer. Strong aroma when cut.



Eastern Redbud

(*Cercis canadensis*) Family: FABACEAE

Native upland tree. Small (up to 20ft) with a rounded canopy. Fairly non-descript tree in the Winter, except for the zig-zag pattern of the small buds and how flat they occur on the twigs.

Leaves: Alternately arranged. Simple, heart-shaped with **no teeth** on the margin. Smooth leaf texture. Dark green in the Summer, turning yellow in the Fall. Buds are fairly small and black-brown in color.

Twigs: Slender, dark brown with subtle white spots (lenticels). The buds are dark brown and small, arranged on the twigs in a zig-zag pattern.

Flowers and Fruits: Red flower buds appear on branches in early Spring before any leaves, blossoming into pink flowers. Fruits are green legume pods in the Summer.



Hackberry

(*Celtis occidentalis*) Family: CANNABACEAE

Native tree up to 100ft in height. Look for the assymetrical leaf base, coarse toothy leaf margin, and rough sand-papery feel to the thin leaves.

Leaves: Buds pressed against twigs. Alternate, simple, egg-shaped leaves. Thin and rough, leathery-feeling on upper surface. The upper surface is a dark-green color and underneath is paler green with hairs on the veins. Leaf tip is abruptly pointed. Coarsely toothed leaf margin. Leaf base often asymmetrical and rounded or heart-shaped.

Bark: Brown or gray and smooth, becoming rough with ridges and raised with protuberances with age.

Flowers/Fruit: Small green flower with a dark purple drupe with one stone, each fruit occuring alone on the branch.



Tulip poplar

(*Liriodendron tulipifera*)

Family: MAGNOLIACEAE

Native tree producing distinct flowers.

Buds: Valvate (clam-shell) shape, usually brown. They look like little beaver tails.

Leaves: Green and deeply lobed on the sides, forming four pointed sections. To my eye, the leaf-shape is like a bat (head and wings), although it can vary slightly.

Flowers: Distinct yellow and orange tulip flowers. Often found on forest floor when they dry. Spring.

Trunk: When young, trunk is dark brown with beige vertical stripes. Less distinct when mature.



White Oak

(*Quercus alba*) Family: FAGACEAE

Native deciduous tree.

Leaves: Deeply cut *rounded* lobes (7-10 lobes) with no bristles on the tips. Leaves green on top and white-green below.

Winter Buds: Reddish brown, buds clustered at the tips of branches. Stubby and rounded bud shape. Twigs are purplish with a white cast.

Fruit: Producing acorns in late Summer/Fall.



Red Oak

(*Quercus rubra*) Family: FAGACEAE

Native deciduous tree. Look for leaves with shallow, pointed lobes that have bristles at the tips.

Leaves: Alternate. Dark green on top. Pointy lobes along the margins, but they are fairly shallow. Smooth veins underneath leaf with no hairs.

Winter Buds: Reddish-brown, with scales and hairs the tip. They are sharp and tapering, while White Oaks have more blunt, rounded buds. At the tips of twigs, the (terminal) buds are clustered together.

Fruit: Produces acorns in late Summer/Fall.



Box Elder

(*Acer negundo*) Family: SAPINDACEAE

Native. Different from leaves of typical maples.

Buds/Leaves: Opposite, compound leaves. Often three leaflets with shallow, pointed lobes. Variable leaf shape. The opposite buds will meet on the branch with a little point.
Smooth green twigs.

Flowers/Fruit: Winged fruits called samaras produced in early Fall.



Common/Downy Serviceberry

(*Amelanchier arborea*) Family: ROSACEAE

Small deciduous tree up to 60 ft tall.

Buds: Narrow, pointy, and pressed against the twig.

Leaves: Alternate, simple. Egg-shaped, thin leaves, with finely toothed margins. Base rounded and heart-shaped, pointed leaf tip. Upper leaf surface dull green and finely hairy when young in the Spring, becoming hairless in the Summer. "Stem" connecting leaf to branch (petiole) is noticeably long and reddish and hairy when young. Yellow in the Fall.

Flower/Fruit: Five-petaled white flowers. Petals drop and leave a reddish star-shaped buds becoming reddish berries (pomes).

Bark: Smooth gray, becoming thinly ridged with age.



Sweet Birch/Black Birch

(*Betula lenta*) Family: BETULACEAE

A medium-sized native tree with a wintergreen smell.

Leaves: Buds sharply pointed and alternately arranged in a *zig-zag pattern* angled away from the twig. Mostly smooth scales without long hairs. Leaves are simple and with a oval-shaped with a broad base and tapering tip with *double toothed margins*. Leaves turn yellow in the Fall.

Twigs: Reddish brown with small white dots (lenticels). Thin and flexible.

Bark: Distinctly smooth and shiny dark brown with *horizontal* white dots (lenticels) until it matures and cracks.

Flowers/Fruits: Wind pollinated yellow-green flowers. Male flowers are long dangling catkins, while the female flowers grow upright above them. Fruits are cone-like structures dangling catkins.



©2008 Will Cook

American Hophornbeam

(*Ostrya virginiana*) Family: BETULACEAE

Native deciduous tree that can grow up to 70 ft tall.

Leaves: Alternate, simple, ovate (egg-shaped) occurring in a zigzag pattern along branch. *Noticeably hairy* leaf, giving it a soft appearance, but it is somewhat rough. Dull yellow-green on top and paler green underneath. Leaf base is usually heart-shaped but can be rounded or wedge-shaped. Look for the *double-toothed margins* (very sharp larger tooth paired with a smaller one) and abruptly narrow leaf tip. Leaves turn yellow in the Fall.

Buds: Brown or green with obvious overlapping scales and pointy tips. *Buds lean away from the twig.* The tip of each bud scale is often darker brown.

Twigs: Larger twigs are a lustrous, reddish-brown with many little white spots called lenticels. Younger twigs are thin with stiff, *dense hairs*.

Fruit: Flowers (photo left) are yellow catkins that look like hops (liked those used for beer). Fruit (photo right) is a ribbed nutlet enclosed in clustered green sacs appearing in Autumn on mature trees. In more mature trees, the trunk is silvery grey with a twisted, sinewy shape, earning the nickname "musclewood". Old trees have reddish, brown bark that shreds off in strips.

