

LAB 6 – EXPERIMENTAL FOREST

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devil's walkingstick Araliaceae *Aralia spinosa*

Leaf: Alternate, bi- or tri-pinnately compound, up to 5 feet long; leaflets are 2 to 4 inches long, serrated margin; rachis has scattered prickles; green to blue-green above and paler below.

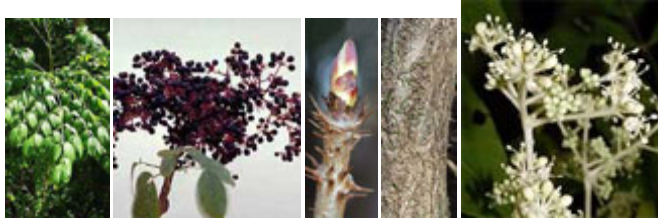
Flower: Monoecious; white and quite small, borne on 12 to 18 inch clusters at the ends of branches, appearing in late summer.

Fruit: A round, fleshy drupe, purple to black and 1/4 inch long; borne in quantity on pink-red clusters; maturing in late summer and early fall.

Twig: Very stout and spiny, gray to straw colored, with a slender U-shaped leaf scars that encircle 1/2 of the stem; buds are relatively small, ovoid and oppressed with very few scales.

Bark: Gray-brown, spines persisting for some time, largest trees become shallowly furrowed.

Form: A large shrub or small tree (up to 30 feet) with club-shaped branches; root sprouts and often forms thickets.



Notes:

American holly Aquifoliaceae *Ilex opaca*

Leaf: Alternate, simple, evergreen, elliptical, 2 to 4 inches long, spiny toothed margin, thickened and leathery, shiny dark green above, much paler below.

Flower: Dioecious; dull green-white, male flowers on 3 to 7 flowered cymes, female flowers are solitary with a pleasant odor, appearing in late spring.

Fruit: Berry-like drupe, red, rarely yellow when ripe, 1/4 inch in diameter, containing ribbed nutlets; maturing in fall and persisting on tree into winter.

Twig: Slender, with rust-colored pubescence; buds small reddish brown, pointed.

Bark: Light gray and smooth regardless of size.

Form: A small tree to 40 feet, with a thick crown and pyramidal form, usually with branches to the ground.



Notes:

northern spicebush Lauraceae *Lindera benzoin*

Leaf: Alternate, simple, elliptical, 3 to 5 inches long, pinnately veined, entire margin that may be somewhat ciliate, strong, spicy odor when crushed, green above and slightly paler below.

Flower: Dioecious; small, but due to large numbers they can be showy, yellow, appearing in axillary clusters before the leaves in early spring.

Fruit: A bright red drupe when ripe (green before ripening), 3/8 inch long with a large seed and a peppery taste and scent, maturing in fall.

Twig: Slender, olive-green to brown in color, numerous light lenticels, with distinctive, stalked globose buds covered with 2 to 3 yellow-green to brown scales; when broken, a spicy, peppery smell is obvious.

Bark: Brown to gray-brown and speckled with light colored lenticels.

Form: A large shrub with several stems, usually rounded in outline up to 15 feet tall.



Notes:

bottomland post oak Fagaceae *Quercus similis*

Leaf: Alternate, simple, oblong, 6 to 10 inches long, with 5 lobes, the two middle lobes are distinctly square, resulting in an overall cruciform appearance, thickened texture; green above with scattered stellate pubescence, pubescent and paler below.

Flower: Monoecious; male flowers are yellow-green, borne in naked, hanging catkins, 2 to 4 inches long; female flowers are reddish and appear as single, short spikes from leaf axils, appearing with the leaves.

Fruit: Acorns are 1/2 to 2/3 inches long and ovoid; cap is bowl-shaped and warty/scaly, covering 1/3 to 1/2 of the nut; Individual scales are more apparent than white oak; maturing in one year and ripening in the fall.

Twig: Gray or tawny-tomentose and dotted with numerous lenticels; multiple terminal buds are short, blunt, orange-brown, somewhat pubescent, short, thread-like stipules may be present.

Bark: Ashy gray and initially quite scaly, later becoming more blocky and ridged, very similar to white oak.

Form: A small to Medium sized tree up to 65 feet tall with a crown that has gnarled and twisted branches.

**Note: This is VT Fact Sheet for Q. stellata but w/ photos for Q. similis; species are very similar but for their site, and how cruciform the leaves often are*



Notes:

willow oak Fagaceae *Quercus phellos*

Leaf: Alternate, simple, 2 to 5 inches long, linear or lanceolate in shape (willow-like) with an entire margin and a bristle tip.

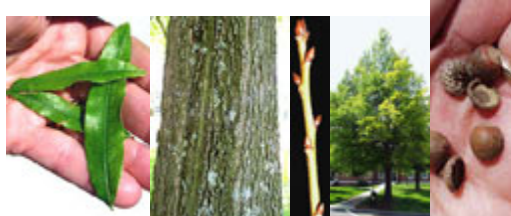
Flower: Monoecious; males borne on slender yellow-green catkins; females borne on very short axillary spikes, both appear very early with the leaves.

Fruit: Acorns are very small, 1/4 to 1/2 inch across, nearly round and yellow-green, turning tan when older, caps are thin, saucer-like and cover only 1/4 of acorn with thin, tomentose, appressed scales.

Twig: Slender, hairless, olive-brown in color when young; multiple terminal buds are very small, reddish brown and sharp-pointed.

Bark: On young stems, smooth, gray and tight; later becoming darker and forming irregular rough ridges and furrows.

Form: A medium sized tree up to 80 feet tall that forms a dense oblong crown when open grown; lower branches do not readily self-prune.



Notes:

laurel oak Fagaceae *Quercus laurifolia*

Leaf: Alternate, simple, entire margins, occasionally with shallow lobes, widest near the middle, 3 to 5 inches long, 1 to 1 1/2 inches wide, thick and persistent, shiny above, pale and smooth below.

Flower: Male flowers are yellow-green long catkins (1 1/2 to 3 inches long), females are green to reddish, very small spike in leaf axils, appearing with the leaves.

Fruit: Acorn, 1/2 to 2/3 inch long, nearly round, dark brown and striated, cap is usually shallow but may cover up to 1/3 of acorn, cap has tight reddish brown scales.

Twig: Slender, light reddish brown, hairless, buds are sharp pointed reddish brown and clustered at twig ends.

Bark: Dark brown and initially smooth, it later develops shallow fissures with flat, rough ridges.

Form: Medium size tree to 60 feet, straight trunk, 1 to 3 feet in diameter, rounded crown.



Notes:

blackgum Cornaceae (Nyssaceae) *Nyssa sylvatica*

Leaf: Alternate, simple, pinnately veined, oblong to obovate in shape with an entire margin, 3 to 5 inches long, occasionally shallow lobes (or coarse teeth) near tip, dark green above and slightly paler below.

Flower: Species is usually dioecious; not showy, light green in color, in clusters hanging from slender stalks, appearing with the leaves.

Fruit: A dark, purplish blue drupe, 1/2 inch long, with a fleshy coating surrounding a ribbed pit, ripen in late summer and fall.

Twig: Moderately stout, red-brown to gray, diaphragmed pith; 1 to 2 inch curved spur shoots are often present; buds ovate, pointed, green and light brown, but darkening to brown in the winter.

Bark: Gray-brown and shallowly, irregularly furrowed, on old stems it can become quite blocky, resembling alligator hide.

Form: A medium sized tree reaching up to 80 feet tall on moist sites, generally much shorter in the mountains. On younger trees the branches often stand at right angles to the trunk with numerous short, curled spur shoots present.



Notes:

overcup oak Fagaceae *Quercus lyrata*

Leaf: Alternate, simple, 6 to 10 inches long, roughly oblong in shape with a highly variable margin that has 5 to 9 lobes with irregular sinuses. The underside is white and pubescent.

Flower: Male flowers are green, borne in naked catkins, 2 to 4 inches long. Female flowers are reddish and appear as single spikes, appearing with the leaves.

Fruit: Acorns are 1/2 to 1 inch long, round and almost entirely covered by the warty and unfringed cap, maturing in 1 year, ripening in fall.

Twig: Slender and gray, glabrous - very closely resembling white oak. Buds are small, ovoid and light chestnut brown in color; end buds are clustered.

Bark: Gray-brown and scaly, often with irregular plates, again resembling white oak.

Form: A medium sized tree with generally poor, twisted form. However, the crown is pyramidal/oval and later rounded.



Notes:

Carolina ash Oleaceae *Fraxinus caroliniana*

Leaf: Opposite, pinnately compound, 5 to 7 leaflets, leaflets 2 to 4 inches long with a usually serrated margin, leaf 5 to 10 inches long, dark green above, paler and smooth below.

Flower: Dioecious; in clusters, green to purple, appearing in spring.

Fruit: Broad-winged samara, 1 1/2 to 2 inches long, 1/2 to 3/4 inch wide, seed may be three-winged and the seed cavity is not distinct.

Twig: Moderate, smooth or may be somewhat fuzzy, gray-brown, opposite leaf scars oval with lateral bud only slightly set down into leaf scar.

Bark: Scaly, gray to slightly orange-brown, splotchy.

Form: Small tree up to 30 feet, 6 inches in diameter.



Notes:

dwarf palmetto Arecaceae *Sabal minor*

Leaf: Alternate, palmately compound, fan shaped; leaflets very long (2 to 4 feet) and lance shaped; leaf stalk concave, extends into leaf blade 2 inches or less, and is without sharp edges; blue green in color, overall leaf nearly round and several feet long.

Flower: Small white flowers occurring on large (several feet), branched clusters, appearing in early summer.

Fruit: Fleshy drupe, nearly round, 1/3 inch across, dark blue, maturing in early fall and persistent into the winter.

Twig: Absent, since leaves appear directly out of unbranched short trunk.

Bark: Rough, gray-brown.

Form: Short bush with a round crown of large, fan shaped leaves.



Notes:

common sweetleaf Symplocaceae *Symplocos tinctoria*

Leaf: Alternate, simple, entire margin or nearly so, oblong or narrowly elliptical, broadest near or above middle, thick, 2 to 6 inches long, tardily deciduous, shiny green above, yellow-green below. Sweet tasting.

Flower: Monoecious; small and appear in clusters, small white petals and numerous stamens, appear has hairy balls before the new leaves.

Fruit: Dry drupes, 1/2 inch long, egg-shaped, orangish brown, mature in late summer.

Twig: Moderate, reddish brown, chambered pith, leaf scar with one-bundle scar, buds large, sharp pointed, scales fringed.

Bark: Grayish green or brown, initially smooth but later develops warty lenticels and shallow splits.

Form: A shrub or small tree up to 30 feet, branches curve upward.



Notes:

hawthorn Rosaceae *Crataegus spp.*

Leaf: Highly variable, but generally alternate, simple, 2 to 4 inches long, serrate and lobed (may be unlobed), subtending long thorns, dark green above and paler below.

Flower: Monoecious; perfect, usually small white flowers, with 5 petals produced in clusters near the end of the twig, appearing in mid to late spring.

Fruit: Small pomes, generally 1/4 inch in diameter, yellow to red when mature; maturing in the early fall.

Twig: Slender, gray in color, with true terminal buds that are usually dark, shiny red and round. Most species have obvious, stiff, 1 inch long thorns; leaf scars contain 3 bundle scars.

Bark: Smooth and gray-brown when young, later turning darker and scaly.

Form: Generally very dense shrubs or small trees up to 25 feet.



Notes:

blackberry Rosaceae *Rubus spp.*

Leaf: Alternate, pinnately compound (usually 3 leaflets), persistent (often barely); leaflets ovate, lobed and doubly serrate, 1 1/2 to 3 inches long, dark green above and paler below. Rachis and petiole armed with slender, easily detached prickles.

Flower: Mostly Dioecious; mostly imperfect, white to pink, 1 to 2 inches across, narrow petals, borne in clusters.

Fruit: Black aggregate of drupelets about 1/2 inch long, very edible.

Twig: Slender, round, and green to red, but covered with a white, waxy bloom, armed with slender straight or recurved prickles that detach easily.

Bark:

Form: A climbing or trailing evergreen shrub with round, slender branches that commonly reach 10 to 20 feet in length. Young stems are erect, but arch as they lengthen, rapidly touching the ground and rooting at the nodes.



Notes:

American basswood Tiliaceae *Tilia americana*

Leaf: Alternate, simple, ovate to cordate, 5 to 6 inches long, with serrate margins, pinnately veined, base is unequally cordate, green above and paler below.

Flower: Monoecious; pale yellow, borne below a long, gracefully curving leafy wing in a many branched cluster, several inches long, appearing in early to mid-summer.

Fruit: A round, unribbed nutlet (1/4 inch) that is covered with gray-brown hair; occur in a hanging cluster with a curving, leafy bract acting as wing on top of the cluster, ripening in the fall.

Twig: Moderately stout, zigzag, green (summer) or red (winter); terminal bud is false, each very plump with one side bulging out disproportionately. Buds are edible but very mucilaginous.

Bark: At first smooth and gray-green, later turning gray-brown and becoming ridged with long, shallow furrows and flat topped ridges. The bark is very fibrous.

Form: A medium sized tree to 80 feet. Older trees very often sprout from the base when cut. Stumps sprout prolifically, often resulting in clumps of several trees.

**Carolina basswood** Tiliaceae *Tilia americana var. caroliniana*

Nearly identical to American basswood EXCEPT: 1) Native in East Texas (more southern range generally), 2) a loose tomentum found on the back of the leaves, and 3) maximum height of approximately 50 feet

Notes: