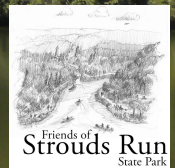


\$4.00

Woody Plants *of the* Strouds Run Area



Strouds Run
Field Guide #5
Second Edition

Woody Plants of the Strouds Run Area is a publication of the **Friends of Strouds Run State Park** (www.friendsofstroudsrun.org). It is published with the assistance of the Athens Conservancy (www.athensconservancy.org) and Athens Trails (www.athenstrails.org).

Publications in this series:

1. **Geology of the Strouds Run Area: Second edition**
2. **Spring Wildflowers of the Strouds Run Area: Second edition**
3. **Invasive Exotic Plants of the Strouds Run Area: Third edition**
4. **Ferns, Fern Allies, and Lycopods of the Strouds Run Area: Second edition**
5. **Woody Plants of the Strouds Run Area: Second edition**
6. **Vascular Plant Checklist of the Strouds Run Area: Second edition**
7. **Summer Wildflowers of the Strouds Run Area: First edition**

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All illustrations by John Knouse

Front cover photograph: **sycamore**, *Platanus occidentalis*, on the shore of Dow Lake

Woody Plants of the Strouds Run Area

Strouds Run State Park, about 2,600 acres in a larger matrix of about 4,300 acres of preserved open-space land, mostly lies within the watershed of Dow Lake, the centerpiece of the park. It includes only a portion of the watershed. The state park was originally the Athens State Forest, purchased from just after World War II into the 1960s. The lake was built in the late 1950s and the land became the park when the lake opened in 1961.

The area also includes the Strouds Ridge Preserve lands with 353 acres (including Sells Park and the Riddle State Nature Preserve), several Athens Conservancy Preserves (Blair Preserve, comprising 75 acres; Tucker Run Preserve, with 50 acres; and the Lohse Preserve of 250 acres), two small nearby tracts of the Wayne National Forest, and the Baker Preserve, 264 acres).

This area is rich in woody plants: trees, shrubs and vines. There are over 130 species present in the Strouds Run area, and this is not counting the many planted landscaping species in Athens that have not yet escaped into the wild.

Strouds Run State Park and surrounding lands feature forest groves a century or more old. These woods that have not been disturbed for many years act as a reservoir for species that otherwise might be more rare or even absent. Hawk Woods (in the Dale and Jackie Riddle State Nature Preserve) and the Crumley Ridge area of the state park (formerly preserved by Dr. J. J. Crumley, an early Ohio state forester) both include old forest. Hawk Woods, in particular, is true old-growth forest, having been undisturbed for about 150 years, and only minimally disturbed before that.

Unfortunately, much of the forest has been impacted by invasive exotic plants, including many woody species. Most of the woody exotics are Asian in origin and have fleshy fruits that are eaten by birds, which then drop the seeds throughout the woods. The organizations mentioned on the title page are working to eradicate the invasive species as much as possible.

Some terminology is important here. “Pinnately-compound” refers to leaves that have leaflets that attach to the sides of a central stalk, like a feather. “Palmately-compound” refers to leaves that have leaflets that attach to a central point.

“Clonal colonizer” refers to trees and shrubs that sprout from the roots or underground stems to make many new plants close to an older one. These typically don’t have transplantable root systems as saplings, and by the time their root systems are well-established, they’re too big to transplant.

These include the **Kentucky coffeetree**, **honey locust**, **black locust**, **tree-of-heaven**, **bladdernut**, **blueberries**, **pawpaw**, **sassafras**, every opposite-leaved shrub in this booklet, **spicebush**, **gooseberry**, **Osage orange**, and the **sumacs**. Other plants such as **raspberries** and their relatives, **roses**, and **barberry** readily root from branch tips touching the ground.

Most plants in this book have flowers with both male and female parts, though some have separate male and female flowers on the same plant. In a few cases, an individual tree, shrub or vine will have ONLY male OR female flowers, and only the female plants set fruit. These are noted.

Monoecious means both sexes on the same plant, while dioecious means plants are male or female.

“Fruit” is generally used to mean the fruiting body, whether succulent or sweet or not.

***=invasive exotic

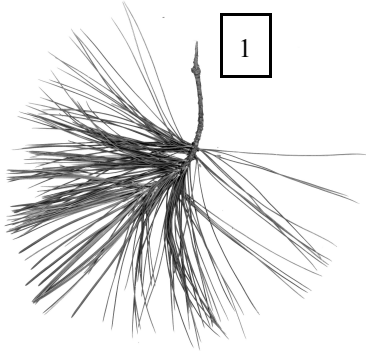
**=non-invasive exotic

*=native, in or close to Athens County, but planted or naturalized

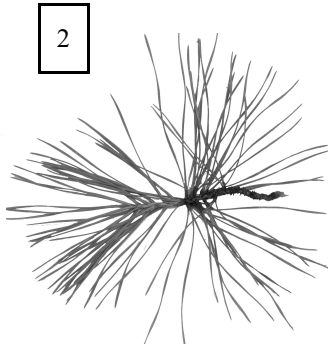
Conifers

The only locally-native conifer in Strouds Run is possibly the redcedar. Others are planted but some of these are native elsewhere in the county. Curiously absent is the Virginia pine, *Pinus virginiana*.

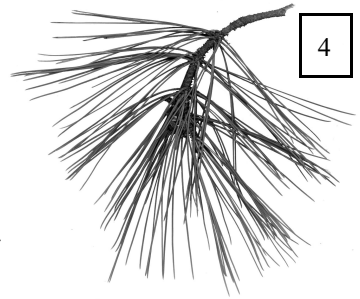
1. ***White pine**, *Pinus strobus*: The white pine is the most familiar pine, a large tree with long, soft needles in bundles of five. The branches are in distinct whorls, one whorl per year. It is the most widely-planted conifer in the park. Common. The Virginia pine, *Pinus virginiana*, is also native close by, and is very different, with bundles of two short, twisted needles.
2. ****Red pine**, *Pinus resinosa*: This pine is also widely-planted in the park, but has needles in bundles of two and they break, not bend (in contrast to *Pinus nigra*), when bent back. Common.
3. ****Scotch pine**, *Pinus sylvestris*: This pine (not illustrated) has a very orange, platy bark, and medium-length needles in bundles of three. There are old plantings in the eastern part of the park, close to the intersection of Strouds Run Road and East Scatter Ridge Road. Occasional.
4. ****Austrian pine**, *Pinus nigra*: This pine is dark in appearance, with long needs in bundles of three. There are several planted near the swimming beach. Occasional.
5. ****European larch**, *Larix decidua*: This deciduous conifer (not illustrated) was planted in several spots over half a century ago. A few are still alive. Look for it in moist places. Occasional.
6. ****Baldcypress**, *Taxodium distichum*: This is another deciduous conifer which is native to swamps, often in standing water, in the southern United States. There is one planted grove above the western head of Dow Lake, close to the beginning of the Hickory Trail. It grows into a massive tree that can live a thousand years. The wood is highly rot-resistant and can last for hundreds of years underwater. In southern swamps it develops “knees”, or short stumps of living wood that thrust above the water. Occasional.
7. ****Norway spruce**, *Picea abies*: This familiar tree has a pyramidal form, more or less horizontal branches, but with drooping branchlets, and dark green foliage. It is widely planted, with only a few at Strouds Run, but is naturalized elsewhere in the county. Occasional.
8. **Redcedar**, *Juniperus virginiana*: This tree is a limestone lover, but will grow anywhere. It is actually a juniper, with the characteristic juniper odor. The berries may be used in gin or in cooking. The wood, with a reddish heartwood, has that hamster-litter odor that we’ve all come to know and love. It is sometimes called the “lollipop tree” because its growth form as an older sapling often resembles a lollipop. The foliage is scaly, held close to the branches, though sometimes the small leaves can stick out like short, prickly needles. Occasional.
9. ****Arborvitae**, *Thuja occidentalis*: Native northeastern North America, this evergreen shrub or tree resembles a redcedar but with smoother foliage. A few are planted at Strouds Run. Occasional.
10. **Hemlock**, *Tsuga canadensis*: This is a beautiful evergreen with short needles, apparently on two sides of the branch, with fine white lines on them. It is a common tree in the more rugged parts of southeast Ohio, and is present naturally in the eastern and western fringes of Athens County, but is not growing as a native at Strouds Run. There are some that were planted on the sides of Crumley Ridge. This tree species is very threatened by the woolly adelgid, a parasitic insect. Occasional.



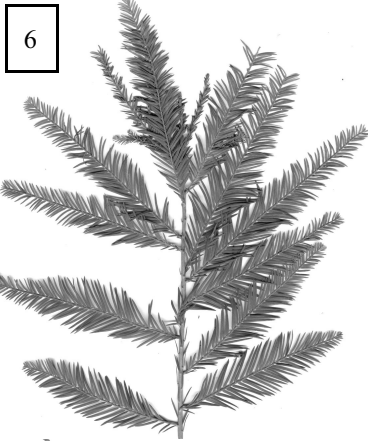
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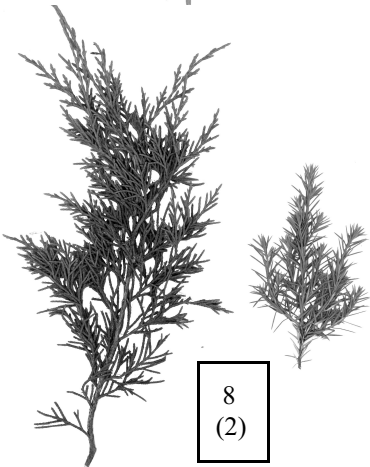
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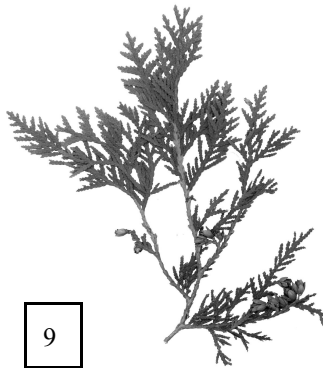
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Broadleaf Plants with Opposite leaves

Opposite Entire-Leaved Vines

11. *Japanese honeysuckle, *Lonicera japonica*:** This invasive exotic vine grows as a wide-spread groundcover and as a twining climber and is seemingly everywhere. Young trees are often deformed into corkscrews by this strangler. The vines have light brown, shreddy bark. The flowers are fragrant, and followed by black berries. Young leaves sometimes are deeply lobed. Abundant.

12. *Wintercreeper, *Euonymus fortunei*:** This exotic vine generally only colonizes areas where it was planted. It has distinctive dark green leaves with light green veins and is evergreen. It grows as a groundcover or as a vine climbing trees by means of aerial rootlets. Occasional.

Opposite Entire-Leaved Shrubs

Most opposite-leaved shrubs with entire leaves are non-native invasive species.

The Bush Honeysuckles

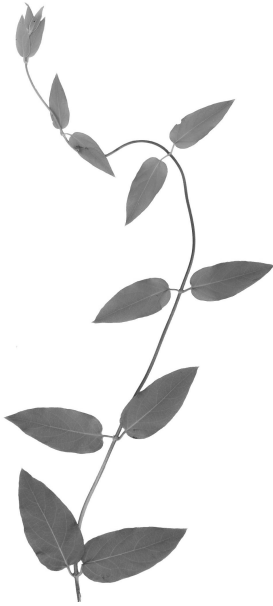
13. *Amur honeysuckle, *Lonicera maackii*:** This shrub has become abundant, and is highly invasive. Fortunately, it is relatively easy to remove, but the bright red berries in the fall ensure a huge crop of seedlings. Abundant.

14. *Tartarian honeysuckle, *Lonicera tatarica*:** This shrub has only been seen in the Strouds Run area a couple of times, but is a serious problem in many other areas. Not illustrated. Rare (as yet).

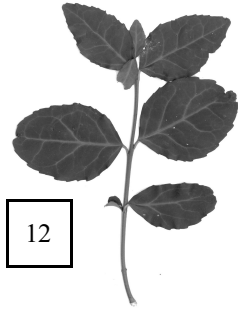
15. *Morrow's honeysuckle, *Lonicera morrowii*:** This is a beautiful shrub, but a seriously aggressive invader. It spreads rapidly by rooting freely from reclining branches. The abundant berries are bright red to orange. The small leaves are elliptical. This is one of the most common plants in the northern part of the county, but is not yet widespread at Strouds Run. Occasional.

	Leaves	Twigs	Flowers
<i>L. maackii</i>	acuminate (long-pointed) at tip, tapered to base, pubescent, widest in middle	green or light brown, never purple beneath	white, fading to yellow
<i>L. tatarica</i>	pointed or wedge-shaped at tip, often straight across or heart-shaped at base, widest near base	small twigs often purple, but older twigs light brown	usually pink, sometimes white or red
<i>L. morrowii</i>	ovate, wedge-shaped or rounded at tip, tapering or straight across at base, widest in middle	most twigs purple	white, fading to yellow

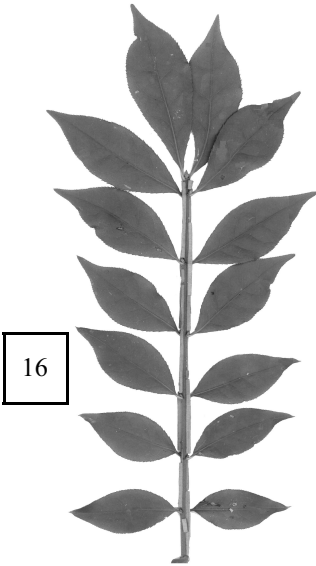
16. *Burning bush, *Euonymus alatus*:** This is an attractive shrub, especially in its bright red fall color that gives it its name, but it is an exotic that is highly invasive, and very difficult to remove once established. In the fall, the bright red berry clusters inside deeper red capsular fruits are distinctive. It seeds freely, producing dense thickets of seedlings. Common.



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17. *Privet, *Ligustrum vulgare*:** It may make good hedges, but it is a real nuisance in the woods, making dense clonal colonies. Fortunately, it is easy to hand-pull unless large. It will re-root if left in contact with the ground. The black berries in the fall ensure its spread through birds. The leaves are small, and many small twigs stick out from the sides of larger twigs (also a feature of blackhaw, with which it's easily confused). Common.

18. Wahoo, *Euonymus atropurpureus*: This uncommon native shrub likes moist areas. It can grow to a slender tree, 15 to 20 feet tall. Leaves resemble those of burning bush but are about twice the size. Bright red berries are showy in the fall. It is closely related to the invasive burning bush, but lacks the corky ridges on the twigs. It prefers moist bottomlands. Occasional.

19. Coralberry, *Symphoricarpos orbiculatus*: This shrub closely resembles a bush honeysuckle, and is a close relative, but it is native. When in fruit in the fall it is unmistakable because of its coral-colored berries. This shrub can form large clonal colonies, and grows in a wide variety of habitats. Leaves are small and oval.

20. Elderberry, *Sambucus canadensis*: Elderberry is the only opposite-leaved shrub with large, compound leaves (also see bladdernut). It has hollow stems, and grows in wet, sunny areas. In summer, it has large, flat clusters of slightly bitter but otherwise insipid edible black berries. The berries are commonly used to make wine. Common.

21. Button-bush, *Cephalanthus occidentalis*: This is strictly a wetland species and does not tolerate deep shade. It prefers to grow in standing water. The name comes from the round seedheads in the fall. The leaves may be either opposite or sometimes in whorls of three. Occasional.

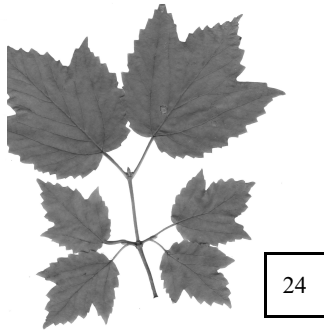
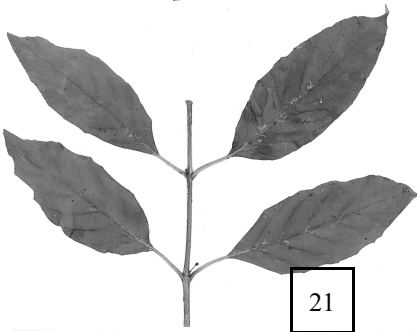
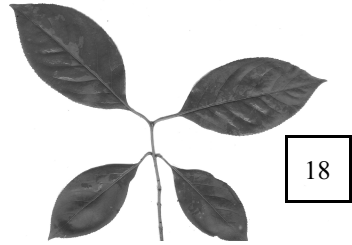
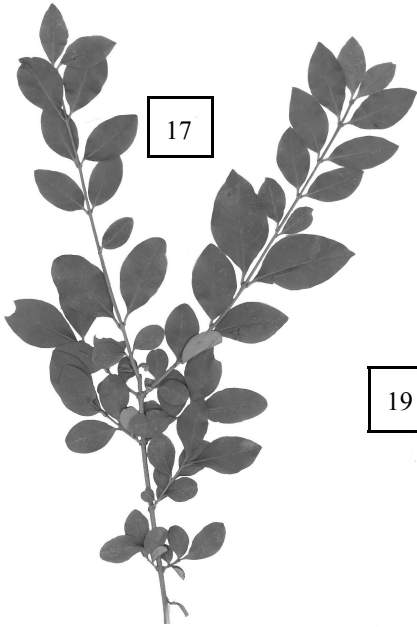
22. Wild hydrangea, *Hydrangea arborescens*: This shrub, a favorite browse for deer, is most often found clinging to steep hillsides or rocks where it is difficult for deer to reach it, although it will grow in a variety of habitats. The common garden hydrangea was bred from this plant. The leaves are elliptical to rounded, and the small white flowers are in more or less flat-topped clusters. A few larger, showy but sterile flowers may be present. Frequent.

The viburnums

23. Blackhaw, *Viburnum prunifolium*: This is a rugged shrub that can grow seemingly almost anywhere, though it is most abundant on woodland edges. It sometimes grows to be a small tree. It has small ovate leaves. The leaf stems are often red. The blackish berries in the fall are edible, tasting a bit like raisins. Easily confused with privet. Common.

24. Maple-leaf viburnum, *Viburnum acerifolium*: This low shrub grows mostly in upland woods. The leaves resemble red maple leaves but differ in being velvety (maple leaves are not at all hairy). In the fall, it turns interesting colors, like a light mauve, not seen on other plants. It has black berries in the fall. Frequent.

25. Arrowwood, *Viburnum dentatum*: This beautiful shrub is often planted as an ornamental. It has shiny, ovate leaves with relatively large but widely-spaced teeth and prominent veins. It prefers moist areas but grows in dry as well. It is absent from the state park, but grows in Sells Park. Fall berries are black. Rare.



The dogwoods, genus *Cornus* (including both trees and shrubs):

26. Silky dogwood, *Cornus amomum*: This is a riparian shrub. It has black berries in the fall, but often starting white. The leaves are usually rather broad. It is common around the lake, especially right on the shores. Very attractive when in bloom. Frequent.

27. Roughleaf dogwood, *Cornus drummondii*: This shrub or small tree is identified by the upper surfaces of the leaves, which are rough when rubbed upwards. It grows on the Baker Tract to the east of Strouds Run, although it is not known from the state park. It is a limestone lover. Rare.

28. Pagodatree or alternate-leaved dogwood, *Cornus alternifolia*: The pagoda dogwood is often used in landscaping. It is the only native alternate-leaved dogwood. It grows close to the lake shore around Dow Lake, and is known from moist areas elsewhere in the county. Occasional.

29. Flowering dogwood, *Cornus florida*: This small tree is the very common dogwood that most people know. It is the only native dogwood with large white petal-like bracts. All other dogwoods have more or less flat-topped clusters of small white flowers. Many flowering dogwoods were lost to an anthracnose blight a few years ago, but the species seems to be recovering well. Common.

Opposite Entire-Leaved Trees**The Maples, Genus *Acer***

30. Red maple, *Acer rubrum*: The red maple grows in an exceptionally broad range of moisture conditions, from very wet to very dry. It is most commonly seen low on hillsides. The bark when young is smooth and light gray, similar to beech, but it becomes shreddy on larger trees. The leaves usually have some red, even if only in the stalk, and they turn bright red in the fall. This tree has the narrowest outline of any native maple. Common.

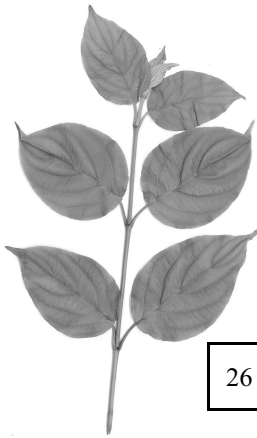
31. Sugar maple, *Acer saccharum*: This is a very common species, the main source of maple syrup. This species is easy to distinguish from other native maples because the leaf margins are smooth, with only a few widely-spaced teeth. There is a variety of the sugar maple, called the black maple, which some botanists consider a separate species, and which is reputed to have the best sap. The leaves of this variety are darker, more leathery, with lobes reduced. Abundant; the black maple is occasional.

32. Silver maple, *Acer saccharinum*: This is a riparian species that grows to immense size. A mature silver maple can resemble an American elm in form, but the wood is brittle, and the tree frequently drops branches. It is often planted for shade because of its rapid growth and large size, but it is unwise to plant it near a building. Common.

33. Box elder, *Acer negundo*: This is often not recognized as a maple because of its compound leaves. Leaves that only have three leaflets resemble poison ivy (but poison ivy has alternate leaves and brown twigs, while box elder has opposite leaves and green twigs), and seedlings of this tree are often mistaken for that plant. Leaves often have five or seven leaflets. This riparian species is usually on the small size, with very weak, brittle wood. Common.

34. Freeman maple, *Acer Xfreemanii*: This is a hybrid between red and silver maples. It is bred for the landscaping trade, and several of these have been planted around the boathouse at Dow Lake. The leaves are shaped like a silver maple, but are like the red maple in texture, and have a red stem.

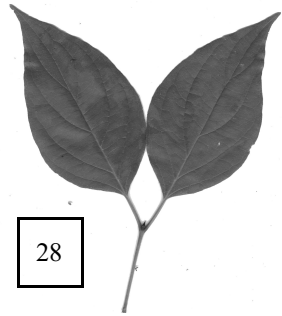
****35. Norway maple, *Acer platanoides*:** This is a European species of maple that closely resembles sugar maple. However, it can be distinguished by plucking a leaf and examining the sap that oozes out: if it's clear, it's sugar maple, if it's milky, it's Norway maple. In some places, this tree is invasive, but escaped trees are rare in this area. Frequent in landscaping, but rare in nature.



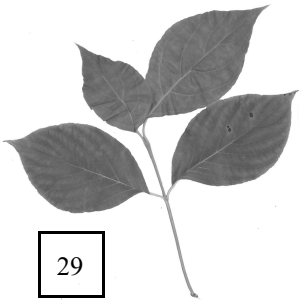
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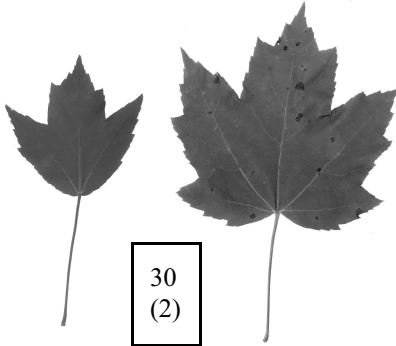
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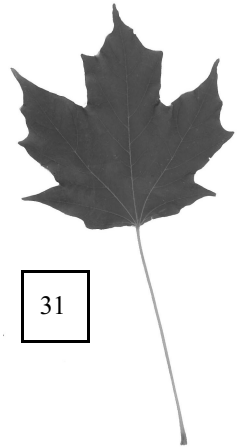
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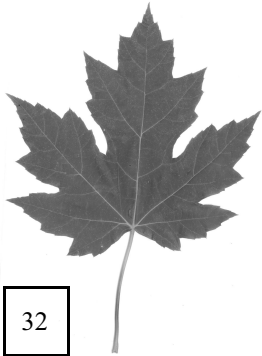
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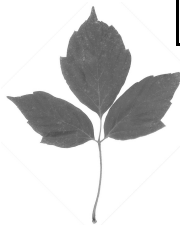
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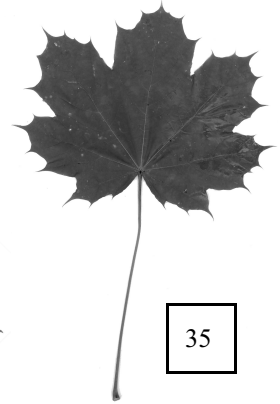
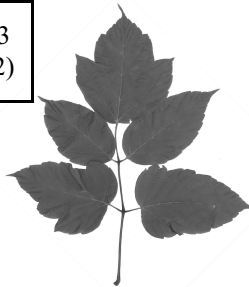
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Opposite Compound-Leaved Vines

***36. Trumpet creeper, *Campsis radicans*:** This is a vine native just to the south of us, but now escaped from cultivation in our area, so it is essentially becoming native here. It has pinnately-compound leaves with many coarsely-toothed leaflets and bright orange trumpet-shaped flowers that are pollinated by hummingbirds. It is unmistakable for any other species. Occasional but common along the northern Lakeview Trail.

Opposite Compound-Leaved Trees

37. Yellow buckeye, *Aesculus flava*: This tree is the native buckeye of Appalachian Ohio, related to the European horsechestnut (*Aesculus hippocastanum*) planted in cities, and to the Ohio buckeye (*Aesculus glabra*), Ohio's state tree, which grows in most of Ohio but is rare in the Allegheny Plateau. The candelabra of spring flowers is an attractive yellow-green. Buckeyes are the only Ohio trees with opposite, palmately-compound leaves, usually with five leaflets. Some leaves will turn bright red through the season, especially in times of drought. The large, flesh-colored winter buds are distinctive. Buckeyes are the first native trees to leaf out in the spring and the first to lose their leaves in the fall. Common. Sometimes listed as *Aesculus octandra*.

Ashes, genus *Fraxinus*

There are three ashes growing in the Strouds Run area. White ash and green ash are common, while blue ash is uncommon. All ashes are difficult to identify from the bark or trunk. Try to find a twig with leaves. All leaves are pinnately compound, usually with seven leaflets.

38. White ash, *Fraxinus americana*: The leaflets always have significant stalks, and the terminal buds are often sunk between the leaf bases of the end leaves. The leaf scar will usually have a deep U-shaped indentation on the top. Common as seedlings and saplings, essentially extirpated as mature trees. The Biltmore ash is considered by some botanists to be a variety of white ash and by other to be a distinct species, *Fraxinus biltmoreana*. It is common in Strouds Run and differs from typical white ash in having velvety twigs and a leaf scar that is straight across on top or even convex.

39. Green ash, *Fraxinus pennsylvanica*: The leaflets have no stalks or very short stalks, and the terminal buds often protrude beyond the leaf bases of the end leaves. The leaflet stalks often have a fine winging of leaf tissue. The leaf scar will either be straight across on top, or have a shallow U-shaped indentation. Frequent as seedlings and saplings, essentially extirpated as mature trees..

40. Blue ash, *Fraxinus quadrangulata*: The blue ash (not illustrated) is readily identified by the twigs that are made square by corky ridges. It is a limestone lover. The name is from blue dye once made from the inner bark. Occasional. Most common on ridgetops on the Baker Preserve nearby.

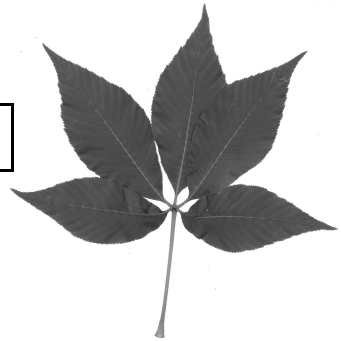
Note: All shes are threatened by the emerald ash borer. In fact, virtually all mature white and green ashes in the forest are dead. Only seedlings and small saplings remain. When you see a dead tree where the outermost bark has been stripped, it's probably an ash. This phenomenon is called "blonding."

41. Bladdernut, *Staphylea trifolia*: This is a very small tree or large shrub that is a clonal colonizer, forming dense groves. It has trifoliolate leaves (leaves with three leaflets). The seeds are borne in papery pods that resemble Chinese lanterns, hence the name. Common.



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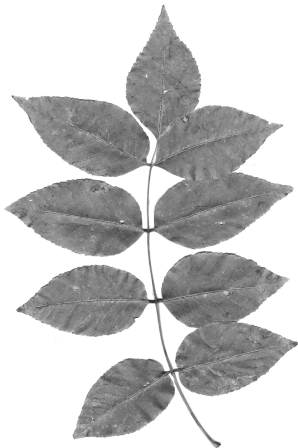
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Alternate entire leaves: Alternate-Leaved Vines: The Grapes

42. Summer grape, *Vitis aestivalis*: This grape has the deepest lobing of any native grape. Leaves are whitened underneath. Teeth are blunter than on the other grapes. Frequent.

43. Riverbank grape, *Vitis riparia*: As both Latin and common names state, this is a grape of riverbanks and bottom areas. The lobes or lobe-teeth point forward, and teeth are usually convex on one side and concave on the other. Occasional.

44. Frost grape, *Vitis vulpina*: This grape has the lobes or lobe-teeth pointing outward, and teeth are convex on both sides. Common.

*****45. Porcelain-berry, *Ampelopsis brevipedunculata*:** This is an invasive exotic closely related to grapes, with almost identical foliage, but tending to be smooth and shiny, and sometimes more deeply lobed. The berries are what make this plant stand out, with beautiful blue, violet and pink. As yet, it is not known from Strouds Run proper, but is common in Athens residential areas. The grape family also includes the Virginia creeper (see alternate compound-leaf vines).

46. Moonseed, *Menispermum canadense*: This vine has shallowly-lobed leaves. The twining stems stay green for several years. A distinctive features is the attachment of the leaf stalk to a point a short distance inside the leaf blade rather than at the very base as in most leaves. Frequent.

The Greenbriers

47. (Roundleaf) Greenbrier, *Smilax rotundifolia*: The most common greenbrier. Leaves may be quite round, but they are more narrowed in the upper part of the leaf. The thorns of all greenbriers stick straight out from the stems. The stems are green year-round. This species is distinguished by its angled stems; the other two species have round stems. It can be a high climber. Abundant.

48. Glaucous greenbrier, *Smilax glauca*: This species has glaucous (whitened) undersides to the leaves, and whitish spots show on the upper surfaces of the evergreen leaves. Frequent.

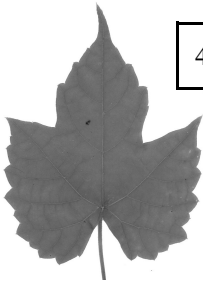
49. Hispid greenbrier, *Smilax hispida*: This greenbrier (not illustrated) has a dense covering of hairlike spines on the lower part of the stems. Frequent.

The Bittersweets

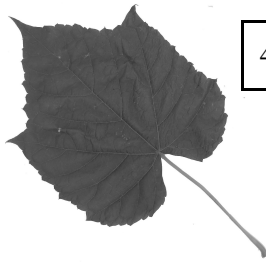
50. American bittersweet, *Celastrus scandens*: This is the native species of bittersweet. It is being displaced by the Asian species, particularly near towns. The showy red and orange fruit clusters are at the ends of branches. Frequent.

*****51. Asian bittersweet, *Celastrus orbiculatus*:** This invasive vine is rapidly replacing our native species. Like kudzu, this vine smothers trees. In foliage, it is very like the native species, but its fruits are in small clusters at the leaf bases, rather than at the end of the stem. Common.

	<i>Celastrus scandens</i>	<i>Celastrus orbiculatus</i>
Pollen	yellow	white
Fruit capsules	orange	yellow
Seeds per fruit	5 or fewer	5 or more
Flower/fruit site	terminal (at branch tip)	axillary (at leaf bases)
Leaf tip	long-pointed	short-pointed

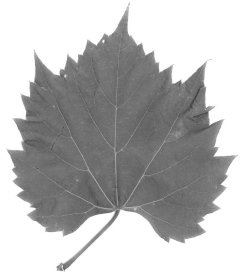


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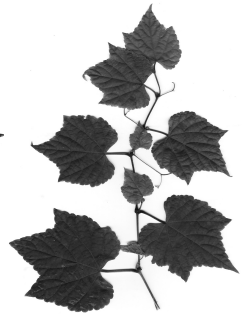
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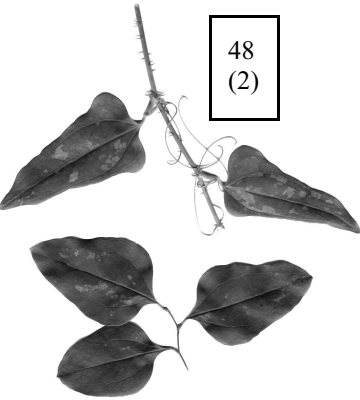
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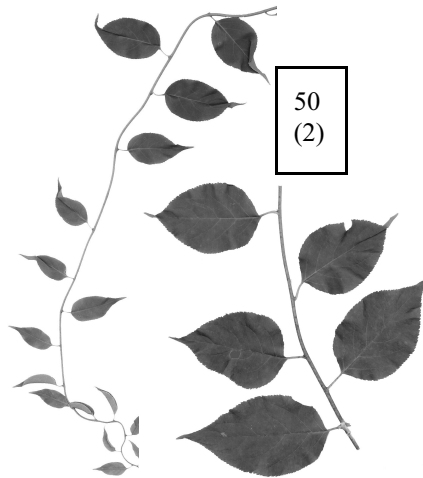
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Alternate-Leaved Shrubs

52. Leatherwood, *Dirca palustris*: This shrub resembles the spicebush, but is distinguished by twigs which bend and do not break, while spicebush twigs snap. The twigs are widened at leaf bases. It grows in bottomlands, usually by streams, sometimes in wetlands. Occasional.

53. Gooseberry, *Ribes cynosbati*: This is a small shrub (not illustrated) with hairlike spines and small deeply-lobed and toothed leaves. The berry is covered by spines. The gooseberries are related to the currants. Occasional.

54. Missouri gooseberry, *Ribes missouriensis*. This is very similar to the above species, but the flowers are slightly different and the fruit is smooth and edible. Rare, known only from one spot near East State Street, though also known from another site in Athens. This is a limestone lover.

***55. American holly**, *Ilex opaca*. This shrub or small tree is not native to this area, but it is native slightly farther south. Well within its range, it grows as a medium-size tree, but here it seldom seems to be more than a shrub. It frequently escapes from cultivation due to spreading by bird droppings, and is most often seen around Sells Park. Individuals are either male or female.

56. Hazelnut, *Corylus americana*: This shrub prefers stream bottoms, often growing on stream banks. It resembles the witch-hazel, but the leaves are finely and sharply toothed and the twigs are covered by reddish hairs. It bears small but tasty hazelnuts, also called filberts, although it is a different species than the filberts in the stores. The nuts are in clusters where they are sheathed in curious leafy coverings. It often grows to small tree size. Common.

57. Witch-hazel, *Hamamelis virginiana*: The witch-hazel can be found growing in a variety of situations, ranging from streamsides to high on ridge sides. It greatly resembles the hazelnut, but the toothing on the leaf is larger and rounded. The leaves are very asymmetrical. Witch-hazel has the odd habit of blooming in November with small yellow flowers. The ripened seed is shot out of the seedpods like bullets in autumn. It sometimes becomes a small tree. Frequent.

*****58. Japanese barberry**, *Berberis thunbergii*: This is yet another foreign shrub that is escaped from cultivation. It has many small but very sharp thorns, which are often three-branched. The leaves are small and simple, but with a unique shape, broad towards the tip, but tapering to the base. The wood and roots are a bright yellow-orange. Frequent.

59. Sandbar willow, *Salix interior*: This is our native shrub willow, forming dense colonies on sandbars and shorelines. It never develops tree-like form. Leaves are soft-hairy when young. Frequent. See numbers 66, 67 for other willows.

60. Spicebush, *Lindera benzoin*: This is our most abundant shrub throughout the area, preferring moist, rich soils but not restricted to them. It is readily identified by the spicy scent when leaves are rubbed or twigs are broken. Roots are also aromatic. The only other tree or shrub with a pleasant spicy scent that is used for food is the sassafras, which is related, although tuliptree and the magnolias also have spicy-smelling roots. The twigs also snap quickly when bent. The small, berrylike fruits are shiny and bright red in the fall. They are sometimes used in teas or other food preparations. The dried leaves and twigs may also be used as a tea. Abundant.



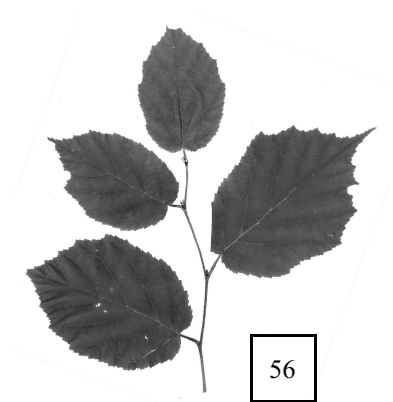
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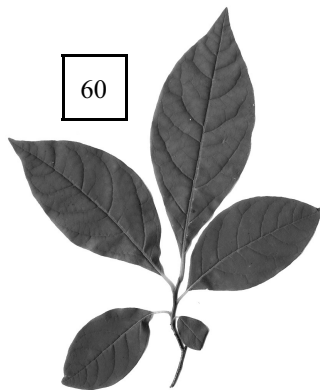
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The Heath Family

61. Deerberry, *Vaccinium stamineum*: Deerberry when not in fruit looks very much like a highbush blueberry, but the berries (which are greenish when mature) are insipid-tasting. The small, white, bell-shaped flowers are attractive. Common.

62. Lowbush blueberry, *Vaccinium pallidum*: The lowbush blueberry can be found on dry, wooded hillsides throughout the area, but berries are difficult to find. The plant is a clonal colonizer, with small white flowers. Common.

63. Huckleberry, *Gaylussacia baccata*: This (not illustrated) looks like a lowbush blueberry, with slightly larger leaves. The fruit, when present, is darker in color, almost black, and has noticeable seeds when eaten. Distinguish this shrub by looking at the undersides of the leaves. If they have small golden resin dots (visible with a 10x magnifying glass), then it is huckleberry. Occasional.

64. Mountain laurel, *Kalmia latifolia*: This beautiful evergreen shrub is only found sporadically around Strouds Run, preferring west or south-facing ridge points, usually close to outcropping sandstone. The leaves are thick and glossy green. The pink to white flowers in late spring are quite beautiful, and unusual in that the petals are all fused together. Occasional.

The heath family also includes sourwood, (below in the section on alternate-leaved trees)

*****65. Autumn-olive**, *Eleagnus umbellata*: This large shrub or small tree is easily identifiable during the summer. The undersides of the leaves are bright silvery, and the tops are even somewhat whitened. It has berry-like fruit that tastes somewhat like dates in the fall when it starts to dry out. Imported for “conservation” purposes, it is yet another invasive exotic plant. It has a fibrous, tenacious root system which makes it difficult to uproot. Frequent.

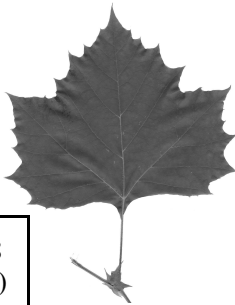
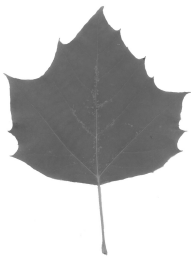
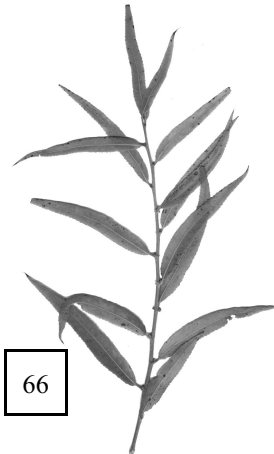
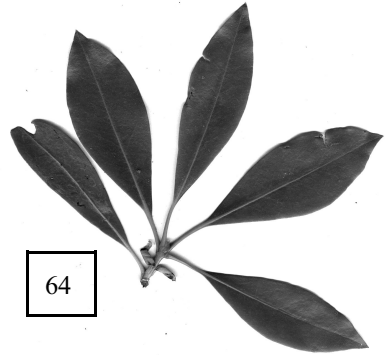
Alternate Entire-Leaved Trees

66. Black willow, *Salix nigra*: Older black willows often have a gnarled, tortured appearance. It is a common riparian tree along streams and rivers. The leaves are very narrow with fine teeth, and the bark is very dark. All our willows may or may not have small stipules (leafy growths) at the leaf bases. This willow is sometimes has a more yellowish green than the others. Frequent.

****67. Crack willow**, *Salix fragilis*: This is a European species. Similar to the black willow, but the leaves are somewhat silvery-gray on both top and bottom. Occasional. Also see number 59.

68. Sycamore, *Platanus occidentalis*: Also illustrated on the cover. This riparian species is easily recognized any time of the year by smooth white bark on the upper trunk. There may also be light green, gray or brown patches. The leaves are shallowly-lobed and can be fairly large. Look for the leafy stipules at the bases of the leaves. The seeds are borne in dense balls that hang on the tree through the winter and disintegrate into fluffy one-seeded fruits in the spring. This tree can become immense. Common.

69. Pawpaw, *Asimina triloba*: The pawpaw is virtually ubiquitous in our area wherever conditions are not too dry. It has large leaves, often a foot or more long, and identification is easy: rub a leaf and smell it (most people consider the odor unpleasant). It is a clonal colonizer, forming a dense shrub layer but capable of growing into a small tree. John James Audubon is said to have used the winter buds of this tree as paintbrushes. The fruit is irregular in shape, sometimes bean-shaped, usually two to three inches long, and greenish to yellowish when ripe. The tawny-orange flesh inside is sweet and very rich when ripe. Some people dislike the taste, others dote on it. There is an annual pawpaw festival in September in our area, at Lake Snowden. Abundant.



70. Persimmon, *Diospyros virginiana*: The persimmon is seldom a large tree. It bears male and female flowers on different trees, with only the latter bearing the fruit. The plum-like golden-colored fruit (looking similar to ginkgo fruit) is edible, but before freezing it is typically very astringent. When the fruit drops after a hard frost, it is generally tastier, but it is still most often used in persimmon pudding or persimmon bread. The leaves are simple, with smooth margins. The dark bark is distinctive, with an “alligator” or checkered pattern, a little bit similar to flowering dogwood or black gum. This tree is actually a true ebony, the only temperate representative of that family, and century-old trees have valuable black heartwood. Frequent.

71. Redbud, *Cercis canadensis*: This small tree is very familiar to most people, with its abundant, pea-like light-purple-colored flowers in the spring. Some years, redbud blooms along with the flowering dogwood, but it often is finished blooming by the time the dogwood starts. The flowers are edible and can be dried to make tea. The leaves are distinctively heart-shaped with a smooth margin. It is an easily-grown flowering landscape tree. Common.

72. Sassafras, *Sassafras albidum*: This tree is well-known for its variable leaves, which assume one of four shapes: simple, three-lobed or two-lobed, like a mitten, with a right or left thumb. The leaves and twigs have a citrus-like odor. The leaves are an ingredient in a Cajun spice mixture called gumbo file (fee-LAY). The root has the distinctive sassafras odor and taste that has been used in root beer and sassafras tea. This small tree is a clonal colonizer, but it makes a beautiful lawn tree, turning orange in the fall. Trees are either male or female. Common.

73. Sweetgum, *Liquidambar styraciflua*: Sweetgum was planted in the park, and it is native just south of Athens County. It is only found in moist areas. The leaves are distinctively star-shaped and can be mistaken for nothing else, though, as can be seen from the illustration, they are rather variable. In the fall, it can turn yellow or purple. This tree is known for the spiky, dry, ball-shaped fruit clusters that hang on the tree through the winter, and which are painful for bare feet. Occasional.

74. Black gum, *Nyssa sylvatica*: This medium-size tree, also called tupelo or pepperidge, has the ability to thrive both in wet soils and dry soils, and may be found both in stream bottoms and high on ridges. It has an interesting, dark, alligator-patterned bark. It is related to the dogwoods. It has dark blue berries. It can exhibit a fascinating range of fall colors, including bright red. When grown in full sun, the leaves can be very shiny. Frequent.

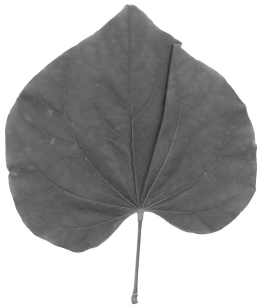
75. Sourwood, *Oxydendrum arboreum*: This attractive small tree is widely used in landscaping in Europe, but is inexplicably seldom seen in American landscaping. It is sometimes called the lily-of-the-valley tree because of its sprays of white blossoms, blooming in early July. The fruiting capsules themselves are attractive and can be used in flower arrangements. The seeds are tiny, almost dust-like but are not shed until mid-winter. The leaves are elliptical, often with fine teeth (not always present) along the edges and a fringe of stiff hairs (like an eyelash) on the midvein beneath. The edible leaves have a sour flavor when chewed, hence the name. Also called sorrel tree, some of the finest honey comes from its blossoms. This tree is in the heath family and prefers dry hillsides. There are some good specimens along the Lakeview Trail. Common.



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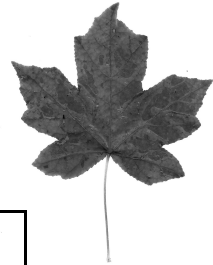
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Trees in the Rose Family

Malus, *Pyrus* and *Prunus* are three economically important genera in the rose family. The *Malus* includes includes apples and crabapples; *Pyrus* includes pears; and *Prunus* includes cherries, plums, apricots, peaches and almonds. Related trees are hawthorn (*Crataegus*) and serviceberry (*Amelanchier*).

76. Wild black cherry, *Prunus serotina*: This is the largest rosaceous tree in our area. Extremely large trees can be over 100 feet tall. The bark is highly distinctive, with large, shiny, cornflake-like scales, with fine horizontal striping. It often has a slight purple cast to it. When young, the bark is very different, but still with horizontal stripes (lenticels). The leaves are elliptical-lanceolate, with small, somewhat blunted teeth. There is a distinctive odor of bitter almond when the bark of the twigs is scratched. The cherries are very small, turning black in the fall, and highly bitter/astringent until they start to dry out, when they turn sweet. Common.

77. American plum, *Prunus americana*: This is a small tree that prefers fairly low areas. The plums are small but tasty. It can easily be grown as a fruit tree in the home landscape. Occasional.

****78. Sweet cherry**, *Prunus avium*. This is a horticultural cherry (not illustrated) that is escaped in the Strouds Run area but is not a problem. It has silvery-gray bark with horizontal stripes (lenticels). The leaves are elliptical. Occasional.

****79. Callery pear**, *Pyrus calleryana*: This is an escaped tree at Strouds Run, but is only occasional. The leaves are dark green and shiny. The “pears” are small, round berry-like fruit with several seeds. There are actually two species which may be escaped; the other is the common pear, *Pyrus communis*, which has larger, edible fruit. The tree is upright, with a central trunk. Occasional.

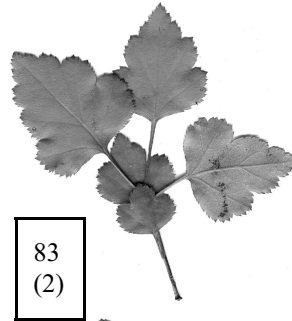
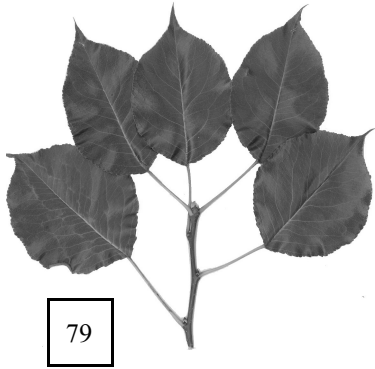
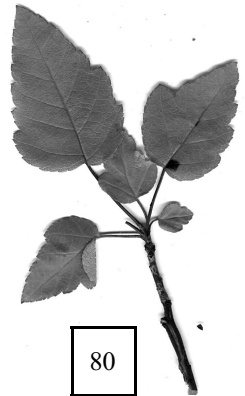
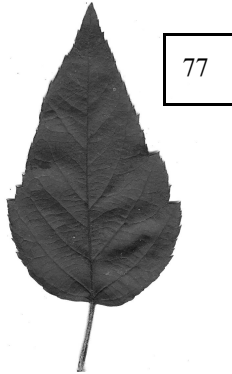
80. Crabapple, *Malus coronaria*: This crabapple is the more common. It is often found on ridgetops. It may or may not have thorns. The leaves are highly variable in shape, sometimes being broader, with more prominent lobes, and sometimes narrower, without lobes. Beautiful in flower, it is a small tree. Common. The name *Pyrus coronaria* is sometimes used.

81. Crabapple, *Malus angustifolia*: This tree prefers moister areas than the other crabapple. The leaves are always narrow, and the flower petals have an attenuated base. It can be seen along the Lakeview Trail. Frequent. The name *Pyrus angustifolia* is sometimes used.

82. Hawthorn, *Crataegus crus-galli*: This is the easiest of the hawthorns to identify. The leaves are rounded with a long-tapering base, and finely toothed. They are sometimes thickened and leathery compared to other hawthorns. The tree has sharp thorns on the branches. Frequent.

83. Hawthorn, *Crataegus* spp. There are several other species of hawthorns in the area, such as *C. calpodendron*, *C. pedicellata* and *C. pruinosa*. Many species are very similar and difficult to identify. They have sharp thorns on the branches. Common.

84. Serviceberry, *Amelanchier arborea*: This small tree has some of the earliest blooms in the spring, just after the ground has thawed out. There is a story that the name is because, in the Appalachians, bodies would be stored until the ground was thawed enough to dig graves, and the serviceberry would signal that event, but the name is actually an old one. It is also called shadblow because it blooms when the shad run. It has small berry-like fruits, each of which have several chewy seeds. The fruit is edible, but insipid. However, horticultural varieties are often delicious. The fairly smooth bark of larger trees has subtle silvery-gray vertical striping. Frequent.



The Elm Group

This includes three related groups, the *Ulmaceae* (elms), *Cannabaceae* (hackberries), and *Moraceae* (mulberries and Osage orange). Leaf bases tend to be very asymmetrical in the first two.

85. Slippery elm, *Ulmus rubra*: Also called red elm, it is more likely to be found on slopes than the American elm. The two are best distinguished by three characteristics. Slippery elms have dark reddish brown – almost black – buds that contrast with the whitish hairs on the twigs. The buds and twigs of American elm are uniformly light brown and do not contrast. A piece of the bark of the American elm plucked from the tree will show alternating layers of light and dark brown, while a piece of slippery elm bark will be a uniform light brown with no differentiation. Also, a slipper elm leaf, pulled apart, has long threads pulled from the veins; American elm does not. The inner bark of the slippery elm has long been used for coughs and sore throats. Common.

86. American elm, *Ulmus americana*: The rumor that the American elm is near extinction is greatly exaggerated. It is actually a very common species, preferring bottomlands and moist slopes. Although the larger trees have mostly been killed off by the Dutch elm disease, there are plenty of smaller trees that bear seed. It was formerly the overwhelming favorite as a street and yard shade tree because of its vase-like form with a high canopy that allowed plenty of air circulation and light beneath it. Sometimes trees can be seen with large branches that distinctively zigzag. American elm has strongly cross-grained wood that is almost impossible to split. Common.

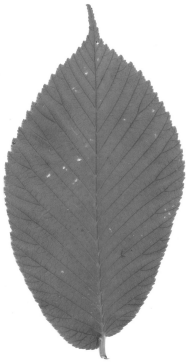
87. Hackberry, *Celtis occidentalis*: The hackberry leaf is asymmetrical like elm, but its venation is palmate (several main veins arising at the base), while elm venation is pinnate (like a feather). These trees are subject to small leaf galls. The fruits have a thin skin around a large rounded seed, but the skin is largely sugar and tastes similar to date sugar. This species is a large tree of mesic woods over limestone, with distinctive warty bark; you can see annual rings in the bark. Common.

88. Dwarf hackberry, *Celtis tenuifolia*: This species is a small tree found in prairie-like openings and sparsely wooded hilltops, often on limestone. It has smaller leaves with fewer teeth, and the bark is not warty. Fruit is similar to hackberry. Frequent.

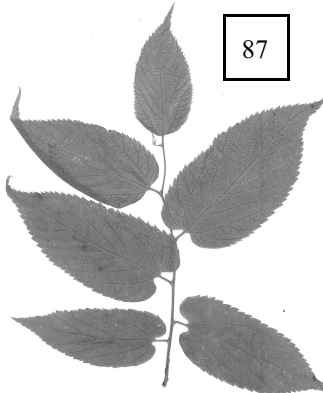
89. Red mulberry, *Morus rubra*: The red mulberry is a small forest tree. The leaves are seldom deeply lobed, and are hairy underneath. When they are lobed, as on young growth, there are only three lobes. The berries are edible and tasty. Trees are either male or female.. Frequent.

****90. White mulberry**, *Morus alba*: This is the mulberry tree often seen in the city. Some trees have white or pinkish fruit, but most have dark purple fruit, which is edible. The sidewalks underneath it and around it are stained with purple during fruiting season, in late June, from the falling berries and bird excrement. The leaves are often shiny, and are hairy only along veins underneath. It rarely escapes and is not invasive in Athens. Trees are male or female. Occasional.

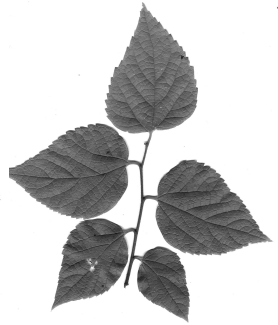
***91. Osage orange**, *Maclura pomifera*: This thorny mulberry-relative is often known for its bent and twisted branches, but it can grow to a fairly large, upright tree. The bark and wood are orangish. This species is native to a small area in northeast Texas and southeast Oklahoma, but was widely planted as a “living fence” before barbed wire was invented because of its ready growth and sharp thorns. This usage gained an alternate name, “hedge-apple.” The fruit resembles a large green orange, but is more deeply wrinkled, and is sometimes compared to a brain. It is reputed to repel spiders and roaches. Frequent.



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Betulaceae, the birch family:

92. Hop-hornbeam, *Ostrya virginiana*: This small tree is found mostly on upper ridge sides. The fruit clusters hanging on the tree look much like hop flowers. The leaves are very similar to ironwood (below) but are downy-hairy. The bark is finely shredding, the only tree with shredding bark with so fine a texture. It is one of the hardest woods in our area (along with ironwood, shagbark hickory and flowering dogwood). Common.

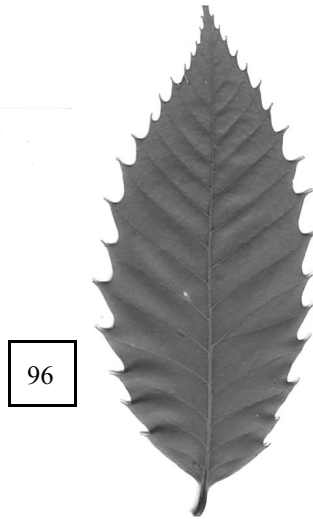
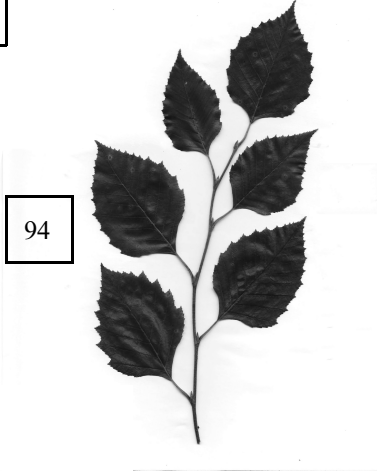
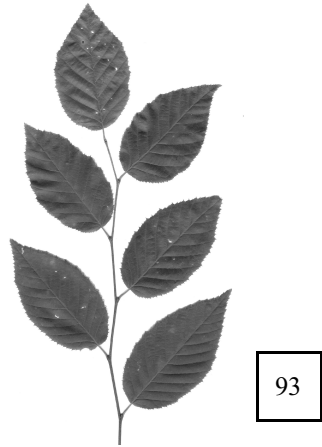
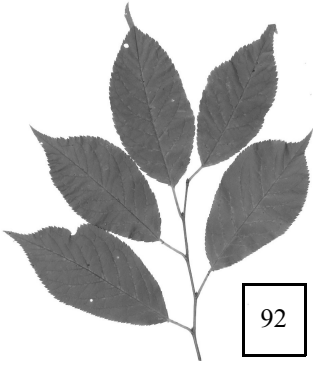
93. Ironwood, *Carpinus caroliniana*: This small tree seems ubiquitous anywhere close to a stream. It has a peculiar trunk and bark, with smooth light gray bark and fluted surface that looks like muscles, hence the alternate name musclewood. It's also called blue beech, musclewood, and hornbeam. It's one of the hardest woods in our area (along with hop-hornbeam, flowering dogwood and shagbark hickory). The leaves are similar to hop-hornbeam but are smooth, usually a little smaller, and often shiny. Common.

94. River birch, *Betula nigra*: This is a riparian species, at streamsides and floodplains. It's the only native birch in the Strouds Run area, although the sweet birch, *Betula lenta*, is found in the far western part of Athens County. River birch is used in landscaping, and is readily identified by its peachy-pink peeling bark, with leaves similar to the above two species. Occasional.

Fagaceae, the Beech (Oak) Family:

95. American beech, *Fagus grandifolia*: Beeches are well-known for their smooth gray bark that people love to carve their initials in. It is an important mast tree for the nuts it produces. It is a very shallow-rooted tree that casts a dense shade when grown in the open. The wood, however, is splintery, prone to rot, and defies a good finish. For this reason, before power chainsaws, loggers would not bother cutting the beeches because they had almost no value, so there are still large, ancient beeches remaining from those days. Common.

96. American chestnut, *Castanea dentata*: This tree is close to extinction because of the chestnut blight, a fungal disease brought in on Asian chestnut logs in 1904. There are two existing trees near the dam, and the only other American chestnuts now known from the Strouds Run area are five saplings that were planted in the early 2000s. These saplings were from the American Chestnut Cooperators Foundation, which is breeding seednuts from the most blight-resistant American chestnuts available. So far, these saplings are all healthy. There was formerly a mature, fruiting tree near the Chestnut Trail, but it died in the 1990s, leaving a single descendant that has since died. The trees planted at Strouds Run are at the Pioneer Cemetery trailhead, near Shelterhouse 3, by the entrance to Swimming Beach Road, and across from the campground road on State Park Road. There are also a couple of trees at West State Street Park in Athens. The American chestnut was once one of the most important forest trees in eastern North America. It is estimated that one in four trees in the Appalachian belt were chestnuts, and the species totaled some four billion trees. It was an extremely important economic resource in early America, providing lumber, tannin, and nuts. It is thought that Native Americans spread the tree for its food value. The nuts, termed "mast" along with other native nuts and acorns, were an important wildlife food. Rare.



Oaks, genus *Quercus*

The oaks are divided into two groups: white oaks and black oaks (including shingle-type oaks).

White oaks (subgenus *Leucobalanus*)

97. Post oak, *Quercus stellata*: This tree, which specializes in dry sites with poor soil, looks like a miniature white oak. Its lumber is similar but usually too knotty to be of high quality. It's great, however, for fence posts. The leaves often somewhat resemble a Maltese cross. Occasional.

98. White oak, *Quercus alba*: This tree is the poster child of North American oaks. It can grow to be 800 years old under exceptional circumstances. 500 years is not uncommon. Open-grown pasture trees are often called "wolf trees" and can often be found in the woods after the younger trees have grown up around them. The largest white oak in the county (near Millfield) has a trunk over eight feet in diameter. The wood is of very high quality, and has exceptional rot resistance due to the pores in the wood becoming blocked against disease. The bark is light gray, and can peel somewhat from the top, bottom, or sides. It sometimes has the white bark fungus commonly seen on white ash. Common.

99. Chinquapin (or Chinkapin) oak, *Quercus muehlenbergii*: Also known as yellow oak, its bark is very similar to white oak but somewhat yellower, while its leaves are very similar to chestnut oak but usually with slightly sharper teeth. It is a limestone lover. Occasional.

100. Chestnut oak, *Quercus prinus*: Also known as mountain oak or rock oak, it usually has very distinctive bark with very coarse, hard, dark ridges. This is a ridgetop tree, living hundreds of years, growing slowly, where other trees often do not thrive. It can sometimes be found perched atop a huge boulder, as at Copperhead Point on the Rockhouse Trail. Common. Sometimes listed as *Quercus montana*.

Red (black) oaks (subgenus *Erythrobalanus*)

101. Black oak, *Quercus velutina*: Once also known as quercitron, it was much used as a source of tannin and of yellow dye. It is a large tree, with the largest specimen in Athens County at Strouds Run, on the Rockhouse Trail, having a trunk about 6 ½ feet in diameter. The leaves are rather variable, and can be huge on young saplings. It has a very rough dark bark. Common.

102. Scarlet oak, *Quercus coccinea*: This tree has bark intermediate between the black and red oaks, looking like the black oak towards the base and like the red oak farther up in the tree. It often has small dead branches hanging onto the trunk longer than in black or red oak. It is often found on ridgetops or high on ridges. The leaves are more deeply cut than any other of the red oak group, with large rounded sinuses. Frequent.

103. Red oak, *Quercus rubra*: This is the giant of the red oak group, and has the highest quality lumber. The lumber is especially excellent for durable indoor flooring and furniture. The largest specimen in Athens County is on the Blair Preserve, with a trunk 5 ½ feet in diameter. It is usually found on the moister parts of ridge sides and along stream valleys, and often will perch atop a rock next to a stream. Common. Sometimes listed as *Quercus borealis*.

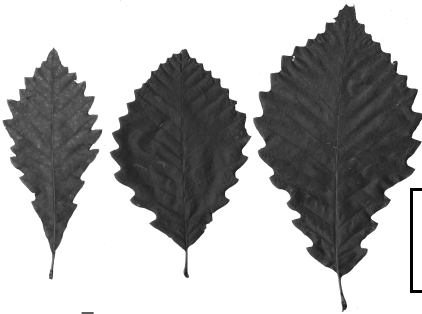
104. Shingle oak, *Quercus imbricaria*: This tree gets its name from the use of its lumber to make "shake" shingles. Unlike other local oaks, the leaves are not lobed or toothed, but have entirely smooth margins. It usually grows in moister soils. Occasional.



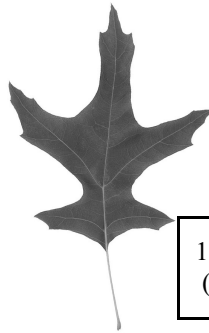
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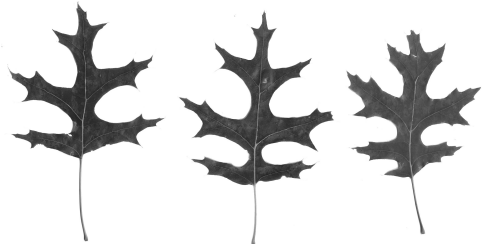


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105. Pin oak, *Quercus palustris*: This is a wetland tree, and will not do well in clay soils or limestone soils, where it often is rather yellowish from iron chlorosis. This is an iconic tree of many city boulevards, because of its classic pyramid shape when young and huge, straight trunks when older. It is a shallow-rooted tree and usually only lives about a hundred years. Occasional.

106. Shumard oak, *Quercus shumardii*: This oak is rare in this area, being generally a more southern and western species. It resembles a cross between a red oak and a scarlet oak, but the buds are distinctively gray and completely lack hairs. Rare.

107. Bigtooth aspen, *Populus grandidentata*: The quaking aspen, *Populus tremuloides*, abundant in the north but absent from our area, is iconic, but few people know its close relative, the bigtooth aspen. The leaves of this tree twinkle in the breeze, too. The bark is an interesting light tan-gray, and sometimes forms peculiar pyramid-like or diamond shapes, something that no other native tree does. Common in young woods but usually short-lived.

108. Cottonwood, *Populus deltoides*: This is a riparian tree that sometimes also grows on uplands. It can withstand heavy flooding, and the roots will tolerate both heavy filling of soil over them and soil removal. It has light, soft wood. When the seeds fall with their downy “umbrellas,” the result can resemble a layer of cotton on the ground. Occasional.

109. Basswood, *Tilia americana*: Rap on the trunk of this tree, and it will often have a somewhat hollow sound. The wood is light and not rot-resistant, but it is fine-grained and excellent for carving. The leaves are uneven at the base, often rather large, and whitish beneath. Frequent.

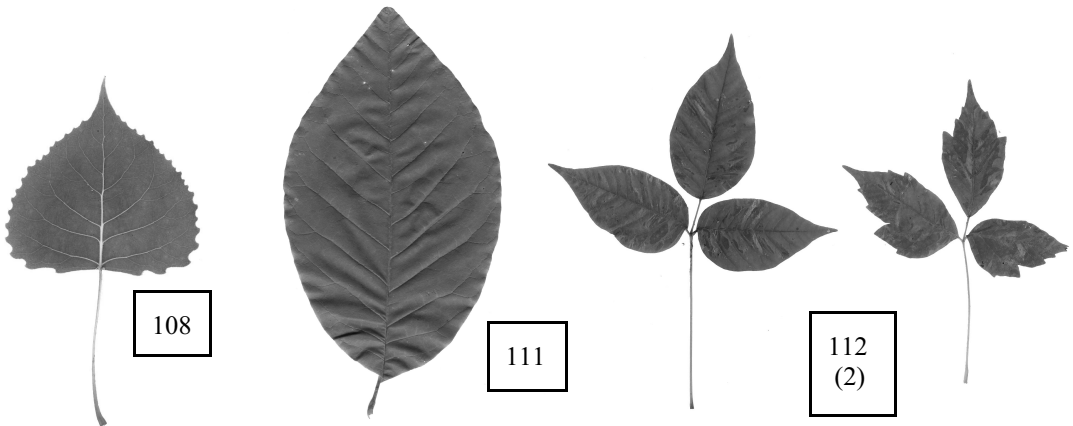
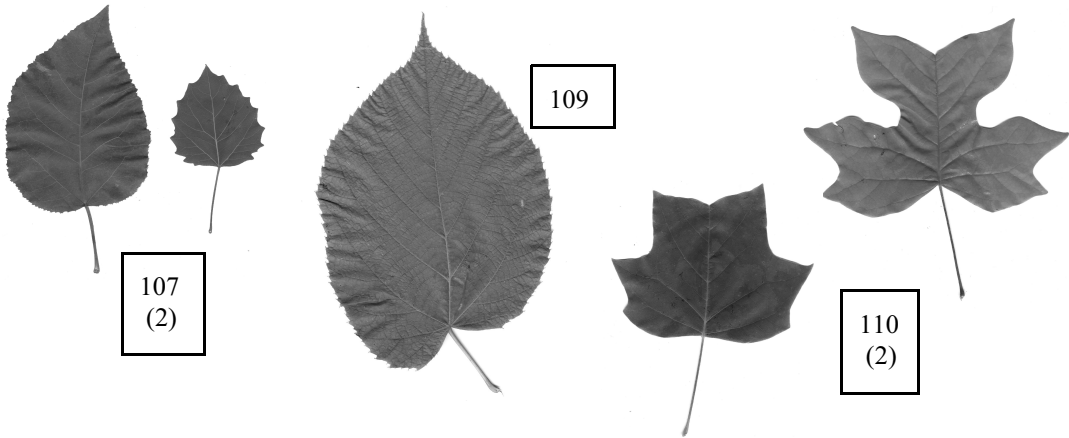
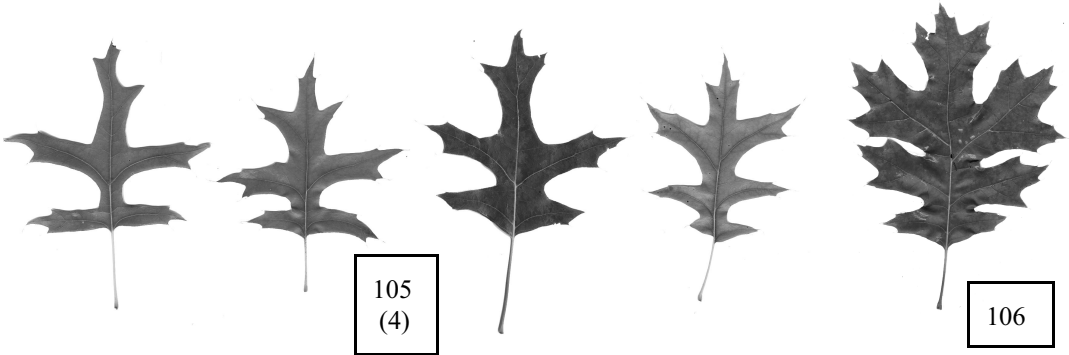
110. Tuliptree, *Liriodendron tulipifera*: This is known in the lumber trade as yellow poplar, but it is not a close poplar relative. It is allied to the magnolias. Leaves can be quite large. The lumber heartwood has a distinctive greenish cast, and is lightweight but exceptionally fine-grained and warp-resistant if kept dry. As a result, it is the wood of choice for pipe organ building. The roots have a spicy scent. Common.

111. Cucumbertree, *Magnolia acuminata*: Our only native magnolia in Athens County. The wood is sometimes included with tuliptree wood as “yellow poplar.” The flowers, unlike most magnolias, are green and not showy. The name comes from the resemblance of the green seed clusters to cucumbers. The leaves sometimes have heart-shaped bases. Like the tuliptree, the roots have a spicy scent. It is known from Strouds Run only from one grove in the Cucumbertree Valley. Occasional.

Broadleaf Plants with Alternate Compound Leaves

Alternate Compound-Leaved Vines

112. Poison ivy, *Toxicodendron radicans*: This vine is nasty but beautiful. Growing in the open with glossy leaves, it looks dressy but is the source of urushiol oil that raises itchy blisters in many people. “Leaves of three, let it be; berries white, poisonous sight.” Bladdernut and boxelder also may have three leaflets, but they have opposite leaves. Raspberries and blackberries also may have three leaflets, but they usually have thorns. The berries of poison ivy aren’t true white, but a light grayish color. Every part of the plant is poisonous to most people, but birds relish the berries as a high-fat winter food. This plant is variable in form, growing as a low groundcover, a shrub, and a high-climbing vine on both trees and cliffs. The leaflets may be smooth, with no teeth, or it may have a few large teeth, or it may be deeply lobed. The lobed form is often called “poison oak,” though the true poison oak is restricted to western North America. Abundant.



113. Virginia creeper, *Parthenocissus quinquefolia*: This is one of our most common vines, and has palmate leaves with five leaflets. The only other woody plant with similar leaves is the buckeye, but it is a tree, not a vine, and its leaves are opposite. Unlike other vines, the Virginia creeper clings to the surface of wood and other hard surfaces with tiny disks that do not penetrate, and so is a safe vine to grow directly on masonry walls, where it can perform an important economic task by cooling the wall in summertime. Its close relative Boston ivy, *Parthenocissus tricuspidata*, shares this characteristics (not to be confused with English ivy, *Hedera helix*, which has rootlets that dig into mortar and gradually destroy it). Common.

114. Kentucky wisteria, *Wisteria macrostachya*: We are at the northern limit of the range for this wisteria. It is a twining vine, with panicles of purple flowers, but the panicles are much smaller than the Japanese or Chinese wisterias so often grown in gardens. Rare.

Alternate Compound-Leaved Shrubs

The Rose Family

*****115. Multiflora rose**, *Rosa multiflora*: This nasty customer, practically unknown a century ago, has become almost ubiquitous throughout the eastern United States, often making outdoor hikes into a miserable experience. It is a vigorous and highly invasive exotic, thriving in the open, but persisting weakly in mature forest, just waiting for the next opening in the canopy. As an edge species, it can climb high into trees. It is the only rose in our area that has heads of many small white flowers. The thorns are wicked and plentiful. Fortunately, the rose rosette virus has begun attacking it. If you see plants with reddened, somewhat shriveled foliage, that's the disease, carried from plant to plant by mites. Feel free to pick these and deposit them on another multiflora rose. Abundant.

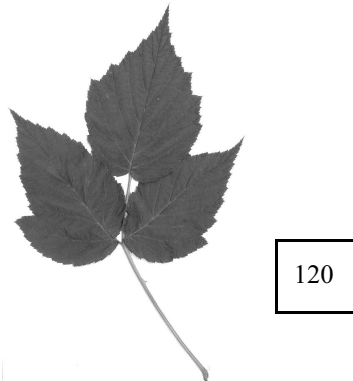
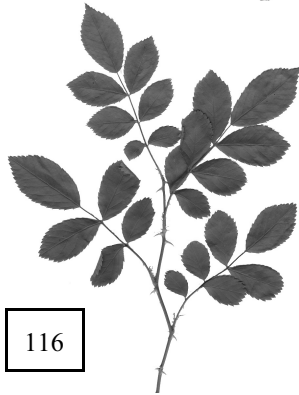
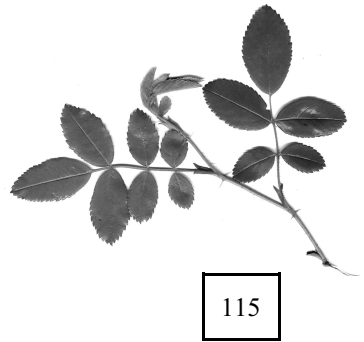
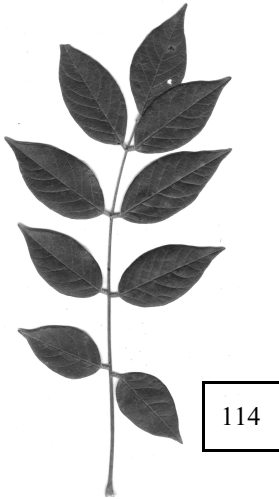
116. Carolina rose, *Rosa carolina*: This is the smaller of our two native roses, preferring ridgetops. It has large pink flowers borne singly, and is usually no more than two feet tall. The thorns are usually almost hairlike, sometimes becoming stouter, but most often sticking straight out from the stem (multiflora rose thorns are usually curved back like blackberry thorns). Frequent.

117. Prairie rose, *Rosa setigera*: This native rose has pink flowers almost identical to the Carolina rose, but they may be several to a cluster, and the plant is taller and much more robust with correspondingly more robust thorns. *Rosa setigera* is unusual in often having only three leaflets, sometimes five. It prefers wetter areas than the Carolina rose. Occasional.

****118. Dog rose**, *Rosa canina*: This is an old horticultural rose (not illustrated) only known from a couple of locations at Strouds Run. It has double (many-petaled) pink flowers. It is the only pink rose with double flowers; all others are natives. Occasional.

*****119. Wineberry**, *Rubus phoenicolasius*: This is an invasive exotic, but an attractive one with tasty berries. It has red, sometimes orange, raspberries. The trifoliate leaves have a distinctively larger terminal leaflet, very glaucous underneath, but the easy identification mark is the dense layer of reddish hairlike spines on the stem. Frequent.

120. Black raspberry, *Rubus occidentalis*: This berry cane can be readily distinguished by the white undersides to the leaves and the glaucous white frosting on purple canes. It bears black raspberries in late June - mid July. Abundant.



121. Dewberry, *Rubus flagellaris*: This low shrub is actually a small, slender blackberry with few spines. The leaves are trifoliate, and the berries usually look like partial berries, not fully rounded, with fewer actual berries. Common.

122-123. Blackberry, *Rubus pensilvanicus* and *Rubus allegheniensis*: These brambles often have five leaflets with a palmately-compound pattern, but may have three leaflets. They must be distinguished by details in the flowers. The berries typically ripen in early to mid July. Abundant.

The Sumacs

124. Smooth sumac, *Rhus glabra*: This sumac has a pink or red central axis in the long pinnately-compound leaves. The leaves are not shiny. The berry clusters bright red, loose when first formed, then drawing in to make a tight cluster when fully ripe. They can be used as spice in cooking or to make “Indian lemonade.” Soak the dried, ripe berry cluster in water, then rub the berries in the water. Strain the water through a cloth to remove the hairs, then sweeten and chill. Common.

125. Shining sumac or winged sumac, *Rhus copallina*: This sumac has long pinnately-compound leaves with small wings of leaf tissue along the midrib. The leaves are usually dark green and shiny. Although the flowers are greenish-yellow, it is the most showy of the sumacs when in flower. It has the least showy fruit of the sumacs. Frequent.

Alternate Compound-Leaved Trees

*****126. Tree-of-heaven or stinktree, *Ailanthus altissima*:** This is a noxious invasive exotic that reproduces freely both by seed and by root sprouts. Cut down one, and within weeks there is a thicket of saplings from the roots. The foliage, when rubbed, gives off an unpleasant odor. It does have the merit of being able to grow in the worst of polluted, industrial urban conditions, but does not belong in our forests. Trees are either male or female. Occasional – so far.

The pea family, Fabaceae

This family also includes the redbud (above in alternate entire-leaved trees).

127. Kentucky coffeetree, *Gymnocladus dioica*: This tree has the largest leaves of any native woody plant. They are doubly compound, and may be three feet long or longer, and about two-thirds as wide. It has distinctive scaly bark. It is a clonal colonizer, reproducing from root sprouts. It is only known from one colony on the east side of Crumley Ridge at Strouds Run. Trees are usually either male or female. Rare.

128. Honey locust, *Gleditsia triacanthos*: This tree has clusters of long, branched thorns sprouting out of its trunk, up to twenty feet above the ground. A thornless variety is grown as a landscaping tree. The leaves have small elliptical leaflets and may be singly or doubly-compound, varying even on the same branch. The terminal leaflet is usually missing. The seed pods are bean-like. Frequent.

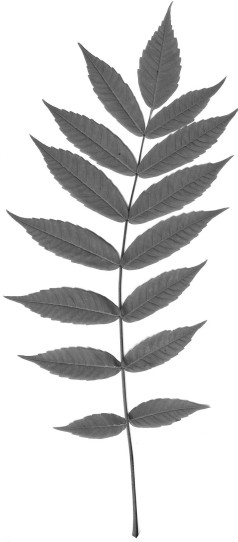
***129. Black locust, *Robinia pseudoacacia*:** This tree was widely planted for use as fenceposts because of its rot-resistant lumber. It is now common over a larger area than originally. There are typically two stout thorns at the base of each leaf but they are often absent. It is beautiful in flower, with clusters of edible and fragrant white pea-like flowers in May to June. The leaves are always singly-compound. In late summer, the tree is often disfigured by leaf miner insects. Common.



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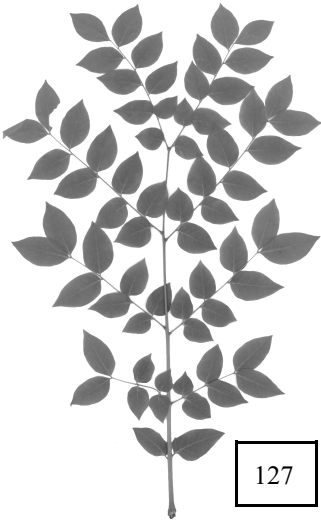
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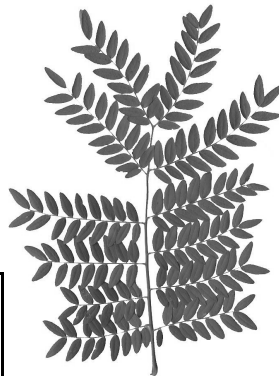
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The walnut family, Juglandaceae

All members of this family have pinnate leaves, with number of leaflets ranging from 5 to 23.

130. Black walnut, *Juglans nigra*: This tree thrives in riparian areas but will grow in a variety of sites. However, it is intolerant of shade and does not like growing in a mature canopy. The terminal leaflet (the single leaflet at the end of the leaf) is usually missing except on young saplings. Rubbing leaves or twigs gives the typical black walnut smell. The nuts are round, encased in a tough, smelly green fleshy covering that turns deep brown and stains badly, and has been used as a dye. Nutmeats are oily and strong-tasting. Nuts are harvested locally to process for commercial sale. The foliage often has a yellowish cast, and the tree usually looks rather open. Common.

131. Butternut, *Juglans cinerea*: This tree has suffered greatly from a fungal disease. It is smaller than the **black walnut**. The nuts are similar in appearance to black walnut, but oval instead of round, and are sweeter-tasting. It can be distinguished from the black walnut by the leaves usually having a terminal leaflet. Vigorous young shoots can have up to 23 leaflets, but leaves normally have no more than 19. The bark also usually has lighter stripes on the ridges among the dark valleys. Rare.

132. Bitternut hickory, *Carya cordiformis*: This hickory has bitter nuts, hence the name. Ironically, it is the local hickory that is most closely related to the pecan. During most of the year, this tree is easily identified by the sulfur-yellow terminal buds, and the buds are more slender than other hickories. This hickory has more leaflets than any of the other native hickories, with usually nine leaflets, as well as a smoother, tighter bark. Sometimes the leaflets are narrow. Common.

133. Shagbark hickory, *Carya ovata*: Our most conspicuous hickory, growing in moist to dry woods throughout the area. It is readily identified by the shaggy bark, which peels from the top or bottom – mostly bottom – in long, coarse, hard strips. The bark of this tree is important habitat for hibernating bats. The nuts are probably the best of any native hickory other than the kingnut. The leaves have five leaflets and there is a distinctive tuft of hairs on the tip of each tooth on the leaf. Common.

134. Kingnut, *Carya laciniosa*: Also called shellbark hickory, this looks similar to shagbark. It prefers much more moist (and acid) environments such as stream valleys, the bark shows broader peeling plates, the leaves usually have seven leaflets (sometimes five, sometimes nine), and the branches are smooth, not hairy. Frequent.

135. Mockernut hickory, *Carya tomentosa*: This tree gets its names because the nuts are fairly large, but it's mostly shell, with tiny (but tasty) nutmeats. Only the bitternut has more leaflets in its leaves; this species usually has seven, but as can be seen from the illustrated leaf, it sometimes has nine. The bark has a stronger basket-weave appearance than other hickories. Frequent.

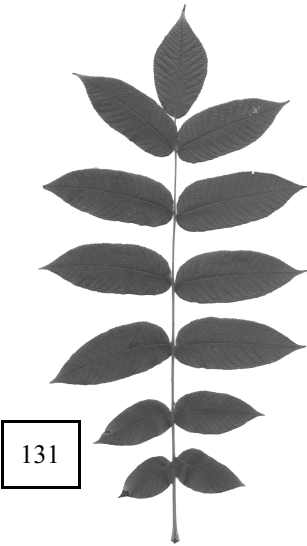
136. Smallnut hickory, *Carya ovalis*: This species (not illustrated) is very similar to pignut, but the nuts are very small and partially split along seams. It may have five or seven leaflets. Occasional. Some consider this only to be a variety of the pignut (and is also called sweet pignut or red hickory).

137. Pignut hickory, *Carya glabra*: This hickory has five leaflets, like the shagbark, but leaves are very smooth and leaflets are more slender, and the tree has a tighter bark. The terminal buds are the smallest of the hickories, and the leaves are usually the smallest. The nuts are variable, ranging from tasty to unpleasant, and the husks remain tight, usually without splitting. This tree prefers ridge tops. Common.

138. Pecan, *Carya illinoensis*, is also illustrated. There is one tree growing at the Athens Community Center and two near Morton Hall on the Ohio University campus.



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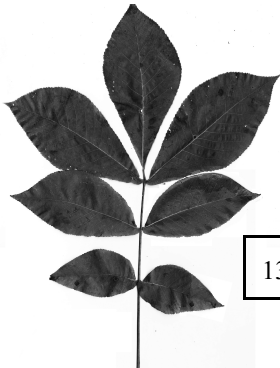
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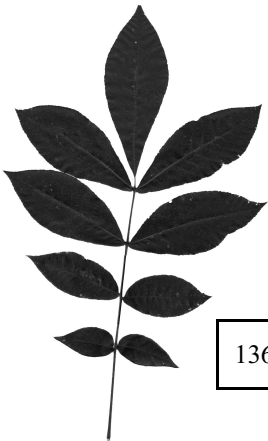
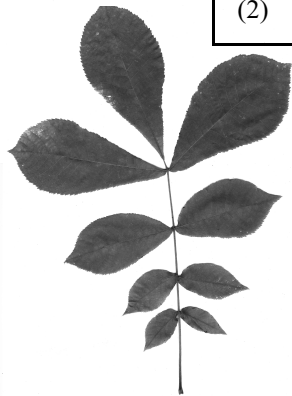
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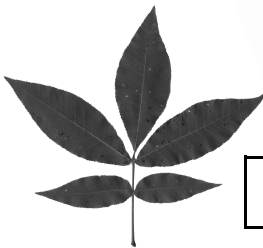
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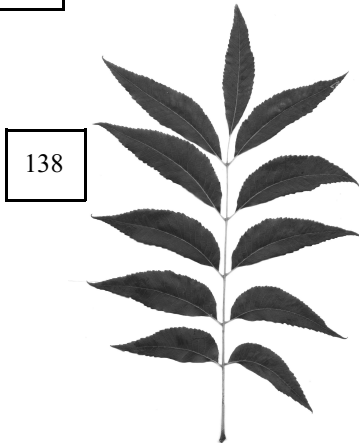
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Table for Identification of Hickories and Walnuts

Species	Common name	Leaf lets	Hairy twigs/ stems	Bark	Bud	Nut Husk
<i>Carya glabra</i>	pignut hickory	5	No, very smooth	Tight	Small	Thin, does not split
<i>C. ovata</i>	shagbark hickory	5	Yes, very	Very shaggy	Large	Thick, quickly splits to 4
<i>C. ovalis</i>	smallnut hickory	5-7	No	Tight to rough	Medium	Thin, splits to 4
<i>C. laciniosa</i>	shellbark hickory, kingnut hickory	(5)- 7- (9)	No	Shaggy	Medium	Thick, splits to 4 or 6
<i>C. tomentosa</i>	mockernut hickory	(5)- 7- (9)	Yes, very	Rough, may be slightly shaggy	Medium	Thick, splits to 4
<i>C. cordiformis</i>	bitternut hickory	(7)- 9	No	Tight	Slim, yellow	Medium, curls up at seams
<i>C. illinoensis</i>	pecan	9-17	Yes	Tight	Small	Thin, elongated
<i>Juglans cinerea</i>	butternut, white walnut	11- 19	Yes or no	Striped (light ridges)	Flattened, downy	Thick, oval, no split, stains
<i>J. nigra</i>	black walnut	(10) 14- 23	Yes or no	Dark brown	Medium	Thick, round,, no split, stains badly
<i>J. regia</i>	English walnut, Carpathian walnut	(5)- 9	No		Small	Thin, splits

