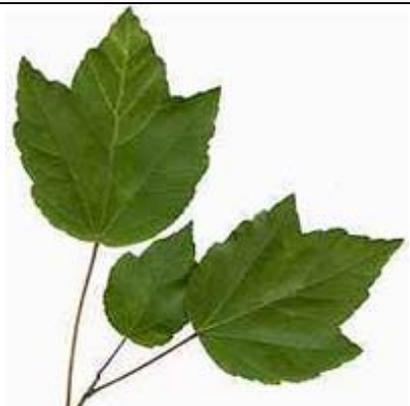


Gladys Russell Wildlife Preserve Tree Identification Course

As of March 2011

Note: Tree numbers are subject to change as we find more varieties to add to the collection.

1	Eastern Red Cedar
	<p>Red cedar is a slow-growing, narrow-leaved evergreen growing in a narrow pyramidal form to 45 feet. Native to North America east of the Rocky Mountains, and isolated populations in Oregon, this common tree was revered by Native Americans for its many and varied uses.</p> <p>The evergreen tree is shaped like a pyramid or column, with reddish-brown to grayish colored bark that is fibrous and shedding. Branches are usually reddish-brown. Leaves are opposite, simple, green or blue-green, closely appressed and overlapping the leaf above, scale-like, and 0.2-0.3 cm (1/16-1/8") long or needlelike and 0.6-1.2 cm (1/4-1/2") long. Male and female cones are on separate trees. The staminate (male) cones are yellowish-brown, papery, solitary at the tips of branchlets, ovoid to ellipsoid, and 0.2-0.4 cm (1/16-1/8") long. The ovulate (female) cones are solitary at the tips of branchlets, dark blue or bluish-purple, waxy and berrylike, 0.4-0.7 cm (3/16-1/4") long. The female cones ripen from September through October. There are 1-3 seeds per cone. Red cedar seeds are yellow-brown and round, 2-4 mm in diameter, ridged near the base, and sometimes shallowly pitted.</p>
2	Tulip Poplar
	<p>Tulip tree, also commonly known as yellow poplar, tulip-poplar, white-poplar, and whitewood, is one of the most attractive and tallest of eastern hardwoods. It is fast growing and may reach 300 years of age on deep, rich, well-drained soils of forest coves and lower mountain slopes. The wood has high commercial value because of its versatility and as a substitute for increasingly scarce softwoods in furniture and framing construction. Yellow-poplar is also valued as a honey tree, a source of wildlife food, and a shade tree for large areas.</p> <p>Tulip tree thrives on many soil types with various physical properties, chemical composition, and parent material. Within the major portion of the range of tulip tree, these soils fall in soil orders Inceptisols and Ultisols. Exceptionally good growth has been observed on alluvial soils bordering streams, on loam soils of mountain coves, on talus slopes below cliffs and bluffs, and on well-watered, gravelly soils. In general, where yellow-poplar grows naturally and well, the soils are moderately moist, well drained, and loose textured; it rarely does well in very wet or very dry situations.</p>

3	Black Locust
	<p>The wood of black locust is strong, hard, and extremely durable. although considered a weed or invasive in some regions, the tree also serves as a good erosion control plant on critical and highly disturbed areas, due to its ease of establishment, rapid early growth and spread, and soil building abilities.</p> <p>This species has been planted outside its natural range, and can crowd out other plants, particularly in sandy soils. This plant is considered noxious and/or invasive in some states, and may displace desirable vegetation if not properly managed.</p> <p>Black locust has a shallow, aggressive root system. The bark of black locust is deeply furrowed and is dark reddish-brown to black in color. It has an alternate branching pattern, which creates a zigzag effect. A pair of sharp thorns grows at each node. They are ½ to ¾ inches long, and very stout.</p> <p>The pinnately compound leaves are 8 to 14 inches long, with 7 to 19 short stalked leaflets. These dull green leaflets are ovoid or oval, 1 to 2 inches long, thin, scabrous above and pale below.</p> <p>The separate male and female plants have sweetly fragrant flowers that are creamy white with five petals (bean-like) arranged in a pyramidal spike. They usually bloom in May or June. Heavy seed production can be expected annually or biannually. The legume type seed is produced in a flat, brown to black pod, which is 2 to 4 inches long. There is an average of 25,500 seeds per pound. although black locust is a good seed producer, its primary means of spread is by both rudimentary and adventitious root suckers.</p>
4	Red Maple
	<p>Red Maple (also known as Swamp or Soft Maple), is one of the most common and widespread deciduous trees of eastern North America. It ranges from the Lake of the Woods on the border between Ontario and Minnesota, east to Newfoundland, south to near Miami, Florida, and southwest to east Texas. Many of its features, especially its leaves, are quite variable in form. At maturity it often attains a height of around 15 m (50 ft). It is aptly named as its flowers, petioles, twigs and seeds are all red to varying degrees. Among these features, however, it is best known for its brilliant deep scarlet foliage in autumn.</p> <p>Over most of its range, red maple is adaptable to a very wide range of site conditions, perhaps more so than any other tree in eastern North America. It can be found growing in swamps, on poor dry soils, and most anywhere in between. It grows well from sea level to about 900 m (3,000 ft).</p>

5	Flowering Dogwood
	<p>Flowering dogwood is a small deciduous tree growing to 10 m (33 ft) high, often wider than it is tall when mature, with a trunk diameter of up to 30 cm (1 ft). A 10-year-old tree will stand about 5 m (16 ft) tall. The leaves are opposite, simple, oval with acute tips, 6–13 cm long and 4–6 cm broad, with an apparently entire margin (actually very finely toothed, under a lens); they turn a rich red-brown in fall. The flowers are individually small and inconspicuous, with four greenish-yellow petals 4 mm long. Around 20 flowers are produced in a dense, rounded, umbel-shaped inflorescence, or flower-head, 1–2 cm in diameter. The flower-head is surrounded by four conspicuous large white, pink or red "petals" (actually bracts), each bract 3 cm long and 2.5 cm broad.</p>
6	Sassafras
	<p>Sassafras trees grow from 9.1–18 m (30–59 ft) tall and spreading 7.6–12 m (25–39 ft) The trunk grows 70–150 cm (28–59 in) in diameter, with many slender branches, and smooth, orange-brown bark. The branching is sympodial. The bark of the mature trunk is thick, red-brown, and deeply furrowed. The wood is light, hard, and sometimes brittle. All parts of the plants are very fragrant. The species are unusual in having three distinct leaf patterns on the same plant, unlobed oval, bilobed (mitten-shaped), and trilobed (three pronged); rarely the leaves can be five-lobed.[They have smooth margins and grow 7–20 cm long by 5–10 cm broad. The young leaves and twigs are quite mucilaginous, and produce a citrus-like scent when crushed. The tiny, yellow flowers are five-petaled and bloom in the spring; they are dioecious, with male and female flowers on separate trees. The fruit are blue-black, egg-shaped, 1 cm long, produced on long, red-stalked cups, and mature in late summer.</p>
7	Sugar Maple
	<p>Sugar maple, sometimes called hard maple or rock maple, is one of the largest and more important of our hardwoods. It grows on approximately 31 million acres, or 9 percent of the hardwood forests in midwest and northeast North America.</p> <p>Sugar maple grows only in regions with relatively with cool, moist climates. They grow best with ranges in temperature from -40° F. in the north to 100° F. in the southwestern areas. Occasional extremes may be more than 20° F. lower or higher than these. It is expected the current man-made rise in global temperature will be deleterious to the species.</p> <p>The fruit of the sugar maple, called a samara, is a double-winged, papery seed-bearing fruit, commonly called a "helicopter" or "whirlybird." The aerodynamic properties allow the seeds to be dispersed, in a fresh breeze, more than 100 meters (330 feet) from the parent tree. A mature sugar maple can produce between 3,000 and 9,000 pounds of seeds.</p>

8	Norway Spruce
	<p>Norway Spruce can grow 80 to 100 feet tall and spread 25 to 40 feet, though some listed cultivars are shrublike. Small-diameter branches sweep horizontally from the straight trunk which can grow to four feet thick. Branchlets droop from the branches toward the ground in a graceful, weeping fashion forming a delicate pyramid. On very old specimens the lower branches increase to 12" or more in diameter and the top becomes open. Many small-diameter roots originate from the base of the trunk and they are often found fairly close to the surface of the soil. The root system is shallow and often dense, particularly close to the trunk which makes growing grass difficult.</p> <p>Norway spruce wood is strong, soft, straight- and fine-grained, and easily worked. It is not durable in contact with soil. It is widely used for construction, pulp, furniture, and musical instruments. Norway spruce is one of the most common and economically important coniferous species in Europe and Scandinavia. In Maine, thinned material and standing dead Norway spruce produced pulp of good strength as reported in a study of the pulp potential of seven softwoods.</p>
9	Eastern White Pine
	<p>White Pine bark darkens and thickens as the tree ages, is smooth and gray on young growth. It becomes gray-brown, deeply furrowed with broad ridges of irregularly rectangular, purple-tinged scaly plates. Branches are whorled, few and spreading, with slightly upturned tips. In closed stands, trunks are free of branches over 2/3 of their length. Twigs are slender, flexible, pale red-brown, with rusty hairs when young; aging gray and smooth.</p> <p>Needles soft, flexible, blue-green; 2"-4" long, 3-sided, in bundles of five. Evergreen. Buds are heavily resinous and sticky, aromatic. Cones are slender and thornless, 3"-10" long and tapering; each scale usually bears two winged seeds as do all native pines. Roots are widespreading and moderately deep, without a distinct taproot.</p>
10	Shiny Sumac
	<p>Shiny sumac is often cultivated, where it is well-suited to natural and informal landscapes because it has underground runners which spread to provide dense, shrubby cover for birds and wildlife. This species is valued for ornamental planting because of its lustrous dark green foliage which turns a brilliant orange-red in fall. The fall color display is frequently enjoyed along interstate highways, as the plant readily colonizes these and other disturbed sites. The tiny, greenish-yellow flowers, borne in compact, terminal panicles, are followed by showy red clusters of berries which persist into the winter and attract wildlife.</p> <p>The flowers are yellow, flowering in the summer. The fruit attracts birds with no significant litter problem, is persistent on the tree and showy.</p>

<p style="text-align: center;">11</p> 	<p style="text-align: center;">Russian Olive (Invasive Specie)</p> <p>Russian olive is a deciduous tree or shrub growing to 35 ft. (10.6 m) in height. Russian olive is easily recognized by the silvery, scaly underside of the leaves and slightly thorny stems. Leaves are alternate and 1/2 in. (1.3 cm) wide. Small, yellowish flowers or hard green to yellow fruits are abundant and occur on clusters near the stems in the spring and summer. Russian olive invades old fields, woodland edges, and other disturbed areas. It can form a dense shrub layer which displaces native species and closes open areas. Russian olive is native to Europe and western Asia and was introduced into North America in the late 1800s. Since then it has been widely planted for wildlife habitat, mine reclamation, and shelterbelts.</p>
<p style="text-align: center;">12</p> 	<p style="text-align: center;">American Elm</p> <p>Once a very popular and long-lived (300+ years) shade and street tree, American Elm suffered a dramatic decline in the 1950's with the infestation of Dutch elm disease, a fungus spread by a bark beetle. The wood of American Elm is very hard and was a valuable timber tree used for lumber, furniture and veneer..</p> <p>Leaf: alternate, simple, ovate to oblong, 3 to 5 inches long, 1 to 3 inches wide, margin coarsely and sharply doubly serrate, base conspicuously inequilateral, upper surface green and glabrous or slightly scabrous, paler and downy beneath.</p> <p>This native North American tree grows quickly when young, forming a broad or upright, vase-shaped silhouette, 80 to 100 feet high and 60 to 120 feet wide. Trunks on older trees could reach to seven feet across. The six-inch-long, deciduous leaves are dark green throughout the year, fading to yellow before dropping in fall. In early spring, before the new leaves unfold, the rather inconspicuous, small, green flowers appear on pendulous stalks. These blooms are followed by green, wafer-like seedpods which mature soon after flowering is finished and the seeds are quite popular with both birds and wildlife.</p>
<p style="text-align: center;">13</p> 	<p style="text-align: center;">Staghorn Sumac</p> <p>The Staghorn Sumac is a deciduous shrub to small tree native to eastern North America. It grows to 3–10 m tall, and has alternate, compound leaves 25–55 cm long, each with 9–31 serrate leaflets 6–11 cm long. The leaf petioles and the stems are densely covered in rust-colored hairs.</p> <p>Staghorn sumac is dioecious, and large clumps can form with either male or female plants. The fruit of staghorn sumac is one of the most identifiable characteristics, forming dense clusters of small red drupes at the terminal end of the branches; the clusters are conic, 10-20 cm long and 4-6 cm broad at the base. The plant flowers from May to July and fruit ripens from June to September. The foliage turns a brilliant red in autumn. The fruit has been known to last through winter and into spring. Staghorn sumac spreads using its seeds, and by spreading rhizomes. This makes it so the tree forms colonies, with the oldest plants in the center, and the younger plants radiating out. It grows quite aggressively.</p>

<p style="text-align: center;">14</p> 	<p style="text-align: center;">Sweet Gum</p> <p>Sweet Gum is native to the eastern United States and as far south as Guatemala. The four species in this genus have globose flowers and globose, pendulous fruits which are aggregates of beaked capsules. The leaves are much like Maple Leaves, but are alternate. Grows 80-100 feet.</p> <p>Sweet Gum is an important timber tree, second in production only to oaks among the hardwoods. It is used in furniture making, cabinetwork, veneer, plywood, pulpwood, barrels and boxes. In olden days, a gum was obtained by peeling the bark and scraping off the resinlike solid. The gum was used for chewing and as a base for medicines. "Storax", a fragrant resin used in perfumes, is made from a close relative, the Oriental Sweetgum.</p>
<p style="text-align: center;">15</p> 	<p style="text-align: center;">Black Cherry</p> <p>Black cherry, the largest of the native cherries and the only one of commercial value, is found throughout the Eastern United States. It is also known as wild black cherry, rum cherry, and mountain black cherry. Large, high-quality trees suited for furniture wood or veneer are found in large numbers in a more restricted commercial range on the Allegheny Plateau of Pennsylvania, New York, and West Virginia. Smaller quantities of high-quality trees grow in scattered locations along the southern Appalachian Mountains and the upland areas of the Gulf Coastal Plain. Elsewhere, black cherry is often a small, poorly formed tree of relatively low commercial value, but important to wildlife for its fruit.</p> <p>Black cherry and its varieties grow under a wide range of climatic conditions, and it tolerates a wide variety of soils, providing the summer months are cool and moist. In Canada, black cherry grows at sea level, while in the Appalachians it grows at 5,000 feet or more. It is thought black cherry will move its range northward and upward in response to man-made global warming.</p> <p>Flowering and Fruiting- Unlike domestic cherries, which flower before the leaves appear, black cherry flowers late in relation to leaf development. At the latitude of 41° to 42° N. in Pennsylvania and New York, black cherry flowers usually appear around May 15 to May 20. At that time, the leaves are nearly full-grown though still reddish in color (36). Flower development in other parts of the range varies with climate-from the end of March in Texas to the first week of June in Quebec, Canada.</p> <p>Black cherry flowers are white, solitary, and borne in umbel-like racemes. The flowers are perfect and are insect pollinated. Several species of flies, a flower beetle, and several species of bees, including the honey bee, work the blossoms for pollen and nectar. Self-pollination has been observed, but none of the self-pollinated flowers developed into viable seeds.</p>

<p style="text-align: center;">16</p> 	<p style="text-align: center;">Pin Oak</p> <p>The Pin Oak is a medium-sized deciduous tree growing to 18-22 m (60-70 ft) tall, with a trunk up to 1 m (3 ft) diameter. It has an 8-14 m (25-45 ft) spread. A 10-year-old tree will be about 8 m (25 ft) tall. The crown is broad conic when young, with numerous small branches radiating out from a central leader. When older, some upper branches become quite large and the central leader is lost, while the lower branches gradually droop downwards.</p> <p>The leaves are 5-16 cm long and 5-12 cm broad, lobed, with five or seven lobes. Each lobe has 5-7 bristle-tipped teeth. The sinuses are typically u-shaped and extremely deep cut. In fact, there is approximately the same amount of sinus area as actual leaf area. The leaf is mostly hairless, except for a very characteristic tuft of pale orange-brown down on the lower surface where each lobe vein joins the central vein. Overall autumn leaf coloration is generally bronze, though individual leaves may be red for a time. The acorns, borne in a shallow, thin cap, are hemispherical, 10-16 mm long and 9-15 mm broad, green maturing pale brown about 18 months after pollination. The acorn is unpalatable because the kernel is very bitter.</p> <p>A feature of Pin oak (shared by a few other oak species, and also some beeches and hornbeams) is the retention of leaves through the winter on juvenile tissue. Young trees under 6 m (20 ft) will often be covered with leaves year-round, though the leaves die in the fall, remaining attached to the shoots until the new leaves appear in the spring. As with many other oak species, dead Pin oak branches will stay on the tree for many years.</p>
<p style="text-align: center;">17</p> 	<p style="text-align: center;">Cotton Wood</p> <p>Eastern cottonwood, one of the largest eastern hardwoods, is short-lived but the fastest-growing commercial forest species in North America. It grows best on moist well-drained sands or silts near streams, often in pure stands. The lightweight, rather soft wood is used primarily for core stock in manufacturing furniture and for pulpwood. Eastern cottonwood is one of the few hardwood species that is planted and grown specifically for these purposes. Besides the typical eastern variety (var. <i>deltoides</i>), there is a western variety, plains cottonwood (var. <i>occidentalis</i>). Its leaves, more broad than long, are slightly smaller and more coarsely toothed than the typical variety.</p> <p>Eastern cottonwood is frequently planted to give quick shade near homes. Male clones, which have none of the objectionable "cotton" associated with seed, are preferred. Windbreaks are occasionally established with cottonwood as a component. Cottonwood is suitable for soil stabilization where soil and moisture conditions are adequate, as along stream or ditch banks. Deep planting permits reforestation of nonproductive fields with sandy soils having available moisture beneath a dry surface layer.</p>

18	Box Elder
	<p>The Box Elder (also known as Boxelder Maple or Maple Ash) is a small, usually fast-growing and fairly short-lived tree that grows up to 33–82 ft tall, with a trunk diameter of 30–50 centimetres (12–20 in), rarely up to 3.3 ft diameter. It often has several trunks and can form impenetrable thickets.</p> <p>The shoots are green, often with a whitish to pink or violet waxy coating when young. Branches are smooth, somewhat brittle, and tend to retain a fresh green colour rather than forming a bark of dead, protective tissue. The bark on its trunks is pale gray or light brown, deeply cleft into broad ridges, and scaly.</p> <p>Unlike most other maples (which usually have simple, palmately lobed leaves), the box elder leaves that usually have three to seven leaflets. Simple leaves are also occasionally present; technically, these are single-leaflet compound leaves. Only a box elder regularly displays more than three leaflets. It is sometimes confused with poison ivy.</p>
19	Pignut Hickory
	<p>Pignut hickory is a common but not abundant species in the oak-hickory forest association in the Eastern United States and Canada. Other common names are pignut, sweet pignut, coast pignut hickory, smoothbark hickory, swamp hickory, and broom hickory. The pear-shaped nut ripens in September and October and is an important part of the diet of many wild animals.</p>
20	Ash
	<p>White ash inhabits eastern North America. It grows from Nova Scotia west to eastern Minnesota and south to Texas and northern Florida. It is cultivated in Hawaii. The wood of white ash is economically important due to its strength, hardness, weight, and shock resistance. It is second only to hickory for use in the production of tool handles. Nearly all wooden baseball bats are made from white ash. The wood is also used in furniture, antique vehicle parts, railroad cars and ties, canoe paddles, snowshoes, boats, doors, and cabinets.</p> <p>White ash is an important source of browse and cover for livestock and wildlife. The samaras are good forage for the wood duck, northern bobwhite, purple finch, pine grosbeak, fox squirrel, and mice, and many other birds and small mammals. White ash is browsed mostly in the summer by white-tailed deer and cattle. The bark of young trees is occasionally used as food by beaver, porcupine, and rabbits.</p> <p>The tree is in danger of damage from the Emerald Ash Borer</p>

<p style="text-align: center;">21</p>	<p style="text-align: center;">Post Oak</p>
	<p>Post oak is an oak in the white oak group. It is a small tree, typically 40 to 50 feet (10–15 m) tall and a 35 - 50 foot spread, though occasional specimens reach 100 feet tall (30 m tall and 140 cm diameter). It is native to the eastern United States, from Connecticut in the northeast, west to southern Iowa, southwest to central Texas, and southeast to northern Florida. It is one of the most common oaks in the southern part of the eastern prairies.</p> <p>The leaves have a very distinctive shape, with three perpendicular terminal lobes, shaped much like a Maltese Cross. They are leathery, and tomentose (densely short-hairy) beneath. The branching pattern of this tree often gives it a rugged appearance. The acorns are one half to 1 inch (1.5–2 cm) long, and are mature in their first summer.</p>
<p style="text-align: center;">22</p>	<p style="text-align: center;">Shagbark Hickory</p>
	<p>The shagbark hickory grows well in both dry and wet soil conditions, but prefers well-drained soils such as those found here, on a bluff overlooking the West Branch of the DuPage River in Northern Illinois. This bluff is the site of a Late Woodland period aboriginal settlement responsible for the effigy burial mounds found nearby. Shagbarks are commonly found in association with oak trees. The wood is hard, strong, tough and elastic, and is used in handles for tools and in athletic equipment. The wood also makes excellent firewood, and often is used in smoking meat. Squirrels are extremely fond of the fruit of the hickory, and some humans also use the nuts in baked goods, cookies, cakes, salads and game dishes.</p> <p>Shagbark hickory, <i>Carya ovata</i> is probably the most distinctive of all the hickories because of its loose-plated bark. Common names include shellbark hickory, scalybark hickory, shagbark, and upland hickory. Shagbark hickory is evenly distributed throughout the Eastern States and, together with pignut hickory, furnishes the bulk of the commercial hickory. The tough resilient properties of the wood make it suitable for products subject to impact and stress. The sweet nuts, once a staple food for American Indians, provide food for wildlife.</p>
<p style="text-align: center;">23</p>	<p style="text-align: center;">White Oak</p>
	<p>White oak grows under a wide variety of climatic conditions, and a great variety of soil types. It is a large, long-lived tree often 80 to 100 feet in height and 36 to 48 inches in trunk diameter. Individual trees 150 feet high, 96 inches diameter and 600 years old have been recorded. In the open, white oak is characterized by a short stocky bole with a wide spreading rugged crown. In the forest, white oaks develop a tall straight trunk with a compact crown.</p>

24	Autumn Olive (Invasive Specie)
	<p>Autumn olive is a medium to large deciduous shrub. Its leaves are alternate, oval to lanceolate, untoothed and grow to 1-3 inches in length. The upper surface of the leaves is dark green to grayish-green in color, while the lower surface is covered with silvery white scales. The small, light yellow flowers are borne along twigs after the leaves have appeared early in the growing season. The fruits are small, round, juicy, reddish to pink, dotted with scales and are produced in great quantity.</p> <p>Autumn olive is native to China, Korea and Japan. It was first introduced to United States from Japan in 1830. In Indiana, as in the rest of the country, autumn olive was often used for the revegetation of disturbed habitats. It has also been sold commercially for roadsides, landscaping and gardens.</p>
25	Beech
	<p>American Beech is a species of beech native to eastern North America, from Nova Scotia west to southern Ontario in southeastern Canada, west to Wisconsin and south to eastern Texas and northern Florida in the United States. A related beech native to the mountains of central Mexico is sometimes treated as a subspecies of American Beech, but more often as a distinct species, Mexican Beech.</p> <p>It is a deciduous tree growing to 20–35 m (66–115 ft) tall, with smooth, silver-gray bark. The leaves are dark green, simple and sparsely-toothed with small teeth, 2.4–4.7 in long (rarely 5.9 in), with a short petiole. The winter twigs are distinctive among North American trees, being long and slender (0.59–0.79 in by 0.079–0.12 in) with two rows of overlapping scales on the buds. The tree is monoecious, with flowers of both sexes on the same tree. The fruit is a small, sharply-angled nut, borne in pairs in a soft-spined, four-lobed husk.</p>