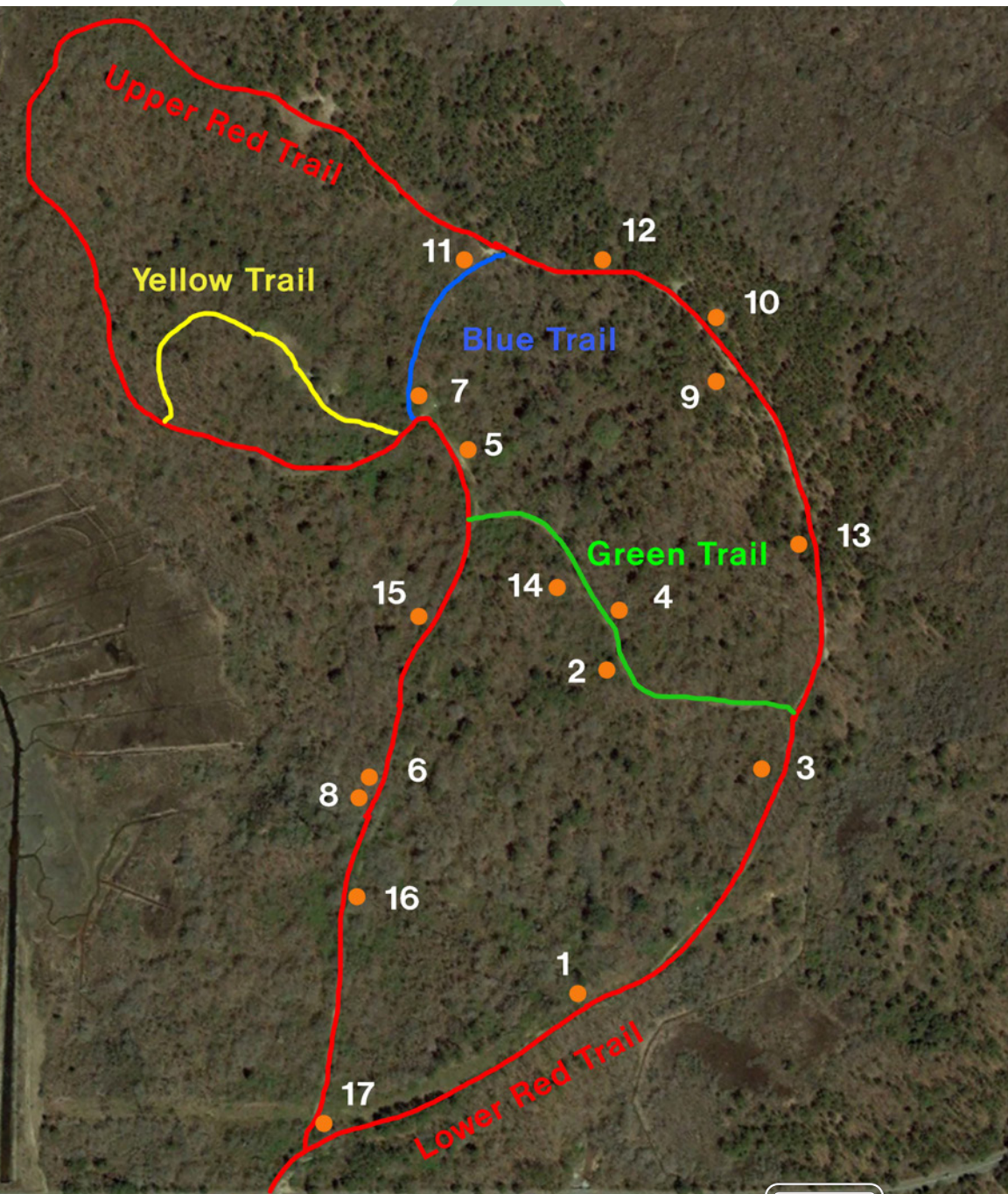


Sagamore Hill

Self Guided Flora Hike

The U.S. Army Corps of Engineers and Upper Cape Technical High School welcomes you to Sagamore Hill. Are you curious about the different plant species you see along the trail? Then this tour guide is for you! Walk the lower trails and look for plants with a numbered pine tree sign. Then check this guide to learn more about that plant!



Have fun, play it safe! Make sure you follow the safety tips on the next page.



US Army Corps
of Engineers

Safety First!

In order to ensure your safety and the safety of other visitors here are a few tips to keep in mind.

Dress for the weather.

If you are out in the sun on a hot day, bring water, take frequent breaks, and reapply sunscreen as needed. Check the forecast for rain, wind, or snow prior to heading out and bring appropriate layers.

Watch out for ticks, mosquitoes, and flies!

Sagamore Hill is bordered by a salt marsh, making it prime breeding habitat for mosquitoes and biting flies in the summer months. Bring bug spray, wear light colored clothing, and check yourself often for ticks.

Observe wildlife from a safe distance.

Never touch a wild animal or bug-- you never know what could bite, scratch or sting you! If an animal looks hurt or ill, call animal control or the local Department of Natural Resources.

Look out for poison ivy.

Poison ivy is native to Massachusetts and may grow on or around trails. Learn what it looks like and avoid touching it (check out #6 below!). Keep dogs on a leash to prevent them from getting covered in urushiol and bringing it home with you.

Be aware of hunting season.

Sagamore Hill is a multi-use recreation area that is open to hunting from November through February. Wear orange during these months and keep non-sporting dogs leashed and close by. Be aware that hunters and their working dogs may be operating in the area.



Plants of Interest

The plants of interest are detailed on the pages that follow.

You can scroll through the pages to find the plant nearest you.

-OR-

Click on any of the numbered signs below to jump to the one nearest you.



Red Maple

Acer rubrum



Identification: Red maple leaves are opposite, serrate, and usually have 3 lobes. The bark on a young tree is often smooth and light gray but becomes darker and rougher as it matures. Young twigs tend to have a reddish color.

Seasonal Identification: Red maple foliage becomes a brilliant fiery red in the autumn. Sometimes the leaves can be a saturated yellow or orange as well. It produces red flowers from December to May that turn into samaras (which look like helicopters from April through July).

Habitat: Red maple grows on diverse sites, from dry ridges and slopes to bogs and swamps. It commonly grows under more extreme soil-moisture conditions--either very wet or quite dry. Highly adaptable and tolerant to both shade and sun.

Fun Fact: Red maple can be used for maple syrup production, but it must be tapped before it buds in early spring!

CAUTION: The leaves of red maples are dangerous to pets, especially when dried or wilted. Avoid letting pets eat them.



American Beech

Fagus grandifolia



Identification: Has distinct, smooth gray bark that is easily scarred. Leaves are alternate and serrate with prominent veins. Large pointed, cigar shaped buds extend from the tips of the branches.

Seasonal Identification: Produces yellow green flowers April through May that develop into spiny husks containing triangular nuts that fall September through October. Leaves turn a light coppery brown that may persist through fall and winter.

Habitat: Prefers acidic, moist, and well-drained soil. Tolerant of partial shade but prefers full sun.

Fun Fact: Beech mast (nuts) is a vital source of protein and fat for many animals in the fall. It is one of the types of mast that has helped fill the void left behind by the decline of the American chestnut.



Shagbark Hickory

Carya ovata

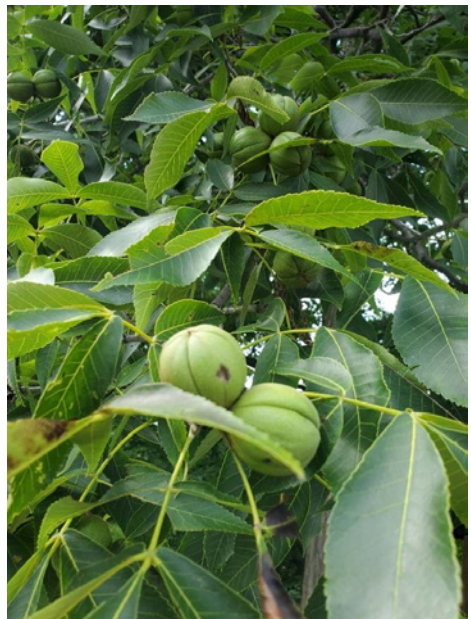


Identification: Shagbark hickory gets its name from its peeling "shaggy" looking bark. As they mature, the peeling becomes more intense, while young trees may have little to no bark peeling. They have alternate compound leaves with 5 - 7 lightly serrated leaflets.

Seasonal Identification: Shagbark hickories are deciduous with yellow or golden brown leaves in the autumn. They produce clusters of greenish-yellow flowers (female) and catkins (male) from April to May. From September to October, they will drop nuts contained in hard, four sectioned husks that fade from bright green to dark brown.

Habitat: Often found in mature woodlands with rich, moist, and well-drained soils. Prefers full sun to part shade.

Fun Fact: Pioneers once used the inner bark to produce a yellow dye for textiles.



Paper Birch

Betula papyrifera



Identification: Paper birch is a deciduous tree with distinctive white peeling bark and gray-black scars. When the inner bark is exposed, it is often a pinkish, salmon color. Leaves are simple, double serrate, roughly oval shaped, and grow alternately on the branch.

Seasonal Identification: The flowers it produces in spring are called catkins and have a cone-like appearance. They drop tiny brown seeds with fragile wings in the fall. Leaves turn a distinct vibrant yellow in the fall. The white bark may appear to blend in with the snow in the winter.

Habitat: They develop best on well-drained, sandy loams on cool, moist sites. Prefers part shade but tolerant of full sun, especially when young. Does not tolerate heat very well. Typically only live to be 30-50 years old.

Fun Fact: Paper birch bark was used by Native Americans to make many items such as canoes, containers, and as a backing for embroidery.



Staghorn Sumac

Rhus typhina



Identification: Staghorn sumac is a deciduous shrub which grows up to tall and wide. It can occasionally grow as a small tree, but is usually found growing as a dense, shrubby colony. They have alternate compound leaves with at least 9 toothed leaflets (but can reach up to 31 leaflets). The stems are covered in fine hairs giving a velvet-like appearance (like a stag's antlers!).

Seasonal Identification: From May through July, greenish-yellow flowers bloom. June through September, staghorn sumac produces distinctive clusters of fuzzy reddish fruits that grow in a cone-like or triangular manner. It has bright red leaves in the fall.

Habitat: Staghorn sumac prefers open areas with fertile soils where they can easily spread. Prefers full sun and will not tolerate much shade. Often found on upland sites and on open fields, roadsides, or near railroads.

Fun Fact: Almost every part of staghorn sumac can be used to create a multitude of different natural dye colors for wool, from yellow and beige to pink and red, and even dark black.



Poison Ivy

Toxicodendron radicans



Identification: Poison ivy has alternate leaves that are compound with three leaflets and can be highly variable in appearance. Poison ivy can grow as an individual plant, in dense clusters like a shrub, or as a hairy vine that climbs trees.

Seasonal Identification: In spring, new leaf growth is a bronzy red or purplish color. produces small green flowers that bloom May through July. Yields dense clusters of white berries August through November. Leaves turn a rich red or orange color in the fall.

Habitat: Poison ivy is a native deciduous woody plant that is found in fields, woodlands, riverbeds, pastures, and home landscapes. The plant thrives best in moist, well-drained soil. The plant may also attach itself to trees, shrubs, fences, or other structures and climb.

Fun Fact: The only other animals that have an allergic reaction to poison ivy besides humans are other primates and guinea pigs.

CAUTION: *""Leaves of three, let it be! Hairy rope, don't be a dope! Berries white, danger in sight!"*

Urushiol oil from the leaves and stem causes skin irritation, rashes, and blisters. Don't touch!



Black Cherry

Prunus serotina



Identification: Black cherry trees have long ° finely serrated leaves that are ovate in shape. They grow in an alternate patten. The underside of leaves have small rusty-colored hairs along the mid-vein. Bark is dark gray to black and as the tree matures bark will take on a scaly "burnt potato chip" appearance.

Seasonal Identification: In spring, black cherry trees produce clusters of small white flowers with 5 petals. The flowers give way to red to reddish-black colored cherries. Cherries usually ripen later in the year, typically late August through September.

Habitat: Prefers moist, well-drained soils. A pioneer species, black cherry is often found in open woods, fence rows, roadsides, and old fields.

Fun Fact: Black cherry wood is considered very valuable for its rich orange color; it is often used for cabinets, furniture, instruments, paneling, toys, and handles.

CAUTION: The bark, leaves, and seeds of this species are toxic to humans and herbivores. Do not consume.



Tupelo

Nyssa sylvatica



Identification: Tupelo trees have glossy, dark green leaves that are variable in shape and grow alternately. Leaves are often oval, elliptical, or obovate. The bark is a brown-gray color that slowly darkens and furrows as it matures, eventually resembling an alligator's scales. The tree often takes on a pyramidal or oval shape.

Seasonal Identification: Tupelo trees may take longer than other species to grow leaves after the winter. In May and June it may still be regrowing its leaves when it also begins to produce small yellowish-green flowers. The flowers will mature into small purple-black fruits around October. In the fall, the leaves of tupelo trees can range from vibrant yellows and oranges to bright scarlet and even purple.

Habitat: Tupelo prefers well-drained, moist, acidic soils and full sun to partial shade. It doesn't dominate sites and usually grows in mixed species woodlands. Often found on slopes and ridgetops, or upland from moist sites.

Fun Fact: This tree can live to over 650 years old and has one of the longest life spans of any flowering plant in eastern North America!



Eastern Red Cedar

Juniperus virginiana

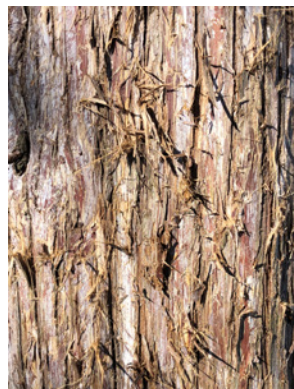


Identification: Eastern red cedar is a coniferous tree with flat, blue-green scale-like needles that usually occur oppositely. Young needles at the ends of branches or on a very young sapling may be sharp and pointed. The outer bark is a thin reddish-brown that often peels off in narrow vertical strips, exposing pale gray bark below.

Seasonal Identification: Eastern red cedar needles may turn from blue-green to a bronzy yellow-green in the winter. In late winter to early spring, they will produce either small light blue-green clusters of flowers or small yellowish cones. They produce a powdery blue fruit which matures in the fall.

Habitat: It is highly tolerant of a variety of growing conditions but will often be most noticeable on dry, sandy, barren soils with full sun. It is highly tolerant to salt and drought, so it is often found in coastal habitats. Eastern red cedar will not tolerate continuously wet soil or shade.

Fun Fact: While called a cedar, eastern red cedar is actually a type of juniper. The blue "berries" of junipers are actually a type of cone with flesh-like scales.



Pitch Pine

Pinus rigida



Identification: A coniferous tree with an irregular, twisted, globular form. Bark is dark brown or dark gray with thick, overlapping plates of bark. It has stiff yellow-green needles bound in fascicles (bundles) of 3.

Seasonal Identification: Pitch pine produces male and female cones. Male cones are small and range in color from yellow-green to red. They produce high amounts of pollen in the spring, sometimes visible on a windy day. The female cones are brown and prickled, and produce seeds that mature in the fall or winter. Female cones may remain on a tree until a fire opens them and releases the seeds.

Habitat: Adapted to medium and coarse textured soils that are acidic, sandy, or rocky. More often in dry, steep ridges, outwash plains, as well as river valleys and swamps with more moisture. Fire and salt tolerant.

Fun Fact: Pitch pines are very hardy and have many special adaptations to resist and recover from fire damage such as thick bark plates, the ability to resprout directly from the trunk, serotinous (resin sealed) cones, and a high resin content.



Fox Grape

Vitis labrusca



Identification: Fox grape is a climbing woody vine with heart shaped leaves. Leaves are alternate, simple, and have yellow-green undersides. Every third leaf has forked tendrils used for climbing.

Seasonal Identification: Fox grape is a deciduous plant that produces clusters of small yellow flowers that bloom May through July. They yield medium-sized glossy purple-black grapes August through October.

Habitat: Enjoys loamy, well-drained soil in full sun. Fox grape needs sturdy supports to allow their stems to climb into the canopy. Native to Massachusetts.

Fun Fact: Fox grapes have "slip skin", meaning that they are easily peeled with a small pinch between two fingers, leaving the pulp intact.



Northern Highbush Blueberry

Vaccinium corymbosum



Identification: Highbush blueberry is a woody shrub that can grow 6-12 feet high. The leaves are simple, elliptic, and arranged oppositely on the branch.

Seasonal Identification: Produces small white bell-shaped flowers from May through June. Once pollinated, the flowers yield powdery blue colored berries June through September. Leaves turn a fiery red in the fall.

Habitat: Prefers moist acidic soils on the edges of wetlands. Often found near pine woodlands. Prefers full sun but is tolerant of some shade.

Fun Fact: The berries produced by northern highbush blueberry can survive through temperatures of -20 to -30 degrees Fahrenheit.



Common Greenbriar

Smilax rotundifolia



Identification: Common greenbriar is a climbing vine with simple, glossy heart shaped leaves, arranged alternately on bright green thorned stems. It climbs using small green tendrils.

Seasonal Identification: Greenbriar is a deciduous plant that produces clusters of small greenish-white flowers which bloom April through August. In September, the flowers fade into small blue-black berries which persist through the winter.

Habitat: Found in almost all habitat types including wetlands. Forms dense thickets that can overtake areas easily and will readily climb into a forest canopy.

Fun Fact: Common greenbriar was once used by the Cherokee for a variety of different medical treatments.

CAUTION: Thorns can be 1/3 of an inch long!! They are sharp enough to snag skin and clothing.



Multiflora Rose

Rosa multiflora



Identification: A deciduous thorned shrub which often climbs and forms dense thickets of upright, arching branches. Leaves are compound with 5-9 elliptical serrated leaflets. The base of the leaves have small feathery growths called stipules which help distinguish it from other rose species. Stems are stout, reddish-green, and often covered in recurved thorns.

Seasonal Identification: From May through June, the plant produces many white or pale pink flowers with 5-petals. In late summer, these flowers turn into a reddish fruit called rose hips, which may persist on the plant through the fall and winter.

Habitat: Very invasive. Tolerates a wide range of soil, moisture, and light conditions and can invade fields, forests, praries, and even wetlands. Only moderately cold hardy.

Fun Fact: Multiflora rose can produce up to a million seeds a year, and seeds can remain viable in the soil for up to 20 years.

CAUTION: The recurved thorns are sharp enough to penetrate skin and may carry bacteria or fungus.



Virginia Creeper

Parthenocissus quinquefolia



Identification: Virginia creeper grows as a woody vine. It has compound leaves with 5 serrated leaflets each. The leaves grow alternate each other on the stem. Leaves are deciduous.

Seasonal Identification: In the early spring, new growth has a bronze-red tint. In the early fall, leaves turn from green to bright red. They produce light green flowers in the spring and blue-black berries in the fall.

Habitat: Commonly grows in disturbed habitats, particularly on woodland edges. It can grow horizontally as groundcover or into the overstory as a vine.

Fun Fact: Virginia creeper can grow up to 20 feet tall in one year, and up to 100 feet tall overall.

CAUTION: The sap can cause blisters in some individuals and the berries are toxic to humans.



Oriental Bittersweet

Celastrus orbiculatus



Identification: Oriental bittersweet is an invasive climbing vine with round, serrate leaves that grow alternately from each other. The vines can vary in width depending on age and will often strangle tree limbs and branches as it climbs into the canopy. Oriental bittersweet will form dense thickets if it is in a location without something to climb.

Seasonal Identification: Produces small clusters of yellow-green flowers in late spring which will turn into a yellow-skinned fruit in the summer. In the fall the yellow skin on the fruit splits to reveal a vibrant orange-scarlet center that remains on the stem all winter long.

Habitat: Oriental bittersweet is commonly found in areas with moist, disturbed soil such as old house sites, fields, and road edges. It readily grows in a variety of other soil conditions as well. It prefers full sun and will grow into the canopy of the forest in search of it.

Fun Fact: When the roots of oriental bittersweet are pulled out, they are bright orange like their fruits.



Southern Arrowwood

Viburnum dentatum



Identification: Southern arrowwood has simple toothed leaves, arranged opposite on straight upright stems. The base of arrowwood leaves are rounded or heart shaped. The underside of leaves is velvety.

Seasonal Identification: Arrowwood is a deciduous woody plant. It has white blooms in May through July. It fruits August through November, yielding purple-blue berries.

Habitat: Arrowwood thrives in moist areas such as marshes, streambanks, and swamps. Prefers full sun to partial shade. Native plant to Massachusetts.

Fun Fact: Arrowwood gets its name from its straight stems which were used by Native Americans to make arrow shafts.

