



Mount A Tree ID



Introduction

Length -

The Tree ID loop can be completed in approximately one hour. Depending on ages, group size, and time to key out species it may take +/- one half hour. Distance is .6 miles.

Description -

This walk consists of 15 stations where students and visitors are able to stop and take a moment to try and determine the identity of some of Mount A's common tree species. Trees can be identified by examining the bark, leaves, twigs, and other features. Each Tree ID Point has a flip-up style sign post so that students can try to properly identify the tree before revealing the correct answer. This is a fun, informative, and interactive activity for students of all ages.

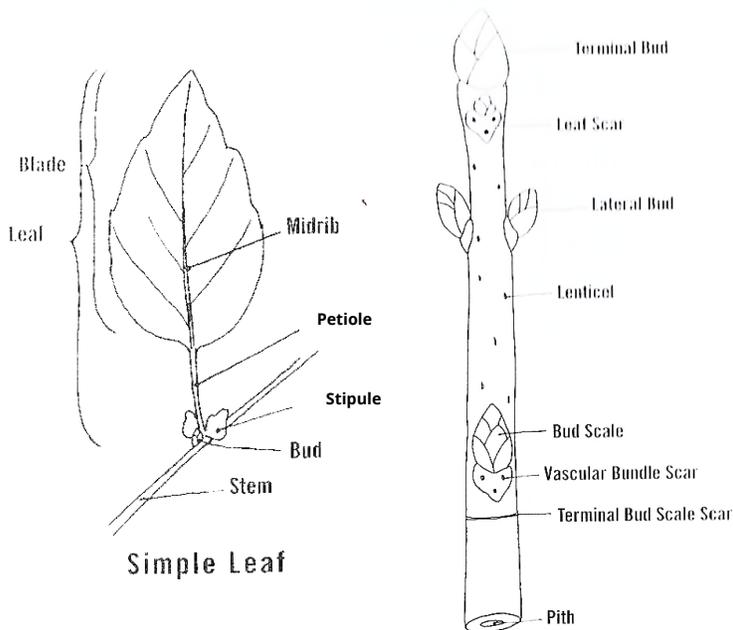
Difficulty -

The difficulty of this trail is easy to moderate. There is a short climb up rocks on the **Summit Staircase**.

Location -

The map for this loop is on the next page. This walk starts on the **Big A** trail, takes you across the summit park, to the north then down **Witch Hazel** trail to **Ring**, then along **Hairpin** and up the **Summit Staircase**, where you will finish behind the summit Learning Lodge on the eastern side of the summit.

We recommend reviewing the book [Forest Trees of Maine](#), which can be found online through the Maine Forest Service by [clicking here](#), and is the book we reference during guided walks (if you've printed this document, the link is written out in the list of resources on the last page). The Glossary on page 14 is a great place to begin. We've included illustrations of simple leaf and twig structure from the book below.



Some Words Used in this Guide

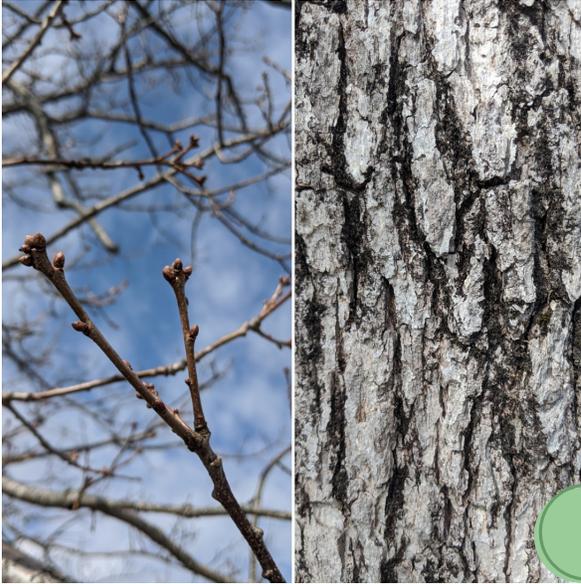
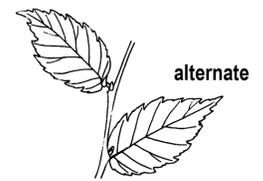
- Alternate** [arrangement of leaves or buds] - not opposite on sides of twig
- Catkin** - a compact, cylindrical cluster of flowers of the same sex
- Compound** [leaf] - a leaf composed of smaller leaf units or leaflets
- Conifer** - cone-bearing trees, "evergreens"
- Deciduous** [leaves] - all leaves drop in autumn
- Fascicles** [leaf] - a cluster of conifer leaves
- Lenticel** [bark] - corky, raised pores on woody parts with openings for air-gas exchange
- Lobed** [leaf] - with large, rounded or pointed projections along the leaf margin
- Opposite** [arrangement of leaves or buds] - directly across from one another on common axis, or twig
- Palmate** [leaf or veins] - compound, with leaflets originating at the same point on a common stalk
- Petiole** [leaf] - stalk the supports the leaf blade
- Pinnate** [leaf or vein] - compound, with leaflets along a common rachis or stalk.



Mount Agamenticus is located in the traditional territory of the Wabanaki Confederacy. We recognize and honor the current Tribes who comprise the Wabanaki Confederacy—the Penobscot, Passamaquoddy, Maliseet, and Micmac peoples—the original stewards of this land. Where direct translations are available, we have included the Passamaquoddy-Maliseet word for tree species.

Further educational resources, including a link to the "Passamaquoddy-Maliseet Language Portal," are available at the end of this guide.

Mount A Tree ID



White Oak - *Quercus alba* *wahcilomoss*

Deciduous tree, 40-70' tall

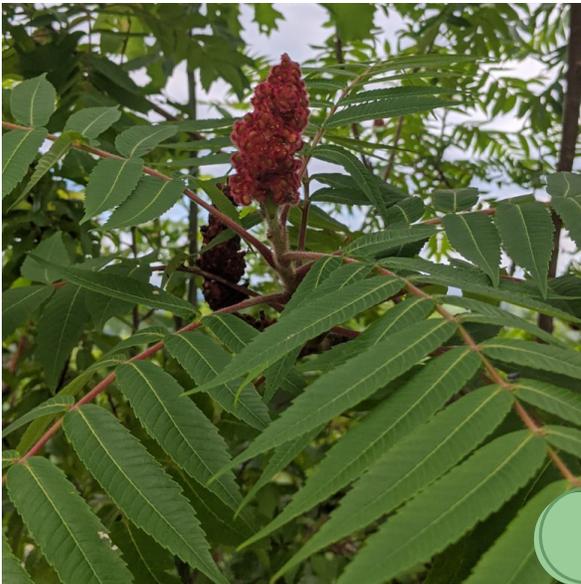
Stem: buds clustered at tips of twigs

Bark: thin, irregular flakes; light ashy gray, furrowed in rectangular blocks when older

Leaf: alternate, 7-9 rounded lobes, short petioles, dull green

Fruit: acorns mature in one growing season

- grows in upland woods and dry slopes



Staghorn Sumac - *Rhus typhina* *ucikanimus*

Deciduous shrub, up to 40' tall

Stem: fuzzy, resembling deer antlers (thus, the name)

Bark: fuzzy for many years, then brown with many lenticels, then scaly

Leaf: 16-24in, alternate, pinnately compound with 11-31 2-5in leaflets

Flower: small with yellow-green petals, upright, dense, up to 8in

dioecious - plants are either male or female

Fruit: round, red, fuzzy, upright dense clusters

- nearly 100 bird species feed on fruits

Dioecious - having the male and female reproductive organs in separate individuals.

Monoecious - having both the male and female reproductive organs in the same individual



Quaking Aspen - *Populus tremuloides* *mit* [meaning poplar]

Deciduous tree, 60-75' tall

Twig: slender, orange to dark brown with half-round leaf scars in groups of 3. Shiny, dark brown slightly sticky buds

Bark: young bark similar to birch, older bark is thick, rough with flattened ridges and almost black

Leaf: simple, alternate, nearly round with pointed tip, finely toothed

Flower: small flowers on catkins 1-2in long, in early spring

Fruit: small fruit that split to release tiny cottony seeds

- widest-ranging tree species in North America

- clusters of trees are often one clone that is more than a hundred different stems connected at the root



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Eastern Hemlock - *Tsuga canadensis* *ksiwsk*

Coniferous tree, 60-70' tall

Twig: slender, gray-brown, very small buds

Bark: young are grey-brown and smooth, turn scaly, older trees red-brown with wide ridges and furrows

Needles: evergreen, 1/2in long, flat, 2 lines of stomata below, single, tapering to dull point

Flower: *monoecious*; males, yellow, small, round; females, light green at branch tips

Cone: oval, light brown, 3/4in long, rounded, scales, early fall

- very shade tolerant; small trees can be very old
- can live 400-600+ years



Witch Hazel - *Hamamelis virginiana* *sakoli-opos*

Deciduous shrub/small tree, 20-30' tall

Bark: gray-brown, somewhat scaly on older stem

Leaf: alternate, non-symmetrical at base, wavy edge

Flower: bright yellow, 4 thread-like petals

Fruit: 2 woody capsules, expelled explosively when ripe

- found on borders of forest in low, rich soil or on rocky banks of streams



Chestnut Oak - *Quercus prinus*

Deciduous tree, 65-80' tall

Stem: hairless twigs, clustered toward the ends

Bark: gray-brown, smooth on young trees; thick, deeply furrowed on old

Leaf: lobed, similar to Chestnut, widest above the middle

Flower: males yellow-green, appear in May; females reddish, borne w/ spikes with leaves mid-spring

Fruit: 1.5in ellipsoid acorn, matures in one season

- found in rocky upland forest, and dry, acidic slopes
- rare in Maine and at its northern limit of growing range in York county; not rare southward (Appalachian region from Maine to northern Georgia, west to southern Illinois and northern Mississippi)

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Striped Maple - *Acer pensylvanicum*

Deciduous tree, up to 25' tall

Stem: twigs and buds are hairless

Bark: reddish-brown or dark green, white-ish vertical lines

Leaf: 3-lobed, resembling a goose foot, opposite, finely toothed; turn light yellow in fall

Flower: bright yellow, drooping, opens late May

Fruit: paired, wings moderately divergent

- thrives in rich, moist soil or rocky slopes

- shade-loving, found growing among other hardwoods



Red Maple - *Acer rubrum*

sonaw [also the word for Sugar Maple, *Acer saccharum*]

Deciduous tree, 50-60' tall

Stem: red, no odor when broken; stiff, straight, opposite with red, often clustered buds

Bark: young is smooth, light gray, thin; old is furrowed with shaggy/scaly ridges and plate-like scales

Leaf: opposite, margins irregularly double-toothed, tips, narrowly pointed, notches between lobes are v-shaped, upper surface is light green, lower is white

Fruit: winged, ripens in spring/early summer, germinates as soon as it falls

- typically found in very wet areas



Paper Birch - *Betula papyrifera* *masqemus*

Deciduous tree, 60-70' tall

Stem: hairy

Bark: a protective layer of papery sheets - whiter in older trees, long horizontal lenticels, often separates into thin paper plates

Leaf: 2-4in alternate, serrated, ovate, yellow in fall

Flower: catkins open in early spring before leaves

- thrives in rich, moist soil

- bark used in making canoes, also called "canoe birch"

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American Beech - *Fagus grandifolia* *mihihqimus*

Deciduous tree, 50-80' tall (can reach 120')

Branch: spread horizontally for sun

Bark: smooth, light gray

Leaf: glossy dark green, 2-6in, serrated, prominently veined, hold through winter

Flower: *monoecious*, yellow/green/brown, clustered in 1in ball

Fruit: 3/4in long and prickly, splits into 4 pieces in fall, edible

- very shade tolerant

- lives 200-400 years



Eastern White Pine - *Pinus strobus* *kuwes, kuw*

Coniferous tree, 70-80' tall

Tree of Fives - 5 needles per fascicle, 5 side buds surrounding central bud on shoot, whorls of 5 branches surrounding truck

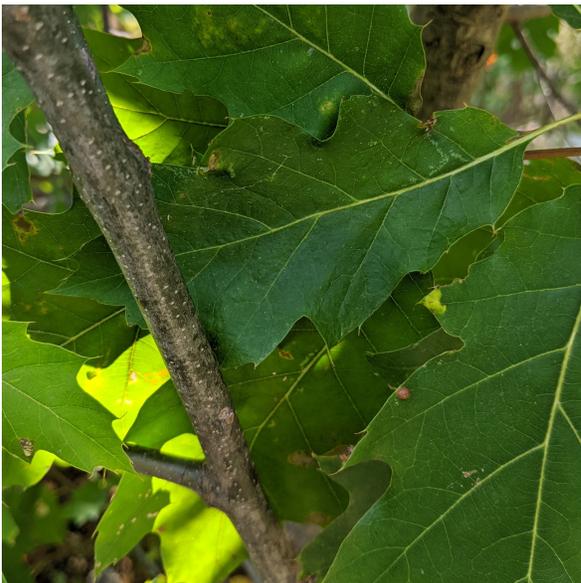
Bark: young trees are smooth/light gray, becoming dark gray or black with flat plates and shallow fissures

Needles: evergreen, 3-5in long, blueish green

Cone: 3-6in long, tapering, no prickles

- both the state tree and flower of Maine

- very shade tolerant; small trees can be quite old, can live 200-400 years



Northern Red Oak - *Quercus rubra* *asahqahawimus, asahqahatoq*

Deciduous tree, 50-75' tall

Stem: stout, reddish to greenish brown, no hairs; winter buds clustered at end of twigs

Bark: mature bark is brown to black with wide, flat-topped ridges

Leaf: alternate, 7-11 lobes with bristles or points at end, slender petioles, dull green

Fruit: brown to red-brown acorns take two growing seasons to mature

- grows in upland woods and dry slopes

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White Spruce - *Picea glauca*

supatoq, supeqatoq

Coniferous tree, 60-90' tall

Branch: bushy, full; rough with pegs leftover from dropped needles

Bark: dark gray or gray-brown

Needles: single, 4-sided, crowded, sharply pointed straight out from branch, blue-green, odorless

Cone: slender, cylindrical, shiny when ripe, scales rounded and soft at the ends, flexible and easy to bend

- lives longer in harsher environments



Shagbark Hickory - *Carya ovata*

Deciduous tree, 60-80' tall (can reach 120')

Twig: olive gray to dark red-brown

Bark: distinctive shaggy bark on mature trees

Leaf: 5 large leaflets, compound alternate, 3 terminal leaflets are longest

Flower: mid-spring; male, green, hanging clusters (catkins); female form in spikes

Fruit: flavorful yellow-white nut in thin rounded husk; start producing at 40 years

- southern Maine is northernmost range

- can live 200-300 years



Pin Cherry - *Prunus pensylvanica*

masqesiminimus, masqeminimus

Small deciduous tree, up to 30' tall

Stem: slender, shiny reddish brown, small buds at tips

Bark: red-brown with horizontal orange lenticels

Leaf: alternate, narrow, oblong, finely serrated, orange in fall

Flower: small white in flat-topped clusters of 5-7, April-May

Fruit: bright red clusters, 1/4in diameter, ripens in August

- shallow root system binds soil

- pioneer species after a disturbance (colonizes rapidly), seeds can lie dormant for 50+ years; rich leaves add many nutrients to soil



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Additional Resources



Northern Red and White oak growing side by side at the summit of Mount Agamenticus

Maine Forest Service:

maine.gov/dacf/mfs/index.shtml

Forest Trees of Maine:

maine.gov/dacf/mfs/publications/handbooks_guides/forest_trees/index.html

NH Division of Forests and Lands:

nh.gov/nhdf/

NOAA Scijinks

scijinks.gov/

Passamaquoddy-Maliseet Language Portal:

pmportal.org



This guide was updated by Mount A education staff in 2020.
If you find any errors, please [contact us](mailto:agamenticus.org) via agamenticus.org

Fall Color

The summer sun triggers the leaves of hardwoods to produce chlorophyll, which aids in photosynthesis (the process of producing energy from sunlight). Shorter daylight hours in the fall cause leaves to cease chlorophyll production, and their green color fades to orange, yellow, and red as chlorophyll is being destroyed faster than it can be produced.

Leaves contain colorful chemical pigments, of which there are four types:



Chlorophyll



Carotenoids



Xanthophylls



Anthocyanins

***Tannins** cause shades of brown in some tree species.*

General Guideline to Fall Tree Coloration for the common species on the Tree ID Walk:

Yellow: American Beech, Paper Birch, maples, Quaking Aspen, Witch Hazel

Red: maples, oaks, Staghorn Sumac

Orange: Sugar Maple (not present on Mount A)

Brown: American Beech

