Welcome to the Marsh Woods Interpretive Trail. The Trail is 24 stages, numbered sequentially, in a clock-wise direction. The Trail identifies flora, fauna, habitats, and heritage sites and was developed by the Nottingham Trails Committee in 2022.

Please observe all posted signs. The Trail is foot traffic only. Stay on the paths to protect this sensitive ecosystem; no collecting of plants, animals, or other items.

1. The Marsh Woods Forest is an example of an Appalachian oak-pine forest. Trees are identifiable as softwoods and hardwoods. In New Hampshire, the most common softwoods are cedar/juniper, fir, hemlock, pine, and spruce.

There is a diversity of hardwoods, with the most frequent being beech, birch, hickory, maple, and oak. Marsh Woods represents a healthy oak-pine mixed wood forest.

2. Beech has smooth, light gray bark. Beech bark disease can cause the bark to become pitted with blisters. This results when the bark is attacked by the beech scale insect and then infected with a fungus. Young beeches will seldom drop their leaves in the autumn, a condition called marcescence.

3. Eastern hemlock is an important forest softwood. Some have multiple rows of horizontally-aligned holes in the bark from the yellow-bellied sapsucker. Porcupines like to eat the inner bark.

4. Stone walls: very few stone walls existed in New Hampshire until after the Revolutionary War. The prime time of stone wall building was between the 1780s and 1830s when up to 80% of forests were cut down as pastures and farmlands became prominent.

With plowing, stones worked to the surface and were placed along fields and pastures as field walls, land boundary markers, and fencing in of animals. Stones were placed at thigh-high for this is the best height for a person to stack and move them. Boundary walls often align to discrete compass points.

5. Red oak displays a long and straight bark pattern with red underneath. The red oak group (black, red,

scarlet) leaves have pointed tips. The red oak was preferred for shipbuilding because of its strength and flexibility.

6. Vernal pools are seasonal wetlands that fill in the spring from rainfall, snowmelt, or rising groundwater; some pools also fill in the fall after autumnal rains.

Most vernal pools completely dry out by the end of summer and cannot support fish populations, making them safe breeding areas for amphibians such as the spring peeper, gray treefrog, wood frog, and spotted salamander.

7. White pine was used for ship masts in the 1600s and 1700s. It is the tallest tree in New Hampshire growing up to 150 feet or more. Needles group 5-to-a-bundle.

Note the limb whorl pattern. For softwoods such as fir, pine, and spruce, clusters of branches that grow around the trunk in a circular pattern and at the same height are limb whorls. Each whorl cluster represents one year of growth.

8. Witch hazel prefers shady, cool, and moist soil. The non-native species flowers in May and the native version flowers in November, being the only native shrub that can flower so late in autumn. Starting in May and June, look for small, triangular shapes on the leaves that change color from green to black, the "witch hat" created by wasp larvae.

9. Water was a widely used power source. For small streams and brooks, such as this one, a dam was built, creating a holding pond above it. Water was released when needed to turn wheels for cutting wood, grinding grains, and processing wool. Circular holes are made by hand drills for rock splitting.

This mill was built in 1827 by Jonathan Sanborn to function as a wool carding mill. The Marsh family owned and operated the mill from approximately 1834 to 1929, converting it for wood products.

10. Yellow birch prefers wetter sites with shady locations. Note the yellow hue to the bark that can peel.

11. Red maple is the most common deciduous tree in New England. It is also called a "swamp maple" because it can live in wet conditions. Sugar maple leaves are the delight of autumn with red, yellow, and orange hues. In the 1700s, sugar maples were planted as a patriotic sign at home sites and along lanes. The syrup was used as a sugar source, rather than purchasing sugar from the British.

12. Livestock Lane / Sheep Chute: this double stone wall lane was used to move livestock to pasture lands and materials to the mill site.

13. White oak bark is in small rectangles that may flake. Leaves have rounded tips. In wetlands, the swamp white oak is common. The white oak group (white, swamp white, chestnut) is used for ship building, flooring, furniture, and barrels.

14. Blueberry: low-bush and high-bush. Blueberries are versatile heath plants that grow in habitats from bogs and fens to forests to dry and rocky hilltops.

15. Teaberry is an evergreen ground plant that thrives in a mixed wood forest. Pinch the leaves for a delightful smell.

16. White birches have lines circling the bark which are lenticels to aid in respiration; note the white bark that peels off. The white birch is the state tree of New Hampshire.

17. Alders grow as small trees and in groups near wetlands. At the end of stems are catkins and cones which produce flowers and pollen.

18. Beavers are nature's forest architects, creating new habitats, such as ponds, floodplains, freshwater marshes, bogs, and swamps. Look for multiple beaver slides providing access to and from water sources.

Turtles, frogs, deer, and moose live in floodplain areas. Listen for blackbird, duck, flycatcher, hawk, heron, kingfisher, marsh wren, and waterthrush calls and songs.

19. Floodplain: spring rains and snow melt cause streams and rivers to overflow their banks, depositing clay, silt and sand-mixed soil, rich in nutrients. Natural levees form over time creating barriers to contain water.

Floodplain habitats were the preferred choice for Native American settlements. The combination of water access, sandy soil, and flat lands provided ideal locations for campsites, hunting, and fishing. Studies have confirmed that Paleoindians were active in New Hampshire starting approximately 13,000 years ago. The Abenaki are direct descendants of those early inhabitants.

20. Sweet ferns have aromatic leaves, brownish catkins, and burr-like fruit. They grow on poor, sandy soils, provide nitrogen, and are an early colonizer of barren soils.

21. Pitch pine prefers dry conditions such as sandy soil, full sun, and mountain tops. Small cones with bristles remain on the trunk throughout the year. Needles are 3-to-a-bundle.

22. Lichens are a unique organism because they are a symbiotic relationship between two organisms — fungus and algae. Lichens are slow growing and can live for hundreds to thousands of years. This area is home to the gray fruticose wooly foam lichen, reindeer, pink earth lichen, and British soldiers. Lichens are not harmful to trees and plants.

23. Cranberries provide an important food for animals. Enjoy the white flowers in spring and the multi-colored leaves in autumn.

24. Red pine grows tall and straight, with reddish gray or brown bark, forming irregular plates with a flaky surface. Needles are long and arranged 2-to-abundle. It is also called a Norway Pine because it was found in Norway, Maine. This stage is located on the western side of the Mill Loop trail.

Thank you for exploring the Marsh Woods Interpretive Trail.

For more trail information and maps, visit the websites of the Nottingham Trails Committee and the Nottingham Conservation Commission: <u>https://www.nottingham-nh.gov/conservation-commission</u>.



