



Protecting the Land You Love
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Discovering Habitats at Taft Point Preserve

About this Guide

The information for each stop corresponds to observation points marked by numbered posts along the Jones Cove Trail Loop, proceeding to the Flanders Bay Trail, and ending at the beach. Find a map marking the observation points online and at the end of this guide.

Hold your smart phone camera over the QR code to be directed to this guide online and to see a trail map, as well as a printable Habitat Matching Game.



Guide developed by Alice Noyes, Maine Master Naturalist, mainemasternaturalist.org

What is a Habitat?

A *habitat* is a place where an animal or plant normally lives, and gets all the things it needs to survive, such as food, water, shelter and space for raising young. Each living thing has a desired habitat where they thrive and multiply.

This preserve is a natural community where the plants, animals, mosses, fungi and lichens all live together, depending on each other for their habitat.

Use all of your senses to notice what is around you:

- Is it sunny or shaded? Is the air damp or dry?
- Look up. Are there trees with needles or with leaves?
- What trees or plants are at eye level?
- What do you notice on the ground? Is it dry or moist? Are there rocks, leaves, needles, mosses, or plants?

At the beginning of the hike you'll notice the forest is thick with evergreen trees— mainly spruce trees with some fir and pine. Mosses cover the ground in the shade. As you walk down the hill, note how deciduous trees replace evergreens. The rain water drains down hill to the flatter oceanside. The lower moist habitat with some sunlight makes a home for several types of ferns, wildflowers, and shrubs.

Mosses

Stop 1

Mosses are green, like other plants, but they lack lignin, the material that makes plants stiff and woody. Their soft, pliable cells absorb and hold water and nutrients from the ground and air without formal roots or leaves. They reproduce by spores.

Habitat: They prefer damp places, sun or partial sun, and space to grow close together in colonies. They have survived for 400 million years in many different habitats on soil, humus, trees & rocks.

Broom Moss (*Dicranum Sp.*)
 Densely packed clumps. Stems may fork, but do not branch. Upright stems will be single but packed together.



Stair-step Moss (*Hylocomium splendens*) Flat branches like stair steps. Red stem with yellowish green leaf-like structures.



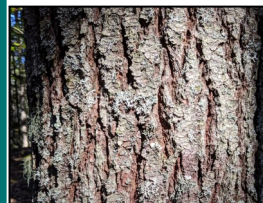
Eastern White Pine (*Pinus strobus*)

Stop 2

Considered the largest conifer (cone bearing tree) in northeastern US, this is Maine's official state tree, and the cone and tassel are the state flower. **Habitat:** Grows in moist sandy soils, but best on fertile well-drained soil, either singly or in groups. Grows 1ft or more in height each year.

Can You Guess its age?

Estimate the distance of your reach. Hug the tree at 4.5' high, and count how many hugs it takes to go around the tree. # hugs x size of reach = circumference. Divide by 3 (π) = diameter. For pine, multiply each inch diam. x 5 (its average growth factor) = approx. age.



Bark (Mature) Reddish to grey brown. Thick irregular furrows.



Needles (leaves): clusters of 5, 3-5" long.



Cones (seeds under scales): 4-8" long, cylindrical.

Red Spruce & Balsam Fir

Stop 3

Red Spruce (*Picea rubens*)
"Spiky spruce"

Habitat: Moist to dry sites, well-drained rocky up-lands, north side. **Bark:** Young: finely shredded, Older: large flaky scales. Reddish.



Balsam Fir (*Abies balsamea*) "Friendly Fir"

Habitat: Cool damp woods and on well drained hillsides.



Bark Resin blisters, becomes rough with age.

Needles yellow-green 1/2"

long, sharp-pointed, stiff, prickly, angled toward tip of branch.



Needles grow from tiny pegs which remain on twigs. **Cones** reddish-brown, 1.5 - 2" hang down.

Needles dark green, about 1" long, soft, 2 white stripes under-

neath. In full sun, turn up. On low branches grow horizon-



tally. Twigs smooth when needles removed. **Cones** dark purple, 2", point up.

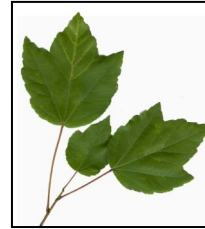
Red Maple

(*Acer rubrum*)

Stop 4



Habitat: Red maples favor moist sites with sun, but will grow elsewhere. One of the first trees to bud in Spring, it produces yellowish-red male flowers and bright red female flowers which sprout tiny green leaves.



Red maple leaf

Red maple **leaves** are the first to turn bright red in Fall. They have 3-5 lobes. Notches between the lobes are V shaped. Edges are irregularly toothed.

Compare the red maple leaves to sugar maple leaves which are found later on the trail. How are they different?



Sugar Maple leaf (*Acer saccharum*)

Red-belted Polypore

(*Fomitopsis pinicola*)

Stop 5

This type of shelf fungus is called a polypore. At 2-to 12" wide, it has a tough outer surface, colored in rings of red, red brown or brown that become mostly black where it is attached to its tree host. This polypore grows on many different tree species, even though it's named after pine trees (*pinicola*).



Fungi are separate from the Plant and Animal Kingdoms. Like the Plant Kingdom, they are immobile, and reproduce by spores. But, like animals, they depend on food from external sources,

and some of their cell walls consist of a tough substance called chitin (as do lobsters and ants)!

Habitat: Grows singly or in groups on stumps and logs of conifers and hardwoods. It takes nutrients from dead, wounded, or cracked living trees.

Ferns

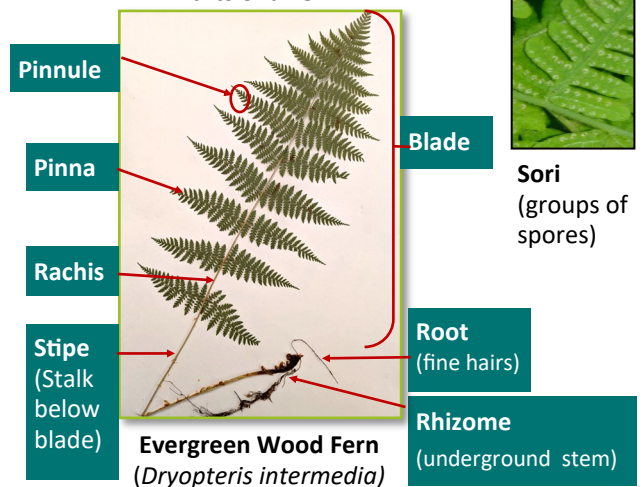
Stop 6 (a)

Ferns: One of the oldest groups of plants on earth, since 400,000,000 years ago, before dinosaurs & flowering plants. 12,000 species world wide, 61 species in Maine.

Habitat: Growing in almost every kind of soil, from very wet to dry, and even on rocks. Varies with species, but most like to live in the shade, or partial shade, in forests - particularly deciduous forests - like this spot.

How different from other plants: Reproduce by making 1000's of spores each year, also spread by rhizomes, an underground stem.

Parts of a Fern



Evergreen Wood Fern (*Dryopteris intermedia*)

Other Ferns at Taft Point

Stop 6 (b)



Interrupted Fern
(*Osmunda claytoniana*)
Fertile pinnae (brown) "interrupt" the frond. 1-5 ft. tall. Pinnules have blunt tips. Grow in clumps.



Sensitive Fern
(*Onoclea sensibilis*)
Triangular fronds, deeply lobed. 1-3' tall. Temperature sensitive. Late to appear and early to fade. Separate beaded fertile stalk.



Bracken Fern
(*Pteridium aquilinum*)
Fronds divided into 3 parts on top of tall stalk. 3' tall. Fronds splay out horizontally. Spread by rhizomes into colonies.

Northern Red Oak

(*Quercus rubra*)

Stop 7



This shoreline, with its sun to half-shade, and sandy to loamy soil, is a favored **habitat** for many large Northern Red Oaks. At 93" in circumference, or 29" diam, this tree could be 198 years old (6.7 growth factor).

Leaves: 5 - 8" long, alternate on stem, dull dark green on top, yellow-green below. Some stay on tree in winter.

Acorns (fruit): 1 - 1.25" long. Major source of food for others.

See Chipmunk below!



Bark: Rough, gray, rounded ridges with reddish color in between. Looks like fluted column. Gets darker and rougher with age.



Round-leaved Dogwood

(*Swida rugosa*)

Stop 8



This colony of small native deciduous trees grows only to about 15' tall. Their leaves are opposite, oval to roundish, with smooth edges, are evenly spaced along the twig, and are rough to the touch. Flowers are white in dense flat topped clusters. Berries are bluish white.

Habitat: Grows in the forest understory. Semi-shade tolerant, it prefers thinner canopies or openings, and the edge of the woods, like you see here along the trail.



"Snag" Tree

Stop 9

Who do you think lives up in those holes?

This "Snag" tree has been left upright to serve as a **habitat** for birds, bats, squirrels, and insects.



Pileated Woodpecker

Since these dying trees attract insects and mosses, they are a **food source** for others.

The higher branches are a "**crows nest**" look out for raptors looking for prey.



American Red Squirrel

The nooks and crannies are a **place to store food**.

The holes were likely made by Pileated Woodpeckers looking for insects. Squirrels then enlarged them for their homes and food storage.



Lichens

Stop 10

Lichens were one of the first living things on earth. They are unique organisms that result from a cooperative venture between as many as four organisms: fungus, algae, cyanobacteria and/or yeast. They grow on trees, rocks & the ground. These examples, growing on the trees at

this stop, illustrate three of the main forms of lichens.



Foliose: leafy, lobes.
Lungwort
(*Lobelia pulmonaria*)



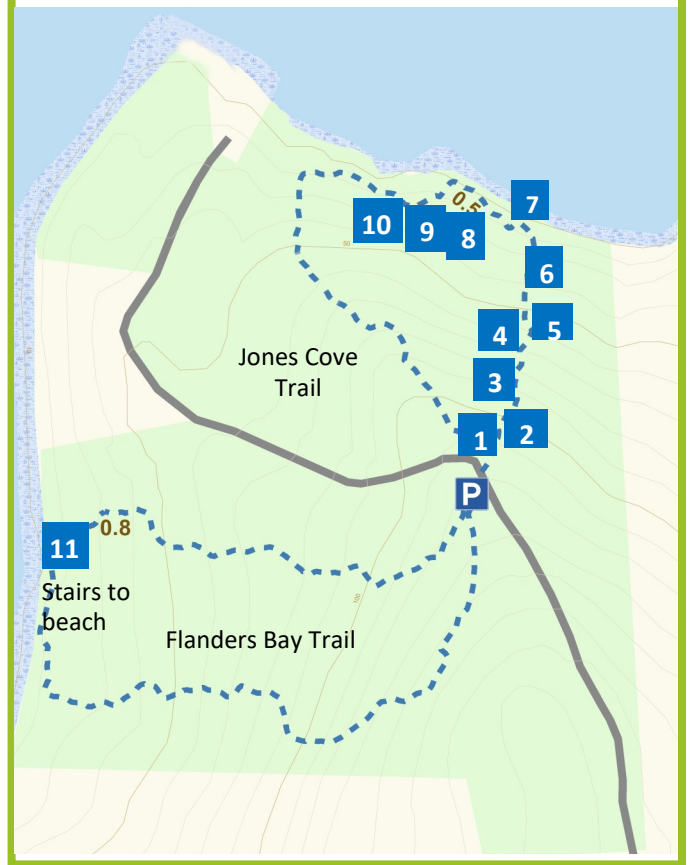
Fruticose: hangs like pendant, or shrubby. **Beard Lichen** (*Usnea*)



Crustose: crust-like.
Common Button Lichen
(*Buellia sp.*)

Habitat: Lichens love Maine with our clean moist air, and our many trees, rocks and undisturbed areas. All they need to survive are sunlight, water, CO₂, and trace minerals. They outlive dry spells and temps way below zero by going dormant. No wonder they've survived glaciers, moving continents, and more!

To access the last stop, return on the Jones Cove Trail to the parking lot and take the Flanders Bay Trail to the beach.



Upper Intertidal Zones

Stop 11(a)

The Intertidal Zones reach from the lowest to the highest tide of the month. **Each zone creates a different habitat** with the twice daily changes in light, temperature, moisture level, wave action, and salinity. Dominant species, and many others, have adapted to the unique conditions in each zone. All of these were found on Taft Point.

Dominant species on left, partner species on right.

Splash Zone: wet from wave splash but never submerged.



Rough Periwinkle
(*Littorina saxatilis*)
Blue - green Algae (on rocks)
(*Calothrix sp.*)



Upper Zone: submerged only during high tide



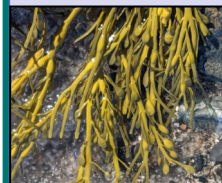
Northern Rock Barnacle
(*Balanus balanoides*)

Note: Visiting the beach at low tide is the best time to find these species. Also, each day varies, so come back again!

Lower Intertidal Zones

Stop 11(b)

Middle Zone: submerged and exposed during every tide



Knotted Wrack
(*Ascophyllum nodosum*)



Blue Mussels
(*Mytilus edulis*)

Lower Zone: usually submerged, exposed briefly during most low tides

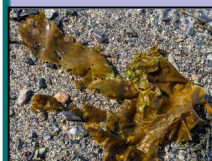


Irish Sea Moss
(*Chondrus crispus*)



Green Crab (*Carcinus maenas*)

Subtidal Zone: always submerged



Horsetail Kelp
(*Laminaria digitata*)

Coiled Tubeworm on kelp
(*Spirorbis sp.*)



Source of info: *Life on the Intertidal Rocks*, C.H. Day
Photos by Alice and Nick Noyes, unless otherwise noted.