



Protecting the Land You Love
 info@frenchmanbay.org
 207-422-2328

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 and Beach Trail ending at the beach along Jones Cove (see map marking observation points online).

For more information, hold your smart phone camera over the QR code to be directed to the Taft Point Preserve page on FrenchmanBay.org



Share photos of your discoveries on Instagram by tagging us

@Frenchmanbayconservancy#FBCTaftPoint

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:

- What do you notice up high above you? Is it sunny or shaded? Is the air damp or dry?
- What do you notice around you up to about 20 feet high? Are there trees with needles or with leaves? Small plants or large?
- What do you notice on the ground? Is it dry or moist? Are there rocks, leaves, needles, mosses, or plants?
- Are there open spaces or lots of nooks and crannies for things to grow, or animals to hide?

Try out what you've learned about the habitats in this Preserve by matching the cards to the Habitat Sheet provided at the kiosk or online at

<https://frenchmanbay.org/preserves-trails/taft-point/>



Mosses

Stop 1

Mosses are green, like 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, but have survived for 400 million years in many different habitats on soil, humus, trees & rocks. Please don't walk on them!

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.

Learn about more Taft Point mosses at the FBC website.



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.



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

Can You Guess its age?

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



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



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



Red Spruce & Balsam Fir

Step 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.



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.



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

Habitat: Cool damp woods and on well drained hillsides.



Bark Resin blisters, becomes rough with age.

Needles dark green, about 1" long, soft, 2 white stripes underneath. In full sun, turn up. On low branches grow horizontally. Twigs smooth when needles removed. **Cones** dark purple, 2", point up.



"Snag" Tree

Step 4

Do you think this tree should be cut down?
Many mammals, birds, and insects would say "NO!"



Pileated Woodpecker



Red Squirrel

Snag trees are dead trees that are left upright to serve as a **habitat** for birds, bats, squirrels, and insects.

Since they 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.

And, the nooks and crannies are a **place to store food**.
The holes were likely made by Pileated Woodpeckers, and enlarged by squirrels.



Red Maple (*Acer rubrum*)

Step 5

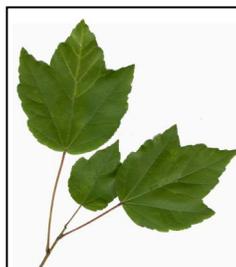


Habitat: The beauty queen of the woods likes many locations, but favors moist sites with sun. It's trunk serves as a habitat for mosses and lichens which don't hurt it, but keep it cool in summer, warm in winter, and moist all year long.



Buds in bright red are the first to come in Spring, then blossom into colorful clusters, and finally sprout tiny green leaves.

Leaves, bright green in summer, turn bright red in Fall, and have 3-5 lobes. Notches between the lobes are V shaped. Edges are irregularly toothed. Leaves are opposite.



Artist's Conk

Step 6

(*Ganoderma applanatum*)



On dead Hemlock tree

This is a type of fungus called a polypore. Approx. 12" wide, it can grow much larger, and live for years. Conks have a tough, woody upper surface, colored in rings, with spores underneath.

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)!



White Underside

Habitat: Grow on, and take nutrients from, dead trees or wounded or cracked living trees.



Ferns

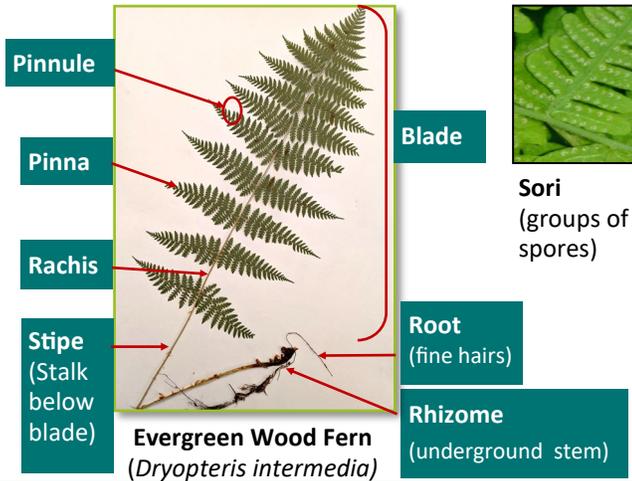
Stop 7

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



Other Ferns at Taft Point

Stop 7



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 8



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!



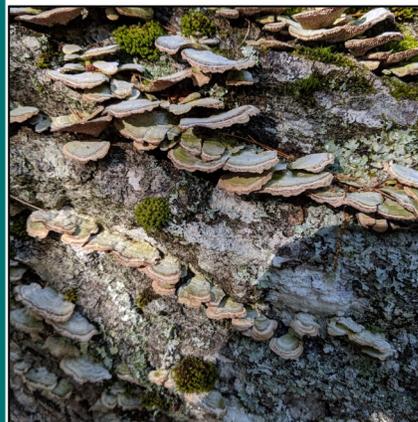
Bark: Rough, gray, rounded ridges with reddish color in between. Looks like fluted column. Gets darker and rougher with age.



Violet-Toothed Polypore

(*Truchaptum bifforme*)

Stop 9



This large colony of fungi love living on this dead oak tree.

Habitat: Living in colonies, on hardwood logs, stumps or decaying limbs. In damp area.

Like other fungi, they pull nutrients out of the surface they live on.

Cap surface is 1/3 to 3” wide and up to 1/8” thick. Frilly, ridged and banded with colors ranging from violet to light brown and white. Rough to the touch, smell is woody.



Underside view: Tooth-like pores under the cap contain “basidia” which drop 1000's of spores on the tree bark to make more polypores.



Lichens

Stop 10

Lichens were one of the first living things on earth. Freddy fungus and Annie Algae took a “liken” to each other and lived happily ever after together. Freddy builds the house (crusty exterior) and Annie makes the food (glucose). Yeast or cyanobacteria join them often. Below are a few of the many lichens at Taft Point found on trees, rocks & the ground. They grow in three forms as shown:



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

Crustose: crust-like.
Whitewash Lichen
(*Phlyctis argena*)



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

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 deal with temps way below zero, and dry spells by going dormant. No wonder they’ve survived glaciers, moving continents, and more!



Lowland by Shore

Stop 11

From the Jones Cove Trail take the Beach Trail to the shore.

Human Habitat! Taft Point is one of only a few coastal sites with a record of human occupation extending to 11,000 years ago. Several archeological digs have shown how Wabanakis lived here for centuries making use of the fishing, rich shoreland zone, forest, flat land, and access to water transportation.



White or Cat Spruce
(*Picea glauca*)

The two dominant species here commonly grow in old pastures or cleared land on shallow rocky soil.

White Spruce : Needles: Strong unpleasant odor. Blue green color. **Cones** 2” long hang down. **Branches:** Long, thick, rigid. Grows to 90’ tall. **Wood Uses:** For paddles, oars, pulp, and lumber.



Green alder
(*Alnus veridis*)

Green Alder: Fast growing, 9’– 30’ tall with smooth grey bark. Two kinds of catkins. Leaves finely toothed.

Habitat: Light-demanding, grow well on poor soils, on forest edges, or wetland margins in moist areas, making thick colonies.



Upper Intertidal Zones

Stop 12

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.



Blue - green Algae (on rocks)
(*Calothrix sp.*) Looks black.

Rough Periwinkle
(*Littorina saxatilis*)



Upper Zone: submerged only during high tide



Northern Rock Barnacle
(*Balanus balanoides*)

If you find examples, share a photo on Instagram and tag us @Frenchmanbayconservancy#FBCTaftPoint



Lower Intertidal Zones

Stop 12

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 or Nick Noyes, unless otherwise noted.