



Three-toothed Cinquefoil
Potentilla tridentata

Three-toothed cinquefoil is one of the more commonly seen species on the granite barrens along the Pot Lake and Indian Hill loops. Its leaves are unmistakable, with each of three leaflets ending in three-toothed arrangement (hence its species name). The flowers of the species, present in June and July, and sometimes into August, are small and white, emerging in branching a arrangement (cyme) atop thin stems 5 to 30 cm tall. The genus *Potentilla* contains species once thought to have medicinal qualities, and this is where the name, meaning “powerful”, originates.



Round-leaved Sundew
Drosera rotundifolia

One of the two insectivorous (insect-eating) genera found on the Bluff Trail, round-leaved sundew is also one of the most striking. Obtaining some of its nutrition from the insects it captures, this plant is able to live in nutrient-deficient boggy areas where many other species would not survive. It is also found along lake shores, especially Upper and Lower Marsh Lakes on the second loop. The leaves of this

plant are arranged in a rosette and are found strictly at the base of the stem. Both the round leaves and the leaf stalks (petioles) are covered in hairs, but it is the glandular hairs on the leaves that give this plant both its common and scientific names; *Drosera* is a derivative of *droseros*, Greek for “dewy”. Small droplets of a sticky substance glisten from each hair and are the first step in catching the prey. Once an insect is stuck, the leaf curls around it and releases digestive enzymes to break it down into a usable form. Though the leaves of Round-leaved Sundew are the most recognizable feature, the flowers are also quite lovely. Usually flowering between mid-July and mid-August, the white flowers are arranged in an elongated coiled cluster atop a solitary stem and open in succession from the bottom to the top.



Clintonia-lily; Corn Lily;
Bluebead Lily; Yellow Clintonia
Clintonia borealis

This member of the Lily family is commonly found along the Bluff Trail, in both wooded and shrub-covered areas. It varies in leaf number, having two, three, or four elliptical leaves, which all growing from the base of the stem, and coming to a point at their ends. The leaf texture is smooth and glossy, and veins run along the length of the leaves, as opposed to out towards the leaf edges. Several yellow flowers appear on a leafless stem in early June, which eventually produce blue, NON-EDIBLE berries later in the summer. The plant is usually between 20 and 30 cm tall. The genus name comes from DeWitt Clinton, an early naturalist, while borealis implies a northern distribution. Younger leaves are thought to taste like cucumber, and may be chopped into salads or boiled. Additionally, the roots of this species have been rubbed on bear traps, as the smell is thought to attract bears.



Downy Rattlesnake Plantain
Goodyera pubescens

This member of the orchid family is extremely rare along the Bluff Trail, but very distinctive and easily identifiable. Although its habitat varies from woodlands to thickets, it has been found on the Bluff trail amongst vegetation on granite outcroppings, on portions of the Indian Hill Loop near Frederick Lake. This species has a characteristic rosette of leaves around its base that have a distinct white-veined pattern. As the common name suggests, this may resemble snakeskin. The stem, which has only a few, reduced leaves, is covered in downy hairs, and white flowers arise in a cluster (raceme) emerging from all sides of the upper stem. Flowers appear in July and August, and the entire plant is between 15 and 45 cm tall. The genus name of downy rattlesnake plantain honours English botanist John Goodyer, while the species name refers to the plants soft hair covering. Due to its snakeskin leaf pattern, it was used by First Nations and early medical practitioners to cure snakebites (there are no venomous snakes in Nova Scotia). The leaves have also been used to make tea, thought to be good for the health.



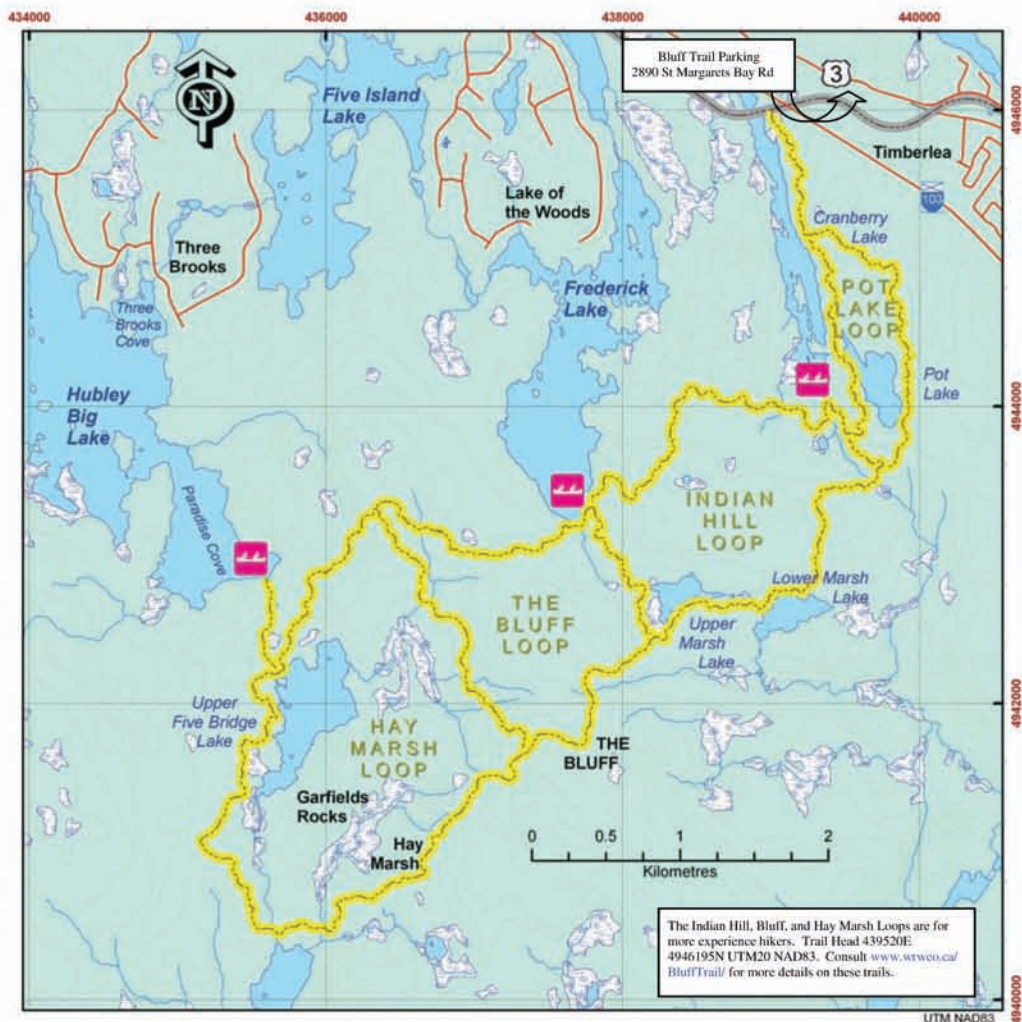
Mountain Sandwort
Arenaria groelandica

One must be very careful when hiking along the Indian Hill Loop of the Bluff Trail. One is likely to come across this species amongst the cracks in the rocky outcroppings characteristic of this part of the trail. As of 1993, it is considered **rare** in Nova Scotia; one must take extra care in one's footing. It is a rather small inconspicuous plant, whose small needle-shaped leaves are sometimes nearly non-existent. They are more numerous at the base of the plant than at the height of the stem. The white flowers produced from June to August are the most notable part of the plant, and actually appear quite large for the overall size of the individual. A delicate beauty.



Indian Pipe
Monotropa uniflora

Ghosts of the forest, *Monotropa uniflora* are achlorophorous (lacking chlorophyll) which is why they are pure white. They are saprophytic, meaning that they obtain their nutrition from decaying organic matter on the forest floor and are also associated with mycorrhizae (soil fungi). These plants spend the majority of their lives below the leaf litter in wooded areas along the Bluff Trail and will only be visible when it is time to mate. At this time a single-flowered stalks emerge from the soil. The emergent plant is almost translucent and waxy to the touch. Small scale-like leaves alternate up the stem to the single flower that seems to nod (the genus name means “one-turn” in reference to the nodding habit, while the species name refers to the solitary flower). They do not, however, remain this way for long; once pollination has occurred, the flower becomes erect and the plant dries and blackens. Look for these incredible plants along the trail from mid-July to August.



Plants of The Bluff Wilderness Hiking Trail

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Nova Scotia Environment
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Bog Laurel
Kalmia polifolia



Huckleberry; Black Huckleberry
Gaylussacia baccata

Huckleberry is likely the most common plant along the Bluff Trail, being found in almost every location throughout the first two loops. It is a woody shrub with alternate light-green leaves. They are generally thin and oblong, though they may be quite variable in the younger stages of growth. The feature which most readily distinguishes this plant from the other shrubs is the presence on the underside of the leaves of a light-yellow iridescence, actually glandular spots. The reddish flowers look much like those of other members of the Ericaceae, having five petals fused into a tube. Roland's Flora of Nova Scotia states that this plant is in flower in early June, though along the Bluff Trail, one may be

able to see the flowers as late as July. The blue-black fruits for which its species name was given start to ripen in mid-August. They may be used as a substitute for blueberries.



Leather-leaf; Cassandra
Chamaedaphne calyculata

Leather-leaf can be found in many areas of the Bluff Trail, especially in the boggy areas. It is tolerant of acidic soils and so is one of the first woody colonizers of a bog. One area of particular note is the bog just before Upper Marsh Lake; the area is riddled with this plant. Like huckleberry, the leaves are alternate along the stem, though they are a distinctive oval shape with a

rusty underside. They may also appear as though they are growing along only one side of the branch. The white flowers that are quite typical of the Ericaceae are formed in the axis of the leaves and are terminal (meaning that no other growth occurs after them on a given branch). The arrangement of the flowers is called a raceme, which is an elongated cluster of stalked flowers that grow from a central branch.



Rhodora
Rhododendron canadense

This deciduous species is another widespread shrub along the Bluff Trail, often found intermingled with huckleberry, sheep laurel, and false holly. Its leaves are distinguishable from these species by their light, almost pastel-green color and the inconspicuous rust-colored hairs on the underside, which are difficult to notice with-

out a hand lens. The characteristic purple flowers of Rhodora emerge in May and June, before any significant appearance of leaves, and add much color to the landscape. The genus name translates roughly as "rose tree", while its species name indicates its Canadian distribution.



Sheep Laurel; Lambkill
Kalmia angustifolia

This woody evergreen shrub is another common component of the vegetation along the Bluff Trail. Although normally flowering in late May and early June, sheep laurel's conspicuous pink flower clusters may color this landscape well into July. The leaves are oppositely arranged (pairs of leaves arise from the same point on opposite sides of the stem), unlike other common shrub species such as Rhodora and huckleberry, and may have powdery white lower surfaces. The flower clusters appear along the length of the stem with leaves above. This easily distin-

guishes the species from its close relative bog laurel (*K. polifolia*) in which the flower cluster is terminal. Sheep laurel's generic name honors botanist Peter Kalm, while its specific name indicates relatively narrow leaves. Its common names indicate its toxicity to livestock, and it is also toxic to humans.



Pink Lady's Slipper;
Pink Moccasin Flower
Cypripedium acaule

When in flower from June to July, this is one of the most easily recognizable plants found on the Bluff Trail. The genus name is derived from Greek words for "beauty" and "foot" or "slipper", referencing the large solitary flower that ranges in colour from pink to brownish to white with a bract extending over top of it. Pollinators enter the flower by the slit in front of the flower and are forced to exit towards the back, brushing against one of two pollen packets which are carried along to the next flower. The paired elliptical leaves are basal, much like in *Clintonia borealis*. To distinguish these two when not in

flower, look for the characteristic bract at the end of the stem and the paired basal leaves (may be dark green above and silver-hairy underneath).



Labrador-tea
Rhododendron groenlandicum

Labrador-tea can be found somewhat commonly in poorly drained areas around the Bluff Trail, such as the area flanking the boardwalk near the trailhead. This is another easily identifiable species, as its tightly inrolled leaves have a thick covering of hair on their undersides. In younger leaves this appears white, while on older leaves it is more of a rust color. The stem too is covered with this rusty down. White

flowers emerge in clusters at the end of stems throughout June, and the plant reaches a height of 30 to 120 cm. Labrador-tea's genus name *Rhododendron* derives from Ancient Greek for a rose tree for which they have a similar aroma, while its species name simply refers to its northern distribution. The leaves of this species are used to make tea rich in vitamin C, which in the past was used to treat a variety of ailments. The leaves and twigs of Labrador-tea are often grazed by moose.



Goldthread; Canker-root
Coptis trifolia

This plant is commonly found forming mats in the wooded areas of the Bluff Trail. The leaves arise from the base of the plant on long slender leaf stalks (petioles) and are divided into three leaflets. The veins are very easy to see and the leaves themselves are glossy, ranging in color from a light spring green to a deep evergreen. Similar to bunchberry, the white "petals" of the flowers are not true petals, but in this

case are sepals. The flowers grow individually on erect stems growing from the base from mid-May to early June, producing dry pods as fruits later in the summer. The common names of this plant are derived from the qualities of the rhizome (the underground stem). These delicate structures are a surprisingly bright yellow-gold color and were used by native peoples and colonists to treat mouth sores (hence canker-root) as well as being steeped to produce an eyewash.



False Holly
Nemopanthus mucronata

Another common shrub along the Bluff Trail, false holly is an eye-catching addition to the landscape as its red, solitary berries ripen towards the end of the summer. There are separate male and female plants. The flowers, which emerge in May and June, are small and greenish, and the leaf stems, or petioles, are a purple color. It is the long, delicate flower/berry stalks (pedicels) that help distinguish this species from Canada holly, and also add to the aesthetics of this plant.



Broom Crowberry
Corema conradii

Broom crowberry, a low evergreen shrub with small, needle-like leaves, is very common on granite outcrops along The Bluff Trail. It occurs as "islands" up to several metres in diameter on otherwise bare surfaces or on thin crusts of soil below and in front of huckleberry at the vegetated edges of outcrops. Reindeer lichens are sometimes abundant amongst

the broom crowberry. There are separate male and female plants. Flowers, at the tips of shoots, open in late April/May. The male flowers are more prominent, producing "a haze of wine-coloured anthers". The small fruits, at first dark colored, turn green towards the end of June and develop a ring of fleshy tissue called an elaisome that attracts ants which in turn disperse seeds. The plants are killed by fire, but buried seeds survive and begin germinating the second season after a fire and then develop into large patches over many years by vegetative growth. It is considered a fire-dependent species, recurrent fires at longer intervals (perhaps 50+ years) being required to maintain this species, otherwise it is overgrown by other species as soil accumulates. While common on rock and sand barrens in Nova Scotia, it is much less common and considered sensitive, imperiled or at risk over the rest of its range (Magdalen Islands, PEI, and a few New England states). It is sensitive to trampling – so please walk around broom crowberry!



Pitcher-plant;
Northern Pitcher-plant
Sarracenia purpurea

Pitcher-plant is an easily identifiable species in the boggy areas of the Bluff Trail, one of the first incidences being just off the second boardwalk. Unlike round-leaved sundew, pitcher-plant is more passive in its insectivory; it simply "waits and hopes" for its next meal. The basal leaves are modified into pitcher or vase-like structures with purple veins (which this plant's species name commemorates) that attract unsuspecting insects. The pitcher is lined with downward curving hairs and wax that make escape difficult; the insect eventually falls into the base of the pitcher and drowns in collected rain-

water. Digestive enzymes and bacterial activity break down the insects into the absorbable nitrogenous compounds. The solitary reddish-purple flowers of the pitcher-plant, visible from July through August, are borne on a leafless stem. The umbrella-shaped part of the flower is actually the female organ.



Teaberry; Checkerberry;
Wintergreen
Gaultheria procumbens

Teaberry is another of the more common plants along the Bluff Trail, found trail-wide again with the exception of boggy regions. This plant is rhizomatous, meaning that it has underground stems, thus growing in colonies. The leaves and flowers are characteristic of the Ericaceae; the leaves are shiny and leathery and the flower petals are fused into a tube. The

leaves are borne on a short upright stem and are generally in groups of three to five. They seem to arise from a central point on the stem and fan out from it (the species name meaning "lying flat" refers to this arrangement). The white flowers and eventually the fleshy red fruits are found below the leaves, emerging from the leaf axis. Interestingly, the leaves and fruits of this plant have a characteristic wintergreen aroma and taste. You should definitely give one a try! The extract has been used to flavor teas, candies, medicines and chewing gums, and the plant is most notably displayed on the "curiously strong" Altoids Wintergreen container.

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