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## HFN FIELD TRIPS

### BLUFF TRAIL HIKE

– David Patriquin

**Date:** Saturday, September 24th

**Place:** near Timberlea

**Weather:** sunny, about 24°C

**Leaders:** David Patriquin

**Participants:** 5

A small but enthusiastic group of five joined me on this hike around the first loop of The Bluff Wilderness Hiking Trail, on a magnificent day in late September. It was a strongly plant-oriented group and we stopped regularly to explore and talk about the vegetation and ecology.

From the trailhead on the Beechville-Lakeside-Timberlea Rails to Trails, (BLT), it is about one km to the beginning of the Pot Lake Loop, the first of four 'stacked' loops of the Bluff Trail. The trail in, and one side of the Pot Lake loop, go alongside Cranberry Lake, a narrow, brown-water lake oriented NW/SE which was carved out by glaciers. It then continues around Pot Lake, a smaller, headwater lake flowing into Cranberry Lake.

While the Pot Lake loop is the shortest of the four and the most readily accessible, I find it both the most difficult to walk but the most interesting. It is rough walking because of the many ups and downs – up onto and then down from boulders – and a lot of it goes through forest where heavy use has exposed big roots. The other loops are comprised of far more barrens which are much easier to walk. But the first loop is the most interesting to me because of the diversity of habitats: lakeside wetlands; wet, Black Spruce/Fir/Red Maple forest; mixed Red Spruce/Yellow Birch forest, including a couple of old growth stands with massive Red Spruce; oak woodlands; barrens; and shrubland. A highpoint at the south end of the Pot Lake loop overlooks a large, ombrotrophic bog (receiving all of its water and nutrients from precipi-

tation, rather than from streams or springs) with open water in the centre. It offers the most panoramic view on the whole trail – across barrens, lakes, and forest.

I knew nothing about The Bluff Trail and surrounding lands when I went to the Woodens River Watershed Environmental Organisation's (WRWEO) AGM in 2008 as a representative from HFN's Executive Board. WRWEO built, and also maintains, The Bluff Trail. It soon became a favourite hiking area and it wasn't long before I was involved with WRWEO in the maintenance and promotion of the trail and the larger Five Bridge Lakes Wilderness Area (FBLWA) in which it is embedded.

In those days, the trail was not well known. The Bluff Wilderness Hiking Trail (full name) was built to introduce people to the larger FBLWA so that they would want to protect it, and events were designed to publicise the trail.

That changed in the summer of 2015 when use of the trail increased 10-fold or more. It was especially intense on the first loop, and involved a lot of 'bad practices', e.g., doggy bags hanging in trees, large fire pits, the cutting down of trees for firewood, and the enlargement of camping sites. A lot of the increased use was associated with people who had little wilderness experience.

We had lots of Leave-No-Trace (LNT) messages around, but they weren't working. For awhile we were overwhelmed by the need to constantly remediate inappropriate use, because it was an onerous task in addition to the routine maintenance of the trail, which in itself is a very large task. If we didn't keep up, the visual presence of bad practices simply provided models for more people to do the same.

In the fall of 2015, we began discussions with Protected Areas (a section of Nova Scotia Environment, NSE) on how to address the issues. I have to credit



the WRWEO chair, Kimberley Berry, in particular, with spearheading some novel developments in wilderness hiking and camping in Nova Scotia, always with the collaboration of Paul Berry, who almost single-handedly has maintained the trail itself for the last several years. Based on Kimberley's experience in changing behaviour in the parking lot for The Bluff Trail (and her own life experience), she was convinced that rather than ban activities such as building fires and camping (which I favoured), we should work on changing people's behaviour. The best way to do that, she insisted, was to be out there talking to people. Kimberley had spent several weekends talking to people in the parking lot to get them to park perpendicularly, rather than parallel, so we could accommodate more cars. Finally – people started doing it, and once this changed behaviour was established, others followed suit.

In the summer of 2015, WRWEO conducted a trial of this approach. With the involvement of Mike Lancaster, two students spent time on the trail documenting trail issues and talking to people, and it started to work.

We were very fortunate to involve Mike, which came about through collaboration with the Five Bridges Wilderness Heritage Trust and the St. Margaret's Bay Stewardship Association (SMBSA). Mike is a certified forestry technician and Stewardship Coordinator with SMBSA, and he has been very successful in implementing volunteer/stewardship programmes related to Micou's and Troop Islands.

To cut the story short, there have been two major developments coming out of the whole process. First, in August of 2016, three sites on the Bluff Wilderness Hiking Trail were designated 'NSE Approved Leave No Trace (LNT) Educational Camping Sites'. Camping is now allowed only at these sites. They are on flat rock surfaces, which in itself offers an example of a 'durable surface' suitable to pitch a tent. Information signs provide guides on how to camp and Leave-No-Trace. So this both reduces the number of camping sites and their impacts, and at the same time educates users on LNT.

Second, WRWEO has designed and embarked on 'The Bluff Trail Stewardship Program'. Its goals are "to decrease the impact of human harms on the trail; improve Leave-No-Trace (LNT) practices among trail users; enhance sustainability of the Bluff Trail; and ensure best possible stewardship practices in this part of the Five Bridge Lakes Wilderness Area." A key component of the programme is to have people out on The Bluff Trail engaging and educating users about the wilderness area and how to interact with it. It is a new model for WRWEO, involving fundraising and the hiring of Mike Lancaster as a Trainer/Coordinator. Mike is integrating his work on The Bluff Trail with his activities in St. Margaret's Bay, making it all a bio-regional approach.

I am very encouraged by these developments. We tend to think that if we get an area protected in some way or another, that's the end of it. But as more people learn about and begin to access these spaces, they again become threatened. We need to embrace a Leave-No-Trace ethic collectively and individually, along with the skills to go with it; that *is* happening, some of it

beginning in the WRWEO parking lot!

As we hiked the Pot Lake loop that day, we talked about some of what was involved in maintaining The Bluff Trail, but, mostly, we just enjoyed the day and explored our surroundings. For me, the biggest satisfaction was what I didn't see: doggie bags, scorched logs, or other signs of misuse. That was quite a change in just a year and a half!

Read more about The Bluff Trail and the stewardship program at [wrweo.ca](http://wrweo.ca). Also, the featured presentation/discussion at the March WRWEO AGM this year was "Introducing The Bluff Trail Stewardship Program... Helping the Trail We Love". For some detail on the natural history of the first loop, see my report for an earlier hike in the Halifax Field Naturalist, Issue #141. If you don't have one, it's available on HFN's website.





# FIELD TRIPS

## THE BLUFF TRAIL HIKE

– David Patriquin

**Date:** Saturday, August 21st

**Place:** The Bluff Wilderness Hiking Trail

**Weather:** Sunny, slight breeze, 23°C

**Interpreters:** Richmond Campbell, David Patriquin

**Participants:** 18

Completed in 2005, The Bluff Wilderness Hiking Trail (its full title), was developed by the Wooden's River Watershed Environmental Organization (WRWEO) as a way to introduce local residents and visitors to a significant wilderness area close to Halifax, thereby promoting conservation of such areas. As expressed in one of the WRWEO documents, it was conceived because "once people have experienced this wildness, most will understand its importance to their lives and the lives of their children and will not let it be destroyed".

The 32 km trail extends deep into an area of approximately 10,000 ha of crown land – the Five Bridge Lakes Wilderness Area (FBLWA) which lies only 20 km west of Halifax as the crow flies. The FBLWA is a varied landscape of barrens, forest, wetlands, and portions of four watersheds, including 26 lakes. The historically important coach road, the Old St. Margaret's Bay Road, runs through the middle of the area, roughly dividing it between 'mostly barrens' to the north (where The Bluff Trail is located), and 'mostly forest' to the south. However, both areas are mosaics of different habitats and vegetation, as was well illustrated.

The hike was held as a 2010 Nova Scotia Park Event. These variously sponsored events take place in provincial parks, wilderness areas, nature reserves, and on Crown Land, and are listed in the annual N.S. Park Events Guide. The participants included three to four members from each of the organisations co-sponsoring the hike (WRWEO, HFN, and the N.S. Wild Flora Society), a visiting field naturalist from Australia, an ecologically-oriented forester, some newcomers to the trail, and some experienced Bluff Trail hikers. It was sunny and warm, making up for 2009 when torrential rains on successive weekends washed out both the scheduled date and the rain date. We stopped at a half dozen sites to talk about the trail and its natural history, eat lunch, or just enjoy the view. Richmond talked about the history and management of The Bluff Trail, and I talked about its natural history, with input from several of the participants.

The trailhead is located close to the north end of Cranberry Lake, which can be seen to the right (south) of Highway 103, just after you pass by Exit 4 heading towards Halifax. This trail is narrow, designed only for walking, and is brush-cut in the fall



only as needed. Problematical wet areas are addressed using 'stone-tread' wherever possible, rather than wooden structures. The stone-tread technique was introduced to Nova Scotia only recently by wilderness enthusiast Garnet McLaughlin, and has quickly become the method of choice. The treated areas are excavated to solid base subsoil or rock and then filled with rocks, pebbles, and sandy soil obtained in the vicinity, making sure not to impede water movement or drainage. Stone-tread is more durable and has a more natural appearance than wooden structures.

As we walked south from the trailhead, sounds of moving vehicles became weaker, disappearing about two hours in. Our hike would take us around the Pot Lake Loop, the first of four successive loops that make up The Bluff Trail, and the most readily accessible and most visited. It provides a wonderful introduction to the habitats and vegetation of the larger area, going through, or by, wetlands, barrens, oak woodlands, and some mixed old growth forest, as well as offering some spectacular landscape views. We stopped at four sites to examine them in some detail and to discuss the area's natural history.

The first stop was on a boardwalk that traverses a wetland beside Cranberry Lake. This wetland supports some beautiful Tamaracks and other vegetation that is typical of relatively nutrient-poor, wet, acidic habitats, e.g., Sphagnum Moss, Labrador Tea, Canada and False Hollies, Leatherleaf, and Rhodora.

In the region of the 'whaleback' (my name for a linear set of high granite outcrops that overlook Cranberry Lake) we stopped on a small one to look at the barrens vegetation. Four species were prominent: the low, spreading Broom Crowberry with needle-like leaves, often mixed with Reindeer Lichen; the diminutive Lowbush Blueberry; and the Black Huckleberry, about 40 cm in height. There were some mats of the moss *Hedwigia ciliata* on rock that was otherwise bare except for encrusting lichens. At other barrens sites, Three-toothed Cinquefoil and Teaberry were also common, the former on the more exposed sites.

Broom Crowberry is abundant at all barrens sites in the Five Bridge Lakes Wilderness Area. These populations are significant because it is an Atlantic Coastal Plain species that is vulnerable or imperiled throughout its range except in Nova Scotia. However, even here, we are losing its habitat (coastal barrens and inland sand barrens) to development and intensive recreational use.



The mosaic of habitats and vegetative characteristics on granitic bedrock was well illustrated at the whaleback area. We were overlooking Cranberry Lake, a roughly linear shape on a NNW-SSE axis carved out by advancing glaciers. (Drumlins in the area are similarly oriented.) This lake is bordered by low wetlands in some areas and by solid granite outcrops in others. Within 20 metres of the barrens site where we stood there were large White Pine, Black Spruce, Red Maple, Large-toothed Aspen, Grey or White Birch, and American Mountain Ash.

The explanation for such variability lies in the granite bedrock and recent glacial action which gouged and/or planed it, depositing till and erratics on a variable scale. Granite is very hard and impermeable, with few fissures. On sloping and elevated areas this results in the shallow rooting of vegetation, quick surface drainage and tendency to drought, with water tending to be retained in depressions. Thus one may see drought-tolerant plant species such as Broom Crowberry and Black Huckleberry side by side with pockets of boggy vegetation such as Sphagnum moss, Pitcher Plant, and Labrador Tea. Larger shrubs and trees occur where there is some thickness of glacial till, and forests are found where there is some expanse of the glacial till deposits. The forest types (deciduous, coniferous, mixed) and dominant species depend on the local moisture regime and disturbance history (mainly fire). Black Spruce/Balsam Fir coniferous forest, Red Oak-dominated deciduous forest, Red Maple-dominated deciduous forest, Red Spruce/Yellow Birch mixed forest, and White Pine/Red Maple/Birch forests or stands are all found on the Bluff Trail.

The mosaic of habitats and vegetation as well as the lack of roads on The Bluff Trail and the larger FBLWA are features that make it near ideal habitat for a group of 25-30 endangered mainland moose which reside on the Chebucto Peninsula. Moose may be spooked by hikers, perceiving them as potential predators. WRWEO has discussed the possibility of seasonal restrictions on access to the more remote loops if scientific study suggests that it would help to protect them. Amongst the other wildlife on The Bluff Trail is the Eastern Coyote. Because of concerns about Coyote encounters, hikers are advised to carry a stick and to act threateningly if approached by them. Black Bears also reside in the area, but they are pretty elusive. WRWEO promotes Leave-No-Trace practices, which help to keep unfriendly encounters to a minimum.



When we reached the junction for the Pot Lake loop, we stopped briefly on the shore of Cranberry Lake to discuss its brown water. It is associated with humic acids leached from wetlands and damp forests, and is dependent on the continued integrity of the landscape at large. Amongst its other properties, the brown water protects Speckled Brook Trout from aluminum toxicity at low pH. This is particularly important because the granitic bedrock makes the area highly susceptible to increased acidification from acid rain.

We then headed upwards to traverse Pot Lake loop clockwise, going first through Black Spruce and Fir forest in the damp area by the lake, then mixed forest, then coming out onto high barrens with occasional White Pines and Birch and expanses of oak-dominated deciduous forest on the dryish slope toward the lake.

We stopped to examine and discuss the oak forest, which is perhaps better described as a woodland, as it is quasi-open with a well-developed shrub layer or layers. Common trees include Red Oak, Red Maple, White Birch, and Amelanchier, with some firs in the understory and some Big-toothed Aspen towards the edges by the barrens. There were no large trees; evidently the area had been completely burned over by fire, most likely in 1957 when a large fire occurred there. Many of the Red Oak and Red Maple boles (trunks) occur in clusters of three to seven or more, which would have originated as sprouts from the root-crowns of trees whose tops were destroyed by fire. The largest Red Oak boles were about 6-7 inches dbh (diameter at breast height) or 9 inches where they occurred singly. Wych Hazel is a common tall understory shrub, while Black Huckleberry, Lambkill, and Bracken Fern form a low shrub layer. Witherod (Wild Raisin) grows to eye level or higher in the more open areas. Leaf litter covers the floor except where there are rock outcrops or fallen tree trunks which are covered with mosses and lichens. Common forest floor herbs include Wild Sasparilla, Bluebead Lilly, Bunchberry, Starflower, and Pink Lady's Slipper.

We continued south on the trail, going through more oak woodlands and some low bushlands with abundant Rhodora, False Holly, and Witherod. As we approached the area above Pot Lake, we moved into mixed forest again and stopped to have lunch below some well-buttressed, towering Red Spruce. Several trees I measured later were 17, 20, and 27 inches dbh and were likely well over 100 years of age. Ralph Johnson, in *Forests of Nova Scotia* (1986) writes, "Red Spruce is a medium-size tree at maturity, reaching 16 to 30 inches dbh and 70 to 90 feet in Nova Scotia at from 150 to 280 years of age." Other trees at this site included Yellow Birch, White Birch, Red Maple, American Mountain Ash, and Balsam Fir. Not far away were the occasional large Red Oak and White Pine, with a few large snags and fallen dead



trees. The forest floor, rocks, and older fallen dead trees were covered by a felt-like mat of mosses and liverworts, with the leafy, moisture-loving liverwort *Bazzania Trilobata* predominant amongst them. Evidently this site escaped the fire of 1957, and probably other earlier fires, because of its moisture. It clearly has features of Old Growth forest today.

After lunch, we moved fairly quickly to complete the trail, stopping briefly at a high point on the Pot Lake Loop in order to enjoy a spectacular 360° panoramic view. On the trail back we passed through another grove of towering Red Spruce, this one on the west side of Pot Lake. We were especially impressed by one tall specimen that had grown right on top of an erratic (a large boulder deposited by a retreating glacier). Its large, buttressed roots enclosed the big rock, looking much like the arms of a giant octopus.

We were back at the trailhead five hours after we started; some who sped ahead made it in four hours. Faster hikers do it comfortably in two hours, and speed hikers in an hour or less; that's clearly not enough time for naturalists!

A young woman who had recently immigrated to Canada expressed appreciation for what she had just experienced. She said that in Korea, she often went to the countryside, but never had she been in an area so wild, it was truly wonderful for her.

We are hopeful that many more can have this experience. In 2009, the FBLWA was declared a Candidate Wilderness Area and formal protection is expected in 2011. However, maintenance of The Bluff Wilderness Hiking Trail and related natural history activities, such as the hike we enjoyed on August 21st, will still be the purview of WRWEO and other volunteer organisations such as HFN and the N.S. Wild Flora Society.

For more about The Bluff Wilderness Hiking Trail and the Five Bridge Lakes Wilderness Area, go to [wrweo.ca](http://wrweo.ca).

For information related to the anticipated designation of the FBLWA as a Protected Area under the provinces Wilderness Protection Act, go to this Nova Scotia Environment site – [www.gov.ns.ca/nse/protectedareas/wa\\_fivebridgelakes.asp](http://www.gov.ns.ca/nse/protectedareas/wa_fivebridgelakes.asp).

## BLUFF TRAIL SPECIES

Reindeer Lichen  
Three-toothed Liverwort  
Sphagnum  
Broom Moss  
Ciliate Hedwigia Moss  
Stair-step Moss  
Hypnum Moss  
Red-stem Moss



Cinnamon Fern  
Bracken Fern  
Balsam Fir  
Red Spruce  
Black Spruce  
Tamarack  
White Pine  
Wych Hazel  
Red Oak  
Yellow Birch  
Wire Birch  
White Birch  
Pitcher Plant  
Largetooth Aspen  
Broom Crowberry  
Labrador Tea



Teaberry  
Creeping Snowberry  
Rhodora  
Lambkill  
Leatherleaf  
Lowbush Blueberry  
Huckleberry  
Loosestrife  
Starflower  
Serviceberry  
Chokeberry  
Three-toothed Cinquefoil  
Mountain-ash  
Bunchberry  
Canada Holly  
False Holly  
Red Maple  
Wild Sarsaparilla  
Partridge-berry  
Witherod  
Wood Aster  
Cottongrass  
Clintonia-lily  
Painted Trillium  
Wild Lily-of-the-valley  
Pink Lady's-slipper



*Cladonia rangiferina*  
*Bazzania trilobata*  
*Sphagnum* spp.  
*Dicranum scoparium*  
*Hedwigia ciliata*  
*Hylocomium splendens*  
*Hypnum imponens*  
*Pleurozium schreberi*

*Osmunda cinnamomea*  
*Pteridium aquilinum*  
*Abies balsamea*  
*Picea rubens*  
*Picea mariana*  
*Larix laricina*  
*Pinus strobus*  
*Hamamelis virginiana*  
*Quercus rubra*  
*Betula alleghaniensis*  
*B. populifolia*  
*B. papyrifera*  
*Sarracenia purpurea*  
*Populus grandidentata*  
*Corema conradii*  
*Ledum groenlandicum*  
*Gaultheria procumbens*  
*Gaultheria hispida*  
*Rhododendron canadense*  
*Kalmia angustifolia*  
*Chamaedaphne calyculata*  
*Vaccinium angustifolium*  
*Gaylussacia baccata*  
*Lysimachia terrestris*  
*Trientalis borealis*  
*Amelanchier* sp.  
*Aronia* sp.  
*Potentilla tridentata*  
*Sorbus americana*  
*Cornus canadensis*  
*Ilex verticillata*  
*Nemopanthus mucronata*  
*Acer rubrum*  
*Aralia nudicaulis*  
*Mitchella repens*  
*Viburnum nudum*  
*Aster acuminatus*  
*Eriophorum* sp.  
*Clintonia borealis*  
*Trillium undulatum*  
*Maianthemum canadense*  
*Cypripedium acaule*

