Biosphere URBAN BioKit HALIFAX REGIONAL MUNICIPALITY

Shubenacadie Canal Greenway Corridor

Welcome to your Shubenacadie Canal Greenway Corridor BioKit Circuit. Use the activities in this circuit, along with the HRM Urban BioKit, to explore the natural treasures and unique places in this park – utilizing your keen powers of observation.

Location: Fairbanks Centre, 54 Locks Road, Dartmouth, 2 kilometres from the junction of Highway 111 and Route 318.

Lost Celtic Town

At the junction of the paths, near the interpretive board

GPS : N 44° 41.984′ W 63° 33.147′

Hidden within the forests in this area of the trail, there lies the remnants of an Irish settlement built in 1826. Since that time, the buildings have been overtaken by nature and are barely visible. You can explore the forest and rediscover the lost village. Start near the interpretive board and walk left off the path into the forest.

What signs of the lost village can you see? What do you think the houses were built of? (Keep in mind that, in 1826, most materials were natural.)

*Use your imagination to draw a house that would have been used by the Irish canal workers and their families. A good starting point is the circular foundations you can see in the forest ground.**

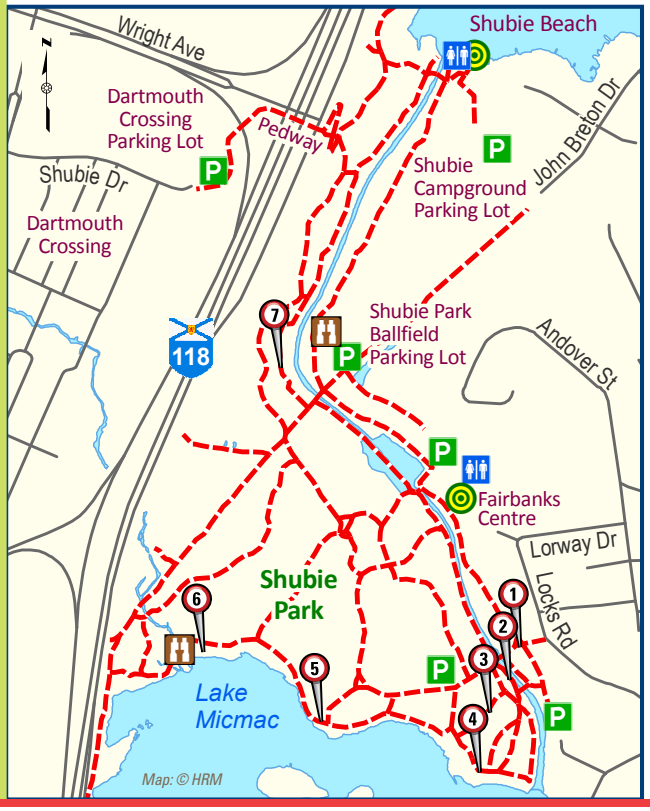
**At the end of your visit, go to the canal's Fairbanks Centre and see the photograph of a house from old Ireland.*

Photo: © History Collection, Nova Scotia Museum

HISTORY

The Shubenacadie Canal is among the oldest canals in Canada. It extends from Halifax Harbour across the entire province to the Bay of Fundy. During its operation from 1856 to 1870, the Shubenacadie Canal ran with modest success, carrying lumber, pottery, iron, coal and bricks across Nova Scotia. The canal was declared a National Historic Civil Engineering Site in 1984.

The natural setting of Shubenacadie Canal makes it hard to imagine that this section of the waterway was human-made, and that some parts of the canal are over 180 years old. With support from the municipal, provincial and federal governments, as well as volunteers from the Shubenacadie Canal Commission, this waterway was restored for activities such as hiking and paddling. Well-connected with the Trans Canada Trail network, the Shubenacadie Canal features several campgrounds to promote longer exploration.



The American Eel

2 ***Cross onto the small bridge over the canal by Lock 2***

GPS: N 44° 41.947′ W 63° 33.144′

The construction of the Shubenacadie Canal created habitat for many species of animals. But as you can see from the bridge, it's generally impossible for aquatic animals to make their way around the canal locks, with the exception of one species: American eel. This snake-like fish lives in the dark, murky parts of lakes and rivers and typically emerges from the water only at night, to feed. Here at Lock 2, eels can often be seen leaving the water at night, slithering up the banks, around the lock and back into the canal on the other side.

If you were an eel, what would be three major barriers you'd face to go from the harbour to where you're now standing?

1. _____

2. _____

3. _____

Note: The Shubenacadie Canal Commission often puts up signs when the eels are present, so keep an eye open.

FOREST GIANTS

3 ***On the small trail crossing the path toward Lake Micmac***

GPS: N 44° 41.925′ W 63° 33.184′

Do you see a very large tree? This species is eastern hemlock, a slow-growing conifer that can grow to over 50 metres tall in its southern range and live for more than 800 years. Large hemlock trees like this one have thick, dense canopies that create shade, block out rain and limit snow accumulation. This creates a great habitat for many animal species, especially during the winter.

Hemlock trees can be identified by a characteristic that you can find on the underside of its needles. What do you see?

Photo: © Parks Canada, J. Pleau

Scientific Exploration!

1) Walk around the base of a hemlock, observing what is growing on the ground within two metres of the trunk.
2) Crawl under the tree and look up to the sky for a new perspective.
3) Repeat 1 and 2 with a broadleaf tree. Note: This activity is best done when the broadleaf is covered with leaves.

How are species underneath the two trees different from one another?

_____

Which type of tree has the most species growing underneath its canopy?

_____

Under which tree do you think plants grow better?

_____

As you may have noticed, there is less underbrush below the hemlock. Not much will grow under a hemlock tree, as they produce acidic needles and create dense shade, both of which limit the growth of other plants.

Photo: © Parks Canada, S. Leslie

Did You Know...

Aboriginal peoples in North America used the leaves of eastern hemlocks in steam baths and to make tea. They also created tea from the inner bark; this was an effective treatment for colds, fevers, and diarrhea, and other stomach troubles.

Isle of Pylon

4 ***On the path toward Lake Micmac (Sunrise Beach)***
GPS : N 44° 41.866′ W 63° 33.186

Look at the small island closest to the shore of Lake Micmac. Two Cent Island may look like part of the natural landscape, but it is actually a human-made structure, created to guide vessels toward the canal. Since its construction, it has been overtaken by vegetation. Once barren, it is now home to several species of trees, shrubs and grasses.

Scan the ground and the forest near the beach, to find some of the seeds and fruits pictured here. **Check off the types you find.** Hint: check your shoes for seeds first!

To see what forces of nature could have transported life to this human-made island, conduct tests on these seeds and fruits by **throwing them in the air, in water or on the ground.** Do you think people can act as transportation for seeds and fruits?

☐ Wild flower seeds

Photo: © Parks Canada, J. Pleau

☐ Small fruits

Photo: © Parks Canada

☐ Grass seeds

Photo: © Environment Canada

☐ Seeds within cones

Lake Micmac in the spring
Photo: © A. Billard, Shubenacadie Canal Commission

WATER CLARITY

5 ***On the path along the edge of Lake Micmac in front of Helena Island***
GPS : N 44° 41.922′ W 63° 33.410′

From here you can see how Lake Micmac has been affected by the sediment flowing in from a former quarry site across the highway. The result is an abundance of vegetation growth, known as eutrophication. Excessive vegetation matter production caused by fertilizers and sediment infiltrating the lake destroyed the aquatic habitat of this cove by removing oxygen from the water.

Fortunately, Dartmouth Crossing, a commercial real estate development, has taken preventative measures such as improving the health of the streams flowing into the lake and decreasing the level of sedimentation.

You, too, can help: *avoid chemical fertilizers in your garden, and use detergents without phosphates.*

Streams: A Natural Link to Lakes

6 On the path along the edge of Lake Micmac at the mouth of the small stream

GPS: N 44° 41.975′ W 63° 33.568′

This stream is one of many freshwater sources that feed Lake Micmac. Streams like this one are important habitat for aquatic wildlife in urban areas. A stream's health is determined, in part, by the quality of surrounding vegetation, which controls erosion and water temperature and provides habitat for stream creatures.

Explore the edges of the streams

As a habitat explorer, look for two life forms to study. Lying on your stomach, wiggle to the edge of the stream to get a closer look at the water and plants, then fill out the chart below.

	#1	#2
What kind of organisms were found (plant, fungi, animal)?		
Describe what it looked like or draw a picture.		
How many did you find?		
Was it in the water or on land?		
Describe its habitat.		

Bonus! Look under a rock in the stream, near the edge. Do you see any of the creatures below? They are indicators of good stream health, because they are sensitive to pollution or habitat modifications. **Circle any that you found:**

Flatheaded mayfly larvae

Saddle casemaker caddisfly larvae

Fishfly larvae

Perlodid stonefly larvae

Illustrations: © G3E

Note: Turn back over the rock exactly as you found it.

Plunge into action! The Adopt A Stream program in Nova Scotia gives you the opportunity to improve the habitat of aquatic ecosystems and wetlands in your region.

THE DEEP CUT

7 At the first interpretive board in the Deep Cut section of the canal (don't cross the bridge)

GPS: N 44° 42.223′ W 63° 33.440

The section of the canal between the bridge and Lake Charles is known as the Deep Cut. By taking note of the steep earth banks on either side of the canal, you can see how far down the canal workers had to dig.

Since the canal was built, this 1400-metre-long channel between the two lakes has taken on the appearance of a natural stream. It is now home to ducks, beavers, muskrats and dozens of other animal species. Explore the edges of the Deep Cut and look for as many plants and animals as possible.

How many did you find?

Resources:

- Shubenacadie Canal Commission **shubenacadiecanal.ca**
- NSLC Adopt a Stream **nsadoptastream.org**
- Biosphere **ec.gc.ca/biosphere**

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Aussi disponible en français sous le titre : Circuit BioTrousse – Corridor vert du canal Shubenacadie