

1: Welcome

You are about to embark on a journey through the rich ecosystem that makes up Five Points Forest. One of the interesting aspects of this property is the fact that it is in the Carolinian forest zone but the canopy trees are representative of the Great Lakes St. Lawrence forest. Tamarack, a boreal forest species, is also present. But this is what makes the Carolinian zone so biologically diverse! Some plants we normally find farther north have colonized sites like Five Points Forest centuries ago and have never relinquished them to the trees from farther south.

Five Points Forest is part of the Carolinian life zone of eastern North America and characterized by a predominance of deciduous (broad-leafed) trees and high biodiversity. The Carolinian zone is 0.25% of Canada's area but contains 25% of Canada's population¹. Because of this, the Carolinian zone is very vulnerable to human and climate related impacts. The Carolinian zone is home to 40% of the species at risk in Canada. Five Points Forest is located within the Thames River Watershed, in Ingersoll, Ontario with public access from **4975 Robinson Road**. This property also contains Provincially Significant Wetlands and rare ecological communities for this part of the province.



History of the Property

Uplands of the Five Points Forest were farmed until 1940s-50s and then abandoned. These areas have reforested naturally but also include some older coniferous plantings. The rolling sections were never cleared. Al and Lilianne Driedger purchased the first parcel (28 acres) in 1987 and the second (50 acres) in 1989. In 1993, the Driedgers built a home on the highest point of the property, connected to Robinson Rd. by a long gravel driveway.

The Driedgers as good stewards of the land, have planted trees and maintained hiking trails. The Driedgers desired to protect the land in the public interest for its conservation and

¹ Carolinian Canada. (2015). Retrieved from: <https://caroliniancanada.ca/legacy/.../CarolinianCanadabrochure.pdf>

educational values. In 2007 the Driedgers applied for a conservation severance for the 5 acres surrounding the homestead and donated the residual wooded area of 74 acres to the Thames Talbot Land Trust in 2009.

A large portion of the upland part of the property has regrown into secondary mixed forest composed of an understory of Black Cherry, White Ash and patches of Eastern White Cedar and declining hawthorns and apples, beneath a canopy of Trembling Aspen and declining White Ash. Scots Pine has been planted here in the past, but has been removed over the last few years to promote the growth of native deciduous trees; and the remaining trees are now declining. An active program of Common Buckthorn eradication is also underway on this property.

A mature, upland deciduous forest dominated by Sugar Maple and with a rich ground layer occupies a small ridge and adjacent area both north and south of the center of the wetland. Other tree species include American Beech, Red Maple, Red Oak, Ironwood, American Basswood, Yellow Birch, Eastern White Cedar, White Ash, Bitternut Hickory and Alternate-leaved Dogwood. A lowland forest of Red Maple and Yellow Birch occupies a portion of the bottomland area.

2: Early Successional Meadow

This meadow is a former yard from a historical homestead. The first things to colonize this disturbed area are pioneer species. Pioneer species begin a chain of ecological succession that ultimately leads to a biodiverse, mature forest. The meadow consists of wildflowers like Goldenrod and Asters, Milkweed, Grasses and shrubs such as Silky Dogwood. Think of this meadow as the early stages of life in the ecosystem – a small child that will eventually grow to look a lot like the forest behind it! In the meantime, the meadow provides habitat and food for birds, insects, butterflies and other wildlife².



A bumblebee enjoying some yummy Canada Goldenrod in the meadow

² Photo credit: Kaitlin Richardson

3: Young Forest

The part of the forest surrounding you now is like the teenager. This type of forest is comprised of early successional tree species such as Poplar, Hawthorn, Buckthorn and Birch. Much like a human teenager, this type of forest grows rapidly. It colonizes open areas so that other trees that require shadier conditions will be able to move in. These species are short lived and shade intolerant. When they die, they create plant litter on the forest floor, thereby providing nutrients that make soil conditions appropriate for secondary succession.



Leaves of the Trembling Aspen (left) and Illustration of Common Hawthorn (right)

4: Alien Invasion!

⁵Invasive species are like bullies that try to slow down and stop the chain of succession in the ecosystem. One prominent invasive shrub in Five Points Forest is European Buckthorn (*Rhamnus cathartica*). TTLT and the stewards of the property actively remove Buckthorn every year. Buckthorn is greedy, staying green longer than native plants and stealing the sunlight! Buckthorn does not share space well either, growing quickly and forming patches where nothing else is allowed in. The black berries of this plant show up in



Berries and Leaves of European Buckthorn

³ Image source: http://www.aucoeurdelarbre.ca/upload/images/1.3.2c_0400-pop-00111_1_1.jpg

⁴ Image source: <http://www.pfaf.org/Admin/PlantImages/CrataegusMonogyna.jpg>

⁵ Image source: Credit Valley Conservation

the late summer and the seeds get spread around by birds. As it is gradually removed, we are seeing native species come in and grow, slowly healing the scar that Buckthorn has left on the landscape.

Garlic Mustard is an aggressive, invasive herb that is prevalent at the ground level. In the first year of its life, it grows in a cluster of leaves like a rosette, developing strong roots that will grow into a tall flowering plant with hundreds of seeds in year two. Dense stands of garlic mustard can produce more than 60,000 seeds per m² and double in size every four years⁶. The seeds of this plant can be easily spread by people and animals. They can remain in the soil for many years and still be able to germinate. Al Driedger is a valuable resource in the fight against Garlic Mustard in Five Points Forest, relentlessly picking the plants every year before they flower. TTLT has also developed an “Adopt-a-Patch” program to tackle the removal of this invasive plant.



Garlic Mustard year one (left) and year two (right)

⁶ Retrieved from: <http://www.invadingspecies.com/invaders/plants-terrestrial/garlic-mustard/>

⁷ Image source: www.eattheweeds.com

⁸ Image source: King County

5: Complex Interactions

It's true what they say about survival of the fittest. Out of the thousands of seeds that trees produce each year, very few grow to reach the canopy. Canopy tree species such as Maple, Oak, Ash, and Hickory a lot of light to survive so these trees "reach for the sky". The trees that survive are the ones that make it to the top of the canopy, capturing as much incoming solar radiation as possible. The canopy is what you see when you look at an aerial photograph of the forest. Sub-canopy tree species are more shade tolerant and are happy to colonize the forest under the tree tops in the canopy.

These trees require less light and do not grow as tall.

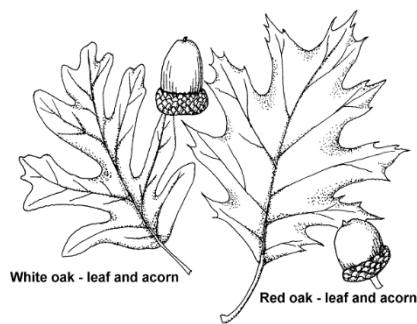
Ironwood, Alternate-leaf Dogwood (*Cornus alternifolia*) and Blue Beech – sometimes called Musclewood (*Carpinus caroliniana*) are examples of sub-canopy trees.



Berries of the Black Cherry

One noteworthy species at Five Points Forest is the

Black Cherry (*Prunus serotina*). The Black Cherry is native to North America and is easily identified by its bark. When the Black Cherry is mature, its broken dark-gray to black bark resembles burnt cornflakes. However, the bark of a young Black Cherry is smooth, much like yellow birch. The tiny horizontal white flecks on the bark of trees in the cherry and birch families are called "lenticels". Lenticels are raised pores on the bark of woody plants that allow gas exchange between the plant and the atmosphere.



White oak - leaf and acorn

Red oak - leaf and acorn

This part of the forest floor is covered with Mayapple (*Podophyllum peltatum*) and other spring ephemerals. Spring ephemerals are perennial plants that emerge quickly in the spring and die back to their underground parts after a short period of growth and reproduction. These types of plants require shady areas with rich, moist soil. The fruit of the Mayapple is edible and resembles a crabapple. People used to collect these fruits in the spring, making them into jam. Other spring ephemerals include Virginia Bluebells, Wild Geranium, different species of Trillium and wild Columbine.

6: Mature Forest

Between here and marker 7 you will see a transition to a mature forest. A Sugar Maple-Beech upland forest is the adult on the forest successional path. This type of forest is biodiverse, supporting many organisms from the soil to the ground level vegetation and many types of trees. You'll notice how shady it is in this type of forest because of the tall trees with big leaves in the canopy that soak up all the sun. It is important to recognize that just because the forest is mature, does not mean it's done growing up! Succession is a dynamic process that is constantly changing based on climate, temperature, precipitation, storm events and canopy gaps from fallen trees.



Sugar Maple leaves (left) and American Beech trunk and leaves (right)

7: Wildlife Tree

Standing dead trees like this one are an important part of the forest. Wildlife trees at all stages provide a portion of the life support system for many species of plants, invertebrates, birds, amphibians, reptiles, and mammals. Some of the uses include nesting, feeding, communication (drumming, marking), roosting, shelter, and over wintering. Another beneficial group of wildlife tree users are the birds of prey: owls that nest in tree cavities and hawks that use the trees as hunting perches. These birds prey on mice and other rodents that often eat tree seeds or young seedlings.





Al and Lilianne Driedger admiring Five Points Forest

8: Al's Oak

This majestic Black Oak is Al Driedger's favorite tree. Much like Al himself, this tree plays an important role in the forest and never gives up!

9: Highs and Lows

An interesting thing about Five Points Forest is the topography. The land here forms both upland and lowland, creating a variety of forest communities and wetlands. This diversity of landforms makes Five Points Forest incredibly biodiverse in addition to containing Provincially Significant Wetlands.

⁹Early Meadow Rue (*Thalictrum dioicum*) is prominent along the side of the trail at this point. This woodland plant is native to North America and produces greenish-white flowers in early spring. The species name "dioicum" in botany means that the male and female flowers are on separate plants, and is derived from the Greek word meaning two households. Depending on the time of year, you may also see spring ephemerals, ferns and wild strawberry. Ferns are edible in the spring, forming fiddleheads, and wild strawberries are tiny but delicious!



Wild Strawberries picked at Five Points Forest

This portion of the forest is an older, mature deciduous upland forest. The grandmother on the successional path, these trees are well-established and extend high into the canopy. The

⁹ Photo credit: Kaitlin Richardson

sub-canopy and ground layers are rich in biodiversity and the soil organisms are very active. The valley alongside the trail is perfect habitat for foraging deer. If you're quiet, you might even see one!



10



11



12

Scarlet Tanager (left), Wood Frog (middle) and Red-tail Hawk (right)

Five Points Forest is also home to a variety of birds. Some of these include Eastern Wood-pewee, Wood Thrush, Scarlet Tanager, Red-tailed Hawk, Gray Catbird and Red-bellied Woodpecker. The forest also provides habitat for reptiles and amphibians.

10: Cedar Swamp

¹³Eastern White Cedar (*Thuja occidentalis*) is native to Eastern Canada and is well established in this part of the forest, forming a cedar swamp ecosystem. A Cedar swamp is an unusual feature in the Carolinian Zone. This species grows naturally in moist forests and coniferous swamps, where other larger and faster-growing species cannot compete successfully. It also grows on cliffs and other sites with reduced tree competition. Eastern White Cedar is a desirable winter food for deer with its soft foliage. The largest known Eastern White Cedar is on South Manitou Island in Michigan and measures 34 m tall and 175 cm in diameter. Talk about a grandpa tree!



Foliage of the Eastern White Cedar

¹⁰ Photo credit: P. Allen Woodliffe

¹¹ Photo credit: Dave Wake

¹² Photo credit: Mark Cunningham

¹³ Image source: Natural Resources Canada (NRCan)

11: Ferns

¹⁴This lowland area is full of different species of ferns. Ferns require rich, moist forest floors and are indicative of rich woodlands. Among these ferns are Christmas Ferns which are darker green with "pinnules" or sub-leaflets that resemble Christmas stockings, and sensitive fern that has more rounded and lobed "pinna" or leaflets like an oak leaf.



TTLT volunteer Donald Craig holding a fern!

12: White Pine Grove

You will notice that the forest floor here does not have as many plants growing as other parts of the forest. This is because coniferous trees like Eastern White Pine do not allow a lot of sunlight to reach the forest floor and when they shed their needles, they create a thick layer of acidic litter that prevents some more sensitive plants from growing there.

During the age where square rig sailboats were used, tall white pines with high quality wood were used to create masts. These "mast pines" were reserved for the British Royal Navy and when the wood was squared, ranged from 30m (100 ft) to 37 m (120 ft) long!

Notice how the needles of the White Pine look like fluffy clouds? The needles of the Pine family are often quite soft compared to the Spruce and Cedar families. White Pine is native to this area and the needles grow in groups of 5. One way to remember this is there are as many needles in a group as there are letters in the word "white" – hence, W-H-I-T-E pine has 5 needles.



White Pine needles grow in bunches of five

¹⁴ Photo Credit: Kaitlin Richardson

¹⁵13: Darkness, Light and Multiple Trunks



The difference in tree canopy is visible when you walk out of the coniferous forest into the deciduous forest. Deciduous trees tend to produce a more dappled shade and grow further apart, whereas the shade in a coniferous forest is thick and dark. This makes it quite obvious that these areas would be suitable for different species.

Walking into this part of the trail can be dark and spooky, but don't let it fool you! It is only dark because the needles on these coniferous trees are very dense and the trees grow very close together.

Now we meet the triplets. These three trees are growing from the same root system! Multi-trunked trees form when the original stem of the tree was damaged, broken or browsed by animals resulting in new stems sprouting from the roots. Often, these stems are all similar in age and size. This phenomena is common in trees that grow in floodplains, such as Willow and Silver Maple because they are often damaged during floods. This is also common after a logging operation, where more small trees are damaged and re-sprout from stumps.

¹⁵ Photo Credit: Kaitlin Richardson

We hoped you enjoyed your visit to Five Points Forest!



TTLT volunteers at a Five Points Forest workday for Buckthorn removal

The **Thames Talbot Land Trust** is a non-profit organization dedicated to the protection of lands and waters having significant natural, recreational, scenic, historical, or agricultural value. Our name reflects the geographical context and cultural heritage of the lands along the Thames River and historic Talbot Trail. Our area of focus includes Middlesex, Elgin, Perth, and Oxford counties. As of May 2016, The Land Trust owns 14 conservation properties and holds one conservation easement, protecting more than 1,000 acres (400 hectares) of land in total.

***TTLT has received support for this project from the
TD Friends of the Environment Foundation.
We are so grateful for their contribution!***



TD Friends of the
Environment
Foundation

Making a donation to the Thames Talbot Land Trust is the simplest way to preserve the places you love for the enjoyment of future generations.



Help save Five Points from alien invasive plants! Learn more about our Adopt-a-Patch Program:

http://www.thamestalbotlandtrust.ca/five_points_forest_adopt_a_patch



To donate or volunteer, please visit our website:

http://www.thamestalbotlandtrust.ca/how_you_can_help

