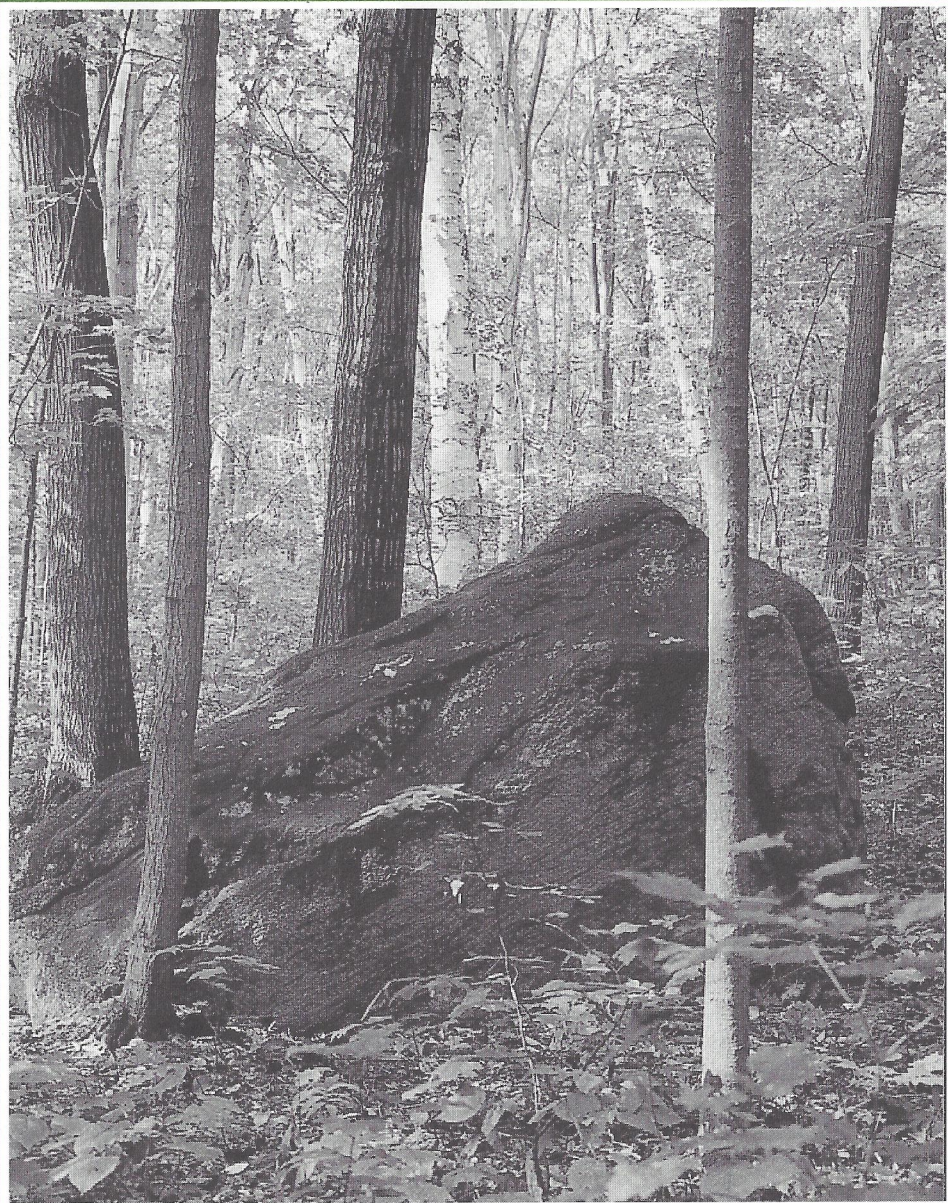
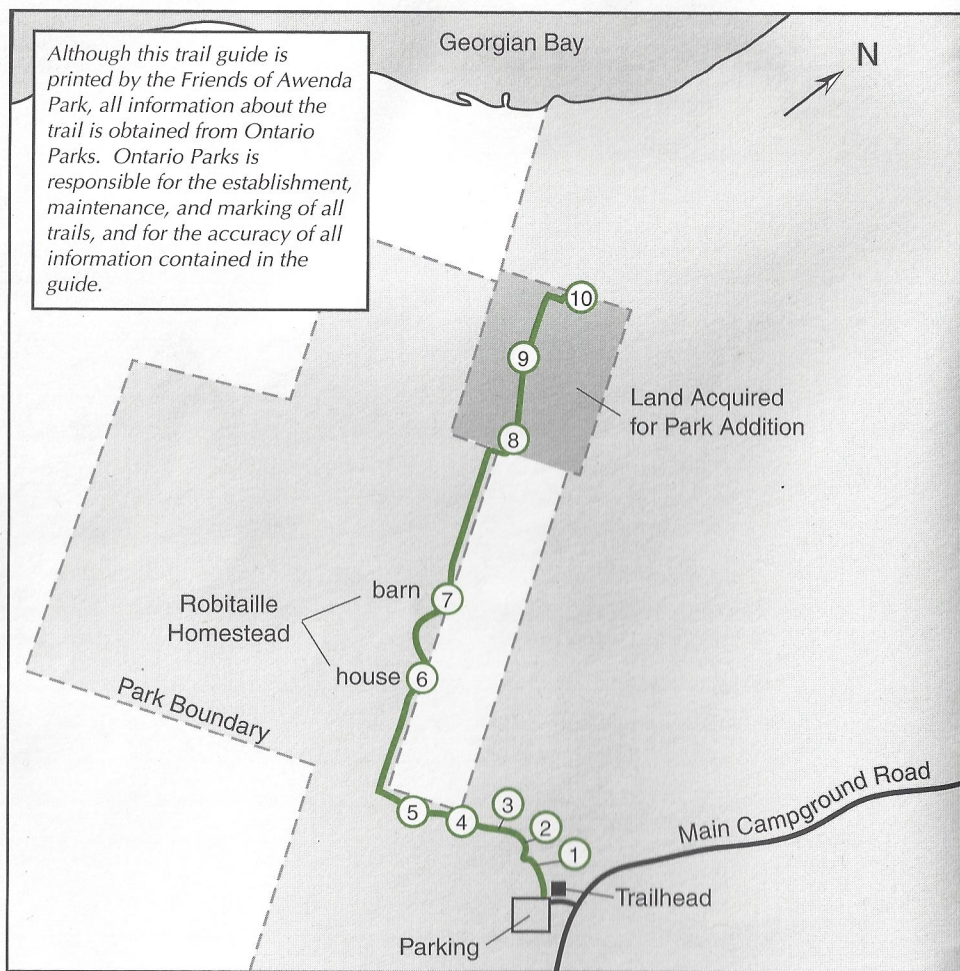


Robitaille Homestead Trail

Awenda Provincial Park



Robitaille Homestead Trail



The Robitaille Homestead Trail is a 1.5 kilometre linear trail (3 km return) which ascends the Algonquin Bluff and terminates at an ancient sand dune. The trail begins at the Robitaille Homestead Trail (formerly Dunes Trail) Parking Lot and will take you approximately 1½ to 2 hours to walk. The trail meanders through forest and field, where you will learn about the temperate Sugar Maple-

American Beech forest and the dynamics of change that affect it. The initial 200 metres of the trail is a relatively steep slope of moderate difficulty which levels off to easy walking terrain above. Take precautions to avoid Poison Ivy along the upper trail. You may wish to take a hat, water bottle, and food with you due to the exposed conditions and trail length.

The Robitaille Homestead Trail passes through two distinct habitats with very different flora and fauna. Included is a brief checklist of common species for both the old field and forest environment you will encounter on your walk.

Note: Species overlap does occur particularly with vertebrates and in areas of transition from one habitat to another. Comprehensive Awenda checklists and identification guides are available at the Nature Shop.

FOREST COMMUNITY

Plants

Hepatica
White Trillium
Trout Lily
Downy Yellow Violet
Canada Mayflower
Starflower
Sweet Cicely
Wild Sarsparilla
Herb Robert
Squawroot
Large-leaved Aster
White Baneberry

Birds

Least Flycatcher
Veery
Wood Thrush
Red-eyed Vireo
Ovenbird
Black-throated Green Warbler
Cerulean Warbler
Scarlet Tanager
Rose-breasted Grosbeak

Mammals

Fisher
Eastern Chipmunk
Raccoon

Reptiles and Amphibians

Red-backed Salamander

OLD FIELD

Ox-eye Daisy
Bladder Campion
Black-eyed Susan
Orange Hawkweed
Common St. Johnswort
Spotted Knapweed
Queen Anne's Lace
Common Milkweed
Viper's Bugloss
Pannicled Tick-trefoil
Common Ragweed
Goldenrod sp.
New England Aster
Hound's Tongue

Wild Turkey
Turkey Vulture
Blue Jay
Chestnut-sided Warbler
Indigo Bunting
Song Sparrow
Chipping Sparrow
American Goldfinch
Rufous-sided Towhee

Long-tailed Weasel
Coyote
Eastern Cottontail Rabbit

Smooth Green Snake
Eastern Milk Snake

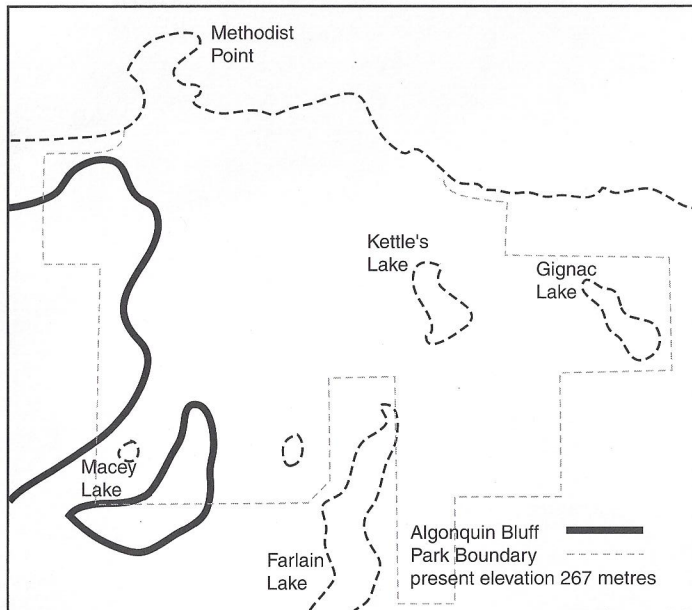
Stop 1 Setting the Stage: A Time Before Forests

You are walking up the Algonquin bluff. This feature was created 12,500 years before present when deposits of sand, rock, and cobble from the Canadian Shield were dropped during the melting of the most recent glacier. Vast amounts of material to depths of 90 metres were left behind to cover this area's limestone bedrock. Glacial melt-water flooded huge areas of the Great Lakes basin creating glacial Lake Algonquin. This lake isolated the highest points of the landscape as islands before

gradually receding to present day Georgian Bay water levels.

Through time processes of physical and chemical weathering eroded this 'glacial till' to create the park's first soils. As 10,000 years is a relatively short time frame in terms of soil development, Awenda's soils are largely sandy (characteristic of the parent rock material) with a poorly developed soil profile. These slightly acidic, nutrient deficient sandy soils combined with a

relatively long growing season which lacks a distinct dry season contributes to the growth of a distinctive forest community – the Sugar Maple-American Beech forest of the Great Lakes St. Lawrence Forest Region.



Lake Algonquin Phase Shoreline 12,000 years B.P. (E. Burden, 1973)

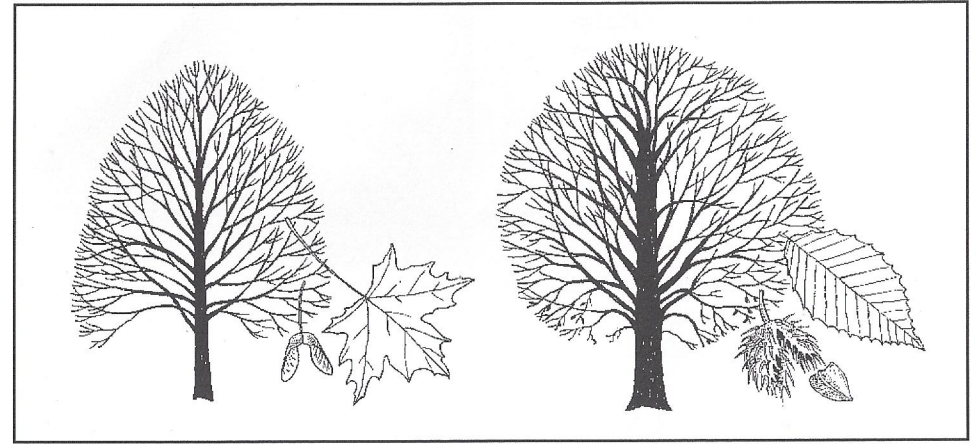
Stop 2 The Dynamic Duo

The forest community around you, and throughout most of the park, is defined by two of the most common tree species - Sugar Maple and American Beech. The moist hardwood forest typically represents 35 different types of

tree. However, under stable environmental and climatic conditions maple and beech tend to be the most numerous or "dominant". American Beech can be easily recognised by its smooth greyish bark and characteristic

leaf, bud, and nut. The Sugar Maple has bark with vertical ridges curled outwards along one side when mature

and a signature 5 lobed leaf which is stylised on the Canadian flag.



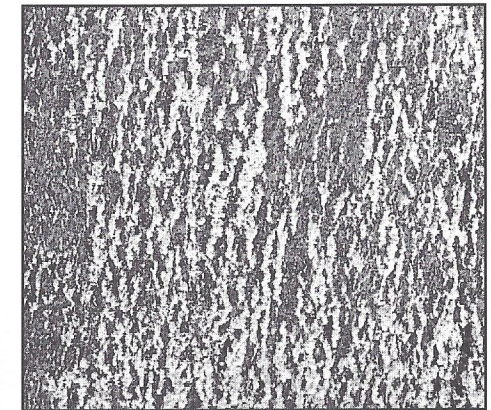
Sugar Maple and American Beech (Juliana Hawke)

Stop 3 The Forest Community: A Life of Constant Stress!

Changes within the forest community are occurring constantly. Various factors may lead to a disturbance on a small or large scale which will influence the survival of individual trees or entire species. These factors are either living (biotic) eg. insect defoliations, increased competition, disease, fungi, old age, and human activity, or non-living



Gypsy Moth females with egg masses



Beech bark disease on American Beech

(abiotic) eg. flood, forest fire, drought, hurricane, climate change, and pollution. The average size of disturbance in a maple-beech forest is small, usually less than two hectares in size. Combinations of these factors or **stresses** serve to weaken individual trees, making mature trees prone to

wind events or **windthrow**, which can topple single trees and cause a visible gap in the canopy of the forest. A healthy maple-beech forest has 80% 'closed' canopy and 20% light gaps. Do you see any visible stresses influencing these forests?

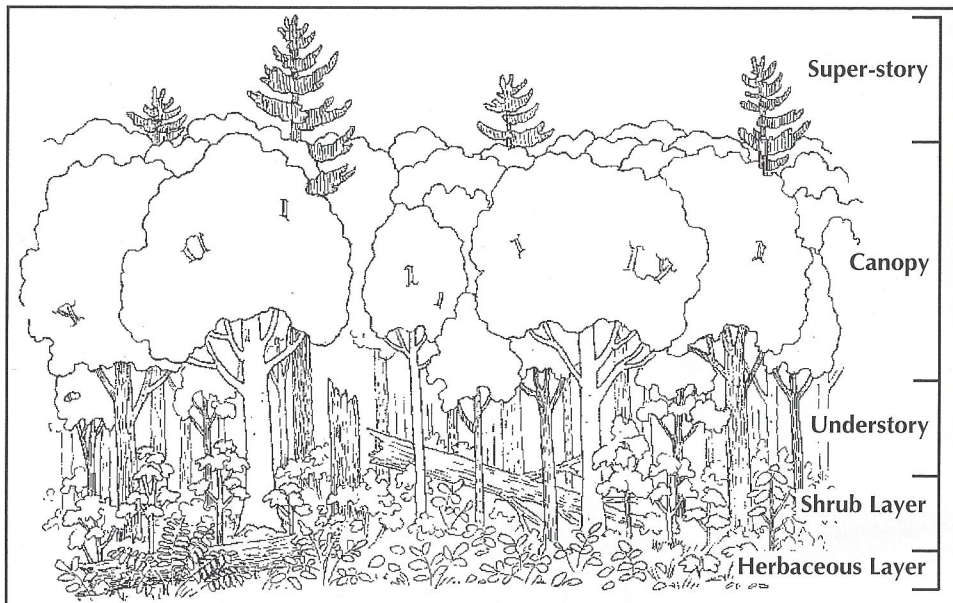


Artist's Conk bracket fungi on American Beech

Stop 4 Made in the Shade

Look around you. Try to locate saplings of other tree species besides Sugar Maple and American Beech. Chances are you were unsuccessful! Oak, birch, poplar, ash, pine, and cherry seedlings are dependent upon larger disturbances which make more direct sunlight

available. The Red Oak and White Birch around you grew here about 60 years ago when this forest was an abandoned farm field. The more common Sugar Maple and American Beech were established after the canopy was formed. Beech and maple are



Cross-section of mature Sugar Maple - American Beech forest (Juliana Hawke)

classified as **very tolerant** of shade. Sugar Maple will reach maximum photosynthesis with only 25% direct sunlight. Small trees can survive up to 150 years **suppressing** their growth until a gap is created in the canopy. When a light gap forms there is a **release** followed by rapid growth toward the available light. Unless conditions

change, the **shade intolerant** trees (such as oak and birch) will disappear at the end of their biological lives. Small light gap openings will favour the well adapted Sugar Maple and American Beech to persist until the cycle of change is more dramatic. Are there any light gaps in the canopy visible along the trail?

Stop 5 Human Activity and Forest Change

Do you notice any changes in the forest community on your left? How is this forest different from the Sugar Maple - American Beech forest? The obvious difference is that the tree species have changed. There are a couple of coniferous species, including White Pine and Norway Spruce. Pines would have been well represented throughout much of the park area as a **super-story** tree which would have towered above the maple-beech canopy reaching heights of 45 metres and living upwards of 450 years. When logging companies

selectively cut the desired pine and oak in the late 1800s, there was not enough light available to allow for the regeneration of the **shade intolerant** pine. How then did these trees grow here? The answer is human activity-large scale land clearance for farming occurred here in the early 1900s. This area of conifers is actually a plantation planted circa the 1930s. You can tell this is not a naturally occurring forest by the regular planting pattern, the low species diversity, and the lack of variation in tree age. Notice what is



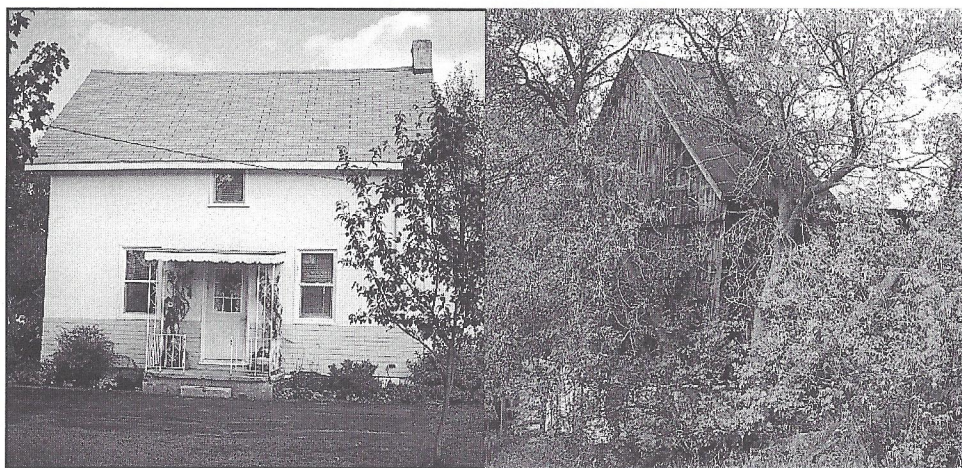
Forest canopy opening or light gap

happening in this light gap beside the trail. What trees are successfully out-competing all others? Eventually this temperate forest ecosystem may return to a **climax condition** of Sugar Maple and American Beech as shade tolerant species out-compete sun-loving species.

Stop 6 The Robitaille Farmstead

Thomas Newberry built a house and barn on this property in 1902. In front of you is the stone foundation of the house. The Newberrys sold out to Eugene Robitaille in 1918. Eugene and his wife Adelaïde raised a family of 11 children, seven of whom were born right here on the farm. Although the sandy soils were not suited to agriculture, the Robitailles grew a number of crops including corn, potatoes and hay. This French Canadian family also maintained 10-15 dairy and beef cattle and a few horses.

The house and barn were eventually sold to Mr. Lalonde and moved to Penetanguishene by horse and sleigh in the winter of 1948. According to son Cena, "We had enough of the farming." Eugene and sons Cena, Urgel, Louis, and Lionel continued Christmas tree farming on their 658 acres until the land was purchased for the park. Forty metres further along the trail is the location of the barn; the stone foundation is clearly visible on your right.



Robitaille House and Barn in Penetanguishene, 2003

Stop 7 If You Can't Beat Succession, Join It!

The sandy glacial soils of the Penetang peninsula are nutrient deficient and drought prone, making them less than ideal for productive agriculture. The Robitaille family began to grow Christmas trees on their property sometime in the late 1940s. Scots Pine represented an ideal cash crop, which grew easily on poor sandy soil. The Christmas trees could be sent to market in five years with no pruning necessary.

Later, insect infestations and disease lengthened the time to harvest to 12 years.

The long rectangular tract of land you walked past, including the land before you, is private property. Lionel Robitaille continues to own this landlocked parcel (2007). He actively farmed Christmas trees here until the late 1990s. The tree farm has kept



The Robitaille Christmas tree fields (view looking south, circa 1975)

Stop 8 Rebirth of a Forest

This abandoned Christmas tree field was last harvested in the early 1990s. A natural process has taken over which, when left uninterrupted, will return this area to a mature forest within 50 to 60 years.

In the first few years after an area is reduced to bare soil only a few hardy "*pioneer*" species of plant will grow; these include Common Ragweed, Crab Grass, and Fireweed. Long-lived dormant seeds are already present in the soil. A square metre of soil may contain as many as 100,000 seeds! Between year three and ten a transition occurs in the vegetation community. Short lived species of annuals give way to herbaceous perennials including many grasses. Asters, goldenrods, and grasses coupled with numerous "alien" or non-native species become dominant with various trees and shrubs germinating. Finally, in years 10 to 60, herbs and grasses are replaced by Staghorn Sumac, Common Juniper, Poison Ivy as well as various trees

other species from growing and maintained the area as a modified field environment. In other nearby locations Scots Pine, a non-native exotic species, has "escaped" and out-competed native species. Scots Pine can be recognised by its orange coloured bark and its twisted 4-8 centimetre needle bundle (always in pairs).



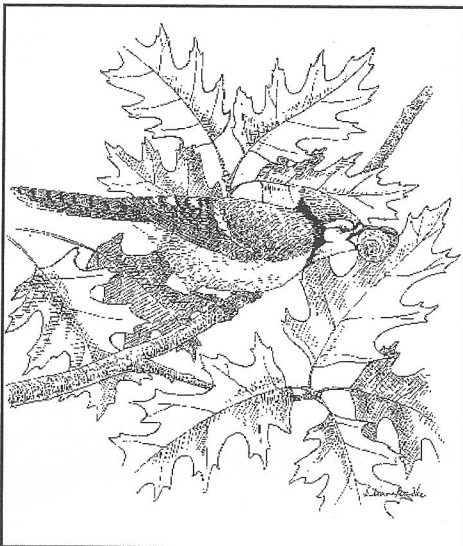
Common Ragweed (*Juliana Hawke*)

Maple-American Beech forest returns anew!

The Robitaille Christmas tree farm has for decades served to hold back this natural process of change. Any trees establishing themselves would be removed as they would compete with

Stop 9 A Forest Friend or Foe

Two common animal species are curiously aiding the process of forest regeneration in these fields. Gray Squirrels and Blue Jays feed extensively on acorns. In "*masting*" years (on average 4 of 10) a single oak tree can produce a mind-boggling 2000-7000 acorns! Many species associated with fields rely heavily on this high fat content feast- Wild Turkey, Eastern Chipmunk, Black Bear, White-tailed Deer, Eastern Gray Squirrel, and Blue Jay to name a few. If any of these animals consume the acorn its ability to germinate is destroyed; hence, the term "*seed predator*".



Blue Jay with acorn (Juliana Hawke)

the Scots Pine crop for sunlight. Today, the woody plant community is growing rapidly without human interference. Contrast what you see here with the Christmas tree field ahead (re-planted and actively managed until 1997) and you should see two very distinctive stages of succession.

Gray Squirrels will, however, bury acorns for winter use. Acorns are buried individually in shallow soil throughout their territories. If a squirrel forgets where it stored an acorn or is predated a seedling could, given direct sunlight, be the result.

Like squirrels, jays will also bury or hide seeds and nuts for future use. Blue Jays will often greedily stuff many acorns into their crop before actually perching and eating them. Jays are known to be messy feeders and will often drop acorns as they fly or feed. Scientists believe that Blue Jays may have played a role in the dispersal of oaks further north after the last ice age. The uncouth Blue Jay may have allowed the oak to "travel" several kilometres per year north of their point of origin!

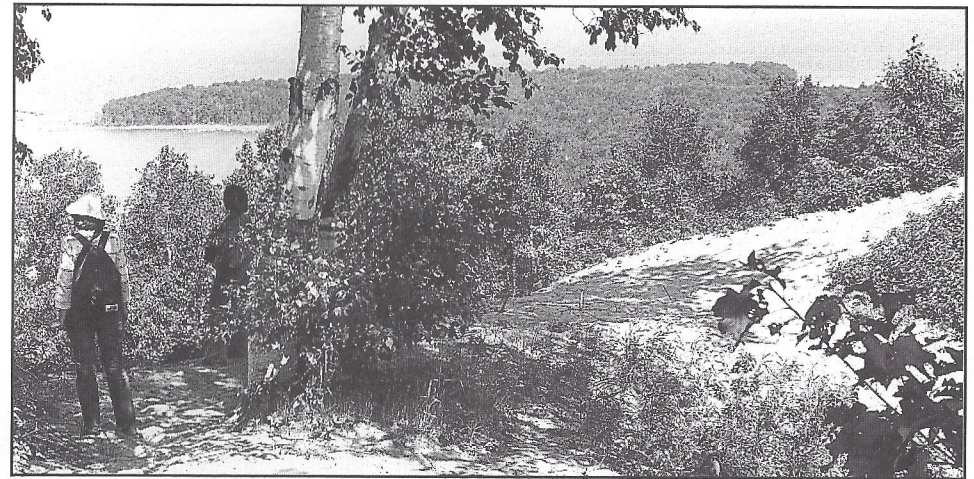
At least 80 to 99 percent of the acorn crop is predated every year but evidently this is a worthy sacrifice for the oak as unwitting accomplices ensure the survival and dispersal of a select few. In the case of Awenda, oaks may have arrived via the Blue Jay express approximately 6000 years ago and may continue to thrive by the absent-minded caching behaviour of these two seed predators!

Stop 10 Awenda's Future Forest Performs Ancient Dune Rescue

You have arrived at the terminus of the Robitaille Homestead Trail. The fine sand of this ancient dune was brought here by prevailing winds over 11,800 years ago, when the waters of Lake Algonquin were almost 90 metres higher than the current Georgian Bay shoreline. Look around you at the treed edges bordering the exposed sand and you will notice that soil depths were once up to one- two metres deeper than the present day. Human activity has yet again played a major role in determining the vegetation community. Throughout the 1950s and 1960s trees were removed and sand was taken for construction purposes. This left the dune exposed to the forces of wind and water erosion. As the loosely packed sand lacked the stabilizing influence of plant root systems it created a "blow-out".

The Ontario Government recently purchased this land (1999) from Louis Robitaille. With the purchase, Awenda now hopes to re-establish the natural processes of succession and actively rehabilitate the area by planting grasses, Staghorn Sumac, Northern Honeysuckle, and other tolerant pioneer species. If you were to come back to this location in 50 years you might expect to find Sugar Maple and American Beech well represented- Awenda's forest come full circle! We hope you enjoy watching the changes through time and marvel at the ever changing dynamics that define Awenda's upland forest community.

In the meantime, you can help out this fragile natural process and avoid walking on the sensitive slope and exposed dune.



View of Methodist Point from trail, 1978

If you have any questions or comments about the trail, please feel free to talk to park staff. **Please help to support the Park education programs by**

depositing \$1 in the drop tube for your trail guide. If you do not wish to keep the guide a deposit box is provided for reusing brochures.

Additional Awenda Trails

Beach Trail – This is a 4 km return trail that starts in the area behind 1st beach where the Nipissing Trail meets the Beach Parking area. This trail allows hikers to walk along Georgian Bay to each of the park's four beaches.

Beaver Pond Trail – This 1 km trail can be accessed from the Beach Trail, between Beach Areas 1 and 2, in the area of the viewing platform. It is a barrier free trail that takes hikers through a nature reserve zone portion of the park.

Bluff Trail – This is a 13 km circular trail which can be accessed from a number of locations throughout the park, including the Trail Centre.

Nipissing Trail – The Nipissing Bluff is the dominant glacial feature in the park. This 0.5 km trail and a 155 step staircase allow hikers to easily descend 32 metres down the face of the Nipissing Bluff. It connects with both the Bluff and Beach Trails.

Brûlé Trail – This is a 2 km trail which provides a link with the Robitaille Homestead Trail. Hikers can start this trail at the Trail Centre or at the campground road beside the additional day visitor parking area.

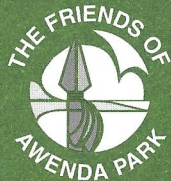
Wendat Trail – This is a 5 km trail which travels around Kettle's Lake. A self-guiding brochure focuses on the area's cultural history. The trail begins and can be accessed from parking area P1. Parking area P2 provides a viewing platform and canoe access.

Cover Photo:

Sugar Maple - American Beech forest
with glacial erratic

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