



MINESING REEDS

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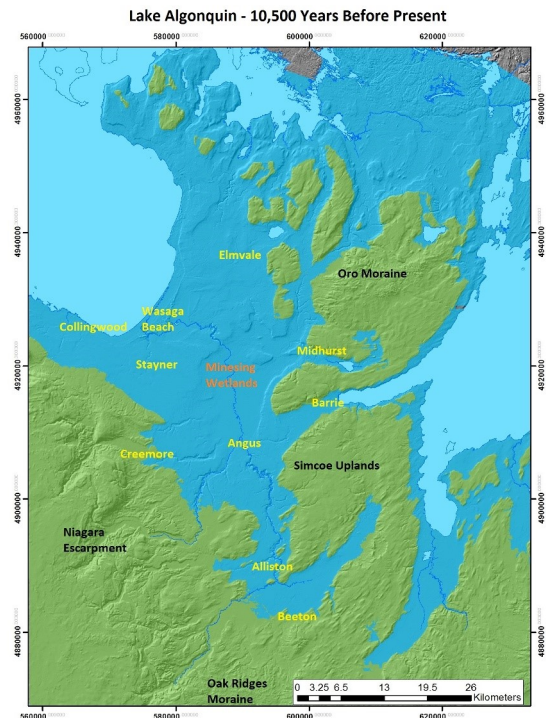
Spring 2015

The Evolution of a Wetland: The Minesing from Ice Age to European Settlement

It is easy to think of the Minesing Wetlands as a timeless natural wonder – one that has existed on our landscape since time immemorial. However, the Minesing Wetlands of today is a relatively new ecosystem and has evolved into its present form within the last 4,000 years. How has it come into being? Well, let's take a walk back into time...

15,000 years ago, most of southern Ontario was in the late throes of the Wisconsin glacialiation – an ice sheet more than a kilometer thick had flowed into and through our area and was beginning to melt in earnest. As the ice margin retreated to the north, an immense lake – Lake Algonquin – formed in the lowlands roughly bounded to the west by the Niagara Escarpment, to the east by the Simcoe Uplands and to the south by the Oak Ridges Moraine. This huge ancestral extension of Georgian Bay stretched south and east, encompassing today's Lake

Please continue reading on page 3



KEEPING YOU INFORMED

👉 Friends of Minesing Wetlands are excited to announce two dates for this spring's guided paddling tours. Trips will go on April 18 and May 9. The April 18 trip is already filled. To join us by canoe or kayak on May 9, please contact Sean Rootham at seanrootham@gmail.com. The five-hour journey, led by certified leaders and including ecological interpretation, will take paddlers along the Willow Creek and into the Nottawasaga River. Basic paddling knowledge is required, as is safety equipment for your vessel. The cost for the trip is \$40 for non-members and \$20 for members.

👉 FOMW are looking forward to their involvement in the L3 Writer's Conference being held at Barrie North Collegiate on April 23rd. The event has an eco/enviro theme, and local organizations will be represented. The evening's program features renowned Canadian author Margaret Atwood. For more information and ticket sales locations, please visit l3writers.ca.



L³ Writers' Conference

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  Find us on facebook at "Friends of Minesing Wetlands Group"

For more information on the Minesing Wetlands or for Friends of Minesing Wetlands membership information, please contact the Nottawasaga Valley Conservation Authority
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please visit minesingwetlands.ca

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Opinions expressed in these articles are solely those of the authors.

First Nations and the Minesing Wetlands

The story of First Nations and the Minesing Wetlands drainage area began over 10,000 years ago. At this time, the wetland itself was many fathoms under water in Lake Algonquin. However, higher shorelines to the south, east and west supported small bands of nomadic Paleo-Indians which followed the seasonal movement of migrating caribou and elk. Sites near Stayner, Cashtown, Cookstown and Alliston attest to the presence of Paleo Indians along the ancient lake shoreline.

Corner notched projectile point



Following the draining of Lake Algonquin, the First Nations of the Archaic period (3,000 to 10,000 years ago) continued to use lake shorelines and the shores of other water features. The shores of large, stable wetlands such as Minesing Wetlands and Holland Marsh provided a setting for more permanent base camps where a variety of fish, waterfowl, fur-bearers, other wildlife and plants could be harvested. Fish weirs similar to those found at Atherley narrows were likely used during this period. Spearheads and stone gauges from Archaic peoples have been found along the Nottawasaga River downstream of the Minesing Wetlands and the ancient Nipissing shoreline along the base of the Minesing uplands.

The Woodland Period (3,000 years ago to European contact) was marked by changes in technology with pottery coming into use at the beginning of the period and a significant transition (at least south of the Canadian Shield) to semi-permanent agricultural settlements approximately 1,000 years ago. The introduction/formalization of burial ceremonies is a consistent thread throughout southern Ontario during this period. Evidence of Early and Middle Woodland cultures is present along the Nottawasaga River from Jack's Lake upstream to Edenvale and also near the mouth of Batteaux Creek.

The Late Woodland/European contact period is best-known of the pre-contact eras. Wendats (Hurons) emigrated from the Lake Ontario area into northern Simcoe County in the 1500s. At the time of European contact, over 20,000 Wendats lived in more than 20 villages, farming for 10-30 years before moving to new territories when the soils were exhausted. Minesing Wetlands lay just south and west of the sandy uplands favoured by the Wendats for clearing and farming.

The Minesing Wetlands lay between the Wendat villages and the Petun villages on the Escarpment foothills to the west. These closely related nations were allies and trading partners and would have shared the bounty of fish and wildlife in the wetland and its river systems. Trading routes crossed the Nottawasaga River near Wasaga Beach to the south of the dune systems.

Influenza and smallpox - unknowingly introduced by European explorers, fur traders and clergy - decimated the Wendats and Petuns, reducing their populations by more than two-thirds by the 1640s. The weakened villages fell prey to large Iroquoian war parties between 1648 and 1650 and the survivors scattered to the east and west.

With the exception of small bands of Ojibway of the Saugeen Ojibway Nation, Minesing Wetlands and its drainage area remained depopulated for almost 200 years. The thriving corn fields of the Wendat reverted back to deep forest which greeted European settlers in the 1800s. However, the oral histories of the First Nations left their indelible mark on the area – Nottawasaga ("Iroquois at the mouth of the river") came to mark the major river system of the area (and adjoining bay) while Minesing ("island") refers to the hamlet on the upland area (which was an island during the Nipissing transgression) - as well as to the internationally significant wetland at its base.

Stone pipe



The Evolution of a Wetland (cont'd)

Simcoe and drained southward through Kirkfield toward Lake Ontario. Today's Minesing Wetlands lay 60 m below the water surface in the depths of Lake Algonquin.

Approximately 10,500 years ago, the ice sheet receded further to the north, opening up a new outlet to the northeast through North Bay and Algonquin Park to the Ottawa River. Lake Algonquin rapidly drained and, for several millennia, Georgian Bay consisted of a much-diminished lake (Lake Hough), at times dozens of kilometers offshore of today's shoreline. During this time, one can envision the evolution of a Minesing Wetland similar to that observed by the first settlers – with broad expanses of floodplain forests associated with the newly-cut Mad River, Nottawasaga River and Willow Creek and large tracts of groundwater-fed conifer swamps and fens.

As the ice sheet continued to recede, a curious thing happened. Just like the pressure being released from a sponge, the earth itself began to bounce back with the release of its icy burden. The "bounceback" was greater to the north than to the south and the Georgian Bay basin began to tilt downward to the south. This caused the North Bay outlet to close and lake waters were once again forced to find their way southward. As a result, Georgian Bay began to rise.

And rise it did, backflooding back toward the present-day shoreline and then rising even beyond that, drowning most of what is now Wasaga Beach and Collingwood. By 4,500 years ago, water levels rose 13 m above the current average Georgian Bay elevation and the backflooding continued upstream through the Nottawasaga River valley and into the Minesing Wetlands itself. This period is referred to as the Nipissing Transgression.

The deciduous and conifer swamp communities in the wetlands would have been inundated and drowned and eventually replaced by a large, shallow lagoon – likely with submerged aquatic vegetation and peripheral marshes. Present-day Marl Lake and Jack's Lake in Wasaga Beach (the last vestiges of the Nipissing lagoon system which covered Wasaga Beach) may provide glimpses of what Minesing Wetlands looked like at this time. Over the centuries, calcium carbonate (marl) was precipitated from the lagoon waters through the action of algae and aquatic plants and deposited at the bottom of the lagoon. This layer of marl – often studded with shallow water molluscs – is consistently found underneath the present-day organic soils of the boreal forest and fen, attesting to the former lagoon that covered Minesing.



Jack's Lake in Wasaga Beach may provide a glimpse of what the Minesing Wetlands looked like 4,500 years ago.

As lake waters continued to push south, the St. Clair River outlet was opened and lake levels rapidly receded back to the present-day Georgian Bay shoreline. Once again, Minesing Wetlands was "de-watered" and allowed to evolve into the mix of deciduous and coniferous swamp ecosystems that greeted the early settlers. Of course, things have changed since then...but that's another story.

Appreciation is extended to David Featherstone, NVCA's Manager of Watershed Monitoring, who contributed all three history-themed articles for this issue of Mining reeds.

Farming in the Minesing Wetlands

It is difficult today to imagine the hardships of the early settlers – clearing the land with relatively primitive implements and dealing with weather conditions much harsher than their native lands. Imagine, then, the additional challenges posed by settling and farming in the vastness of the Minesing Wetlands. For over a century, the hardy pioneers and farmers of the McKinnon Settlement, just north of present-day Angus, did their best to eke out a living and a community in the heart of the Minesing Wetlands.

The high, wide levees along the Nottawasaga River formed the core of the McKinnon Settlement though some farming also occurred on the lower levees of the Mad River. Alexander McKinnon and his four sons initially settled the area in the early 1870s. The McKinnon Bridge, which provided access to lands on the east side of the Nottawasaga River, was erected in 1876.

Unlike the Mad River, the Nottawasaga River did not overflow its banks on a yearly basis and the high, wide levees supported mixed farming with pig and cattle pasture combined with fields of corn, wheat, other grains and clover hay. No doubt the sediments deposited by the river contributed to the rich crops reported by the farmers of the day.

By the 1920s, a Union School had been erected along the edge of the river though enrollment was generally less than a dozen. In addition to farming, timber harvest and hunting contributed to community subsistence.

But the community had more than its share of hardships. When the river did flood, it posed challenges for all. On at least one occasion, a doctor had to be rowed through the floodplain swamps to a levee house to deliver a baby. At times, the livestock would have to be moved to the top floor of the barns. Boating from barn to barn and house to house was commonplace and provisions had to remain topped up to last until floodwaters receded.



Barn ruins in the Minesing Wetlands

By the 1950s, the McKinnon Settlement was in decline due to the combined effects of damaging floods, depression and war. The Union School closed in 1953. By 1973, the Iron Bridge served only one family on the east side of the river. Today, old foundations, fence posts, occasional farm implements and overgrown fields are the only remnants of the former community.

Most of the McKinnon Settlement lands are now managed by the Nottawasaga Valley Conservation Authority. The rich levee soils that once supported crops will, over time, be returned to forest cover which will bolster and reconnect declining floodplain forests in the Minesing Wetlands.

Are you interested in becoming a “Friend of Minesing Wetlands?” Do you frequently visit the Minesing Wetlands, or would someone you know appreciate the gift of a membership and annual pass? Funds raised are directed to the Conservation Lands Reserve. Members receive an annual pass for all Nottawasaga Valley Conservation Authority lands, and receive “Minesing Reeds” (by post or by email). Memberships are valid for the current calendar year.

Please check the appropriate box for your pass and membership category:

☐ \$20 for an individual ☐ \$50 for a family ☐ \$200 for a Club ☐ \$400 for a corporation

*Please return this form, with a cheque payable to NVCA c/o Friends of Minesing Wetlands,
to the N.V.C.A., 8195 Line 8, Utopia, ON, L0M 1T0.*

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