



Field Botanists of Ontario

NEWSLETTER

Summer 2020 Volume 32 (2)



Burnt Lands Provincial Park

Grey County bogs

Manitoba Maple

President's Message

After carefully considering public health guidelines, the FBO board has decided to cancel 2020 field trips until further notice. If our collective situation changes at any point during the field season, field trips will be posted on our website and a notification will be sent out.

The AGM planned for September has also been cancelled, for the same reason. It has been rescheduled for September 2021 in the same location. Some items normally dealt with at the AGM will still be addressed this year: both the treasurer's and auditor's annual report will be presented, new board members will be elected (contact us if you are interested in serving a term on the board), and the winner of the FBO Student Award will be announced. This information will be shared by email in September.

Without field trips, we will not have our usual content for the FBO Newsletter. Therefore, we will be digging into the archives and sharing interesting trip reports from the past (back to 1983). We are also looking for content, so if there are outstanding trip reports from the last few years, we would be grateful to receive them this summer. The newsletter is also a good place to share interesting discoveries or even a review of a species or group of species in Ontario.

Fortunately, Ontario's flora carries on, so we hope you are still getting out to botanize and sharing your findings on our Facebook and Instagram pages.

Yours in the Outdoors,

Troy

On the cover: Wood Lily (*Lilium philadelphicum*). Photo: Natasha Gonsalves.

Trip location maps generated using NatGeo Mapmaker.

The suggested standard source for scientific and common names is the Database of Vascular Plants of Canada (VASCAN): <http://data.canadensys.net/vscan/search>

Field Botanists of Ontario website: www.fieldbotanistsofontario.com

Join us on Facebook



Follow our Blog



See us on Instagram



Annual memberships are \$20.00 for individuals and \$25.00 for families. Membership forms can be found on the FBO website above.

Field Botanists of Ontario

(FBO) is a non-profit organization founded in 1984 for those interested in botany and conservation in Ontario.

President: Troy McMullin
tmcullin@nature.ca

Vice President: Tristan Knight
tristan@terrastoryenviro.com

Secretary: Jennifer Doubt
jdoubt@nature.ca

Treasurer: Larry Lebert
lebert.larry@gmail.com

Past President: Dan Westerhof
dwesterhof@beaconenviro.com

Membership: Mary Anne Young
fbomembership@gmail.com

Field Trips: Jessica Consiglio,
Gwyneth Govers, Sarah Mainguy
fbo.trips@gmail.com

Newsletter Editor:
Christopher Zoladeski
editor.fbo@gmail.com

Associate Editor:
Michael J. Oldham
michael.oldham@ontario.ca

Contributing Editor:
Bill McIlveen
wmcilveen@sympatico.ca

Website: Tristan Knight
tristan@terrastoryenviro.com

Directors: Bill McIlveen, Leanne Wallis, Will Van Hemessen



From the Editor

Welcome to a redesigned Newsletter! It is a curse, and privilege, of every editor to succumb to the urge to change what has been apparently working well, and propose something new and "better". Your editor is no exception. He has used the time, during what effectively amounted to as house-arrest, to fiddle with the Newsletter design, playing with the opportunities provided by a new editing software. Whether the new look is indeed better than the old one, that of course depends on personal taste - even the editor has a few misgivings. But that's water under the bridge - after all the hard work, the design is here to stay - until another urge possesses the editor's mind at some point in the future.

This is of course "work in progress" and there are still, and will be, several design kinks to correct. So, the reader, please be kind and understanding... But, for now, enjoy this Covid-resistant issue! (And great thanks to Jessica Consiglio for permitting the use her unofficial FBO Trillium logo artwork as the title's watermark - multiplied by three!)

In Burnt Lands Provincial Park

22 June, 2019

Natasha Gonsalves



A total of 14 people (including leaders) made the long trek out to Ottawa Valley on Saturday, June 22nd, 2019. The trip, with its focus on alvar species, was led by Dan Brunton and Holly Bickerton. It was made extra special as FBO members were joined by members of the New York Flora Association. It was the first, but hopefully not the last, joint excursion between the two groups.

We could not have asked for better weather: sunny, slightly overcast with a cool breeze, perfect for exploring the flat, open landscape of the Burnt Lands Provincial Park. Burnt Lands Alvar, located approximately 5 km east of the Town of Almonte, is a 516 ha property under both private and public ownership. The sections on Crown land are managed as a Nature Reserve Class Provincial Park.

The site has a long history of disturbance. Fires during European settlement helped inhibit and slow the establishment of trees and shrubs, a fact that many suggest gave the area its name. With its thin, exposed soils on limestone bedrock, the park contains one of the most expansive alvar ecosystems in the Ottawa Valley and southern Ontario as a whole. The Burnt Lands Alvar, as it is referred to, is a Provincially Significant Area of Natural and Scientific Interest (ANSI) and supports a diverse array of northern and western prairie and alvar species, many of which are provincially rare.

After introductions, Dan started off the day by displaying some herbarium samples that he had brought along with him. The samples showcased a wide selection of grass, sedge and herbaceous alvar species (many of which we would encounter later that morning). Examples included Parasol Sedge (*Carex umbellata*), Little Skullcap (*Scutellaria parvula*), and Pennyroyal Bluecurls (*Trichostema brachiatum*). He also brought along a

potted specimen of Limestone Hedge-hyssop (*Gratiola quatermaniae*), a distinct alvar species.

After the "Show and Tell", we walked keenly and carefully into the Burnt Lands. No more than two steps in our first species of interest, Balsam Groundsel (*Packera paupercula*), was encountered. This member of the aster family, with its bright golden yellow flowers was a dominant throughout the alvar.

More species followed in quick succession: Hairy Beards-tongue (*Penstemon hirsutus*), Crawe's Sedge (*Carex crawei*), Richardson's Sedge (*Carex richardsonii*), Purslane Speedwell (*Veronica peregrina* ssp. *xalapensis*), Harebell (*Campanula rotundifolia*), Seneca Snakeroot (*Polygala senega*), Bastard Toadflax (*Comandra umbellata*) and Wood Lily (*Lilium philadelphicum*).

Moss and lichen-covered exposed rock interspersed amongst the landscape supported rare lithophiles (i.e., generally, plants showing preference or tolerance to living on rock surfaces) such as Early Saxifrage (*Micranthes virginensis*), Rock Sandwort (*Sabulina michauxii*, syn. *Minuartia michauxii*, *Arenaria stricta*) and Northern Crane's-bill (*Geranium bicknellii*).

In our morning exploration, the group happened upon a small fen-like feature that supported unexpected delights, namely Northern Bog Aster (*Symphyotrichum boreale*, an obligate fen species), Swamp Fly Honeysuckle (*Lonicera oblongifolia*), and Autumn Willow (*Salix serissima*). Autumn Willow bears some resemblance to Shining Willow (*Salix lucida*) but differs in the stipules. By the end of the morning, an estimated three dozen alvar species were observed - most, but not all, were native.

Initially, in the afternoon, Dan and Holly intended to have the group move over to a nearby bog but recent flooding



Alvar species in full bloom. Bottom row, from left to right: *Scutellaria parvula*, *Packera paupercula* (dominant in the main photo), *Penstemon hirsutus*, *Polygala senega*, *Veronica peregrina* ssp. *xalapensis*, *Salix serissima*, *Lilium philadelphicum*.
Photo: R. Bauer.

caused by beaver activity made the target area inaccessible and forced a change of plans. Reverting to Plan "B", the group navigated to a neighboring forested alvar community instead. This area largely consisted of White Cedar (*Thuja occidentalis*) and Jack Pine (*Pinus banksiana*).

It was here, not far from the road, that two patches of New Jersey Tea (*Ceanothus*) were found (title inset, photo: N. Gonsalves). The two seemingly innocent patches sparked a great and somewhat heated debate over their identification.

To bring the controversy to an end, a hardback copy of the botanical "bible", otherwise known as Michigan Flora was examined. One patch was identified as *Ceanothus herbaceus* without argument. The other patch was more problematic as it exhibited a number of characteristics consistent with *Ceanothus americanus*, however the fact that it was in flower confounded the identification. Did we find a hybrid? Maybe. The question

of which New Jersey Tea plant we observed was not fully answered on this day.

Moving deeper into the forest, a surprisingly abundant population of Ram's-head Lady's-slipper (*Cypripedium arietinum*) was found.

Most of the flowers had disappeared but the plant form within its preferred habitat was distinctive. Other finds in this part of the trip included Northern Panic Grass (*Dichanthelium boreale*) and Wild Lily-of-the-valley (*Maianthemum canadense* var. *interius*). This species differs from the more familiar Lily-of-the-valley (*Maianthemum canadense* var. *canadense*) by the presence of hair on the underside of its leaves and along stems (var. *canadense* is glabrous).

As the day was winding down, the group decided to make one last stop at an area known as Carp Hills. Situated above rich soils, Carp Hills is a 3-4 km wide forested ridge on the Canadian Shield. The upland

forests sit atop Pre-Cambrian bedrock and are comprised of a mix of deciduous and coniferous tree species, particularly Red Maple (*Acer rubrum*), Sugar Maple (*Acer saccharum*), Trembling Aspen (*Populus tremuloides*), White Birch (*Betula papyrifera*), Bur Oak (*Quercus macrocarpa*), and Red Oak (*Quercus rubra*).

On route to the exposed rocky area of the Carp ridge we passed through lowland areas of alder swamp in which Northeastern Manna Grass (*Glyceria melicaria*) and Awl-fruited Sedge (*Carex stipata*) were found. Healthy populations of Cow-wheat (*Melampyrum lineare*) were also found along the way. The landscape (granite bedrock) transitioned into the rocky outcrops characteristic of the Canadian Shield. Here, expansive populations of Pale Corydalis (*Capnoides sempervirens*, syn. *Corydalis sempervirens*) were found. This was my last observation on the wonderful outing. ✱

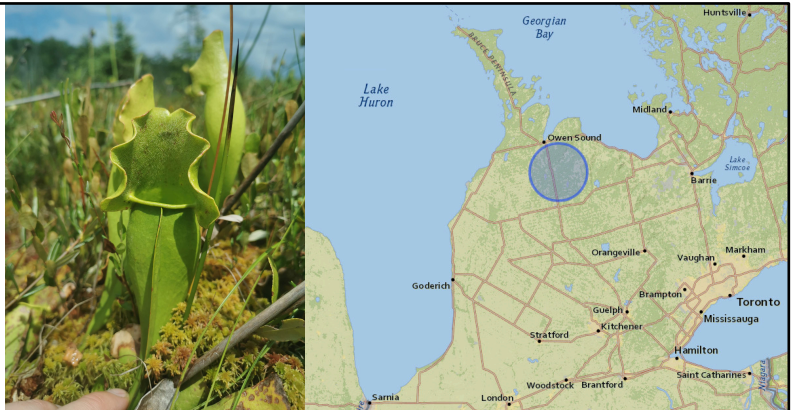
border between the mixed forest and the adjacent wetland community, someone noticed a small patch of Hidden Spikemoss (*Selaginella eclipses*). This small moss-like plant can go easily undetected, as its leaves are delicate and small, and its stems lay flat on the ground, creeping along the substrate. Despite superficially resembling a bryophyte, *Selaginella* is a vascular plant which belongs to the Lycophyta clade. Lycophytes are often referred to as the “fern allies” and were once the dominant vegetation during the Carboniferous period.

Walter led the group out of the canopy of the mixed forest and into a wetland where the true botanical gems awaited us. The group walked along a boardwalk which Walter had constructed. He stopped to point out several plants on the edge of the wetland including Common Boneset (*Eupatorium perfoliatum*), Joe Pye Weed (*Eutrochium maculatum*), Marsh Scullcap (*Scutellaria galericulata*), and American Water-horehound (*Lycopus*

Orchids and more in hidden Grey County Bogs

13 July 2019

Corey Burt



Somewhere in Grey County, a group of field botanists met to venture into a privately-owned bog, led by Walter Muma. Walter is an expert in wildflowers in Grey County and elsewhere in Ontario, and his selection of field sites did not disappoint!

The journey began in a meadow, where we reviewed common herbaceous meadow species including Queen Anne’s Lace (*Daucus carota*), Bird’s-foot Trefoil (*Lotus corniculatus*), and exotic grass species including Reed Canarygrass (*Phalaris arundinacea* var. *arundinacea*), Orchard Grass (*Dactylis glomerata*), Timothy (*Phleum pratense*), and Quackgrass (*Elymus repens*).

After warming up in the meadow, we entered a mixed forest. The forest floor was sparse, but several sedge species were found poking out of the conifer litter such as Meadow Sedge (*Carex granularis*) and Long-stalked Sedge (*Carex pedunculata*). Just as we came to the

americanus). He noted a handy vegetative character to distinguish *Lycopus americanus* from the non-native, similar looking European Water-horehound (*L. europaeus*). The lobes on the leaves of American Water-horehound are angled forward, whereas the lobes on the leaves of European Water-horehound are typically perpendicular.

As we wandered farther along the boardwalk, the landscape began to change. The vegetation was open, trees were scarce and stunted, and the ground cover was dominated by Sedges (*Carex* spp.) and Peat Mosses (*Sphagnum* spp.). We had reached the bog! Our trip leader mentioned how he had purchased the property knowing there was wetland present, but it wasn’t until he ventured into the community that he realized what a true botanical treasure he had come upon!

Amidst the sea of green, we spotted a variety of orchid



Calopogon tuberosus. Photo: C. Burt.

species, many of which were in full flower. The star of the show, with large striking pink inflorescences was Grass Pink (*Calopogon tuberosus*). The inflorescence of this species is somewhat unique among the orchids growing in Grey County and elsewhere, as the labellum (or

“lip”) is located above the petals and sepals, whereas in most other species the labellum is found below the petals and sepals. The labellum is a specialized petal found in orchid flowers which attracts pollinators. Some other orchid species caught in flower included Rose Pogonia (*Pogonia ophioglossoides*), Loesel’s Twayblade (*Liparis loeselii*) and Tall White Bog Orchid (*Platanthera dilatata*). Walter noted that *Platanthera dilatata* has a distinct scent, similar to cloves, an olfactory character which can prove useful when differentiating between *Platanthera* species. The leaves of Green Adder’s-mouth (*Malaxis unifolia*) were also observed, however, it was not in flower.

Several sedge species were observed throughout Walter’s Bog such as Woolly-fruited Sedge (*Carex lasiocarpa*), Bog Sedge (*C. limosa*) and the similar-looking Boreal Bog Sedge (*C. magellanica*), Cyperus-like Sedge (*C. pseudocyperus*), Tussock Sedge (*C. stricta*), and Water Sedge (*C. aquatilis*).

In the afternoon, the group trekked through an agricultural field and a deciduous forest to reach our final

destination: Moss Lake Bog. The first plant that stuck out was Northern Pitcher Plant (*Sarracenia purpurea*), which was scattered throughout the bog, poking above mats of *Sphagnum*. This is the only representative of the Sarraceniaceae family found in Ontario. *Sarracenia purpurea* (along with the other species in Sarraceniaceae) have heavily modified leaves which are hollow and tubular. These modified leaves or “pitchers” produce a secretion at the summit which attracts insects. Eventually, some of the insects fall into the pitcher and drown. The Northern Pitcher Plant then secretes enzymes which digest the insects, providing the plant with nitrogen and other nutrients which are often lacking in bogs. While *Sarracenia purpurea* typically have at least some maroon to purple coloration throughout the plant, all of the individuals in the Moss Lake Bog were bright green. Plants completely lacking any red-purple pigment have been called *Sarracenia purpurea* forma *heterophylla* (Frederick 1956).



Moss Lake Bog. Photo: C. Burt.

The bog was peppered with shades of pink as the previously observed *Calopogon tuberosus* and *Pogonia ophioglossoides* were in full bloom and in great abundance. After some searching, White Fringed Orchid (*Platanthera blephariglottis* var. *blephariglottis*) was also found in flower.

Several shrubs were observed along the edge and within the bog including Bog Laurel (*Kalmia polifolia*), Wild Raisin (*Viburnum nudum* var. *cassinoides*), Chokeberry (*Aronia prunifolia*), Leatherleaf (*Chamaedaphne calyculata*) and the only species Walter noted he did not previously know the common name to: Mountain Holly (*Ilex mucronata*).

While not as striking as the orchids, or as obvious as the shrubs, several graminoid species were noted including: Boreal Mannagrass (*Glyceria borealis*), Tawny Cottongrass (*Eriophorum virginicum*), and Few-flowered Sedge (*Carex pauciflora*). *Carex pauciflora* is a species which can easily be overlooked if there wasn't a gaggle of keen botanists combing through the area looking for botanical curiosities! The common name for this plant is quite appropriate, as this diminutive sedge has a cluster of 6 or fewer reflexed, slender peryginia concentrated at the top of the stem. Podgrass (*Scheuchzeria palustris*) was also encountered within the bog. This small herbaceous plant could easily be mistaken for a graminoid with its linear, grass-like leaves. There is one vegetative character which can easily set it apart from other superficially similar bog species. At the summit of each linear leaf, there is a small, distinct circular pore.

Thank you to Walter for leading another excellent botanical adventure in Grey County!

Literature Cited

Case, F. W. (1956). Some Michigan records for *Sarracenia purpurea* forma *heterophylla*. *Rhodora* 58 (692): 203–207.

Native Status for Manitoba Maple

W.D. McIlveen

The first specific recollection that I have for Manitoba Maple (*Acer negundo*) is a large tree in our yard when I was a youth. In the late 1950s, my family had moved to a house in the village of Huttonville, now part of Brampton, and the tree was growing there. Despite my young age, I knew exactly what kind of tree it was so I must have already been familiar with it. That tree became part of family legend and, with still-living witnesses to corroborate the story, the following account is largely factual.

The tree was growing at the front corner of the yard. It consisted of two main trunks, each at least two feet in diameter, diverging about three feet above the ground. The base was correspondingly large. One trunk was on a strong lean towards the yard while the other, on a lesser angle, trended towards the road. For some reason, my father took a disliking to the tree. Its fate was thus sealed.



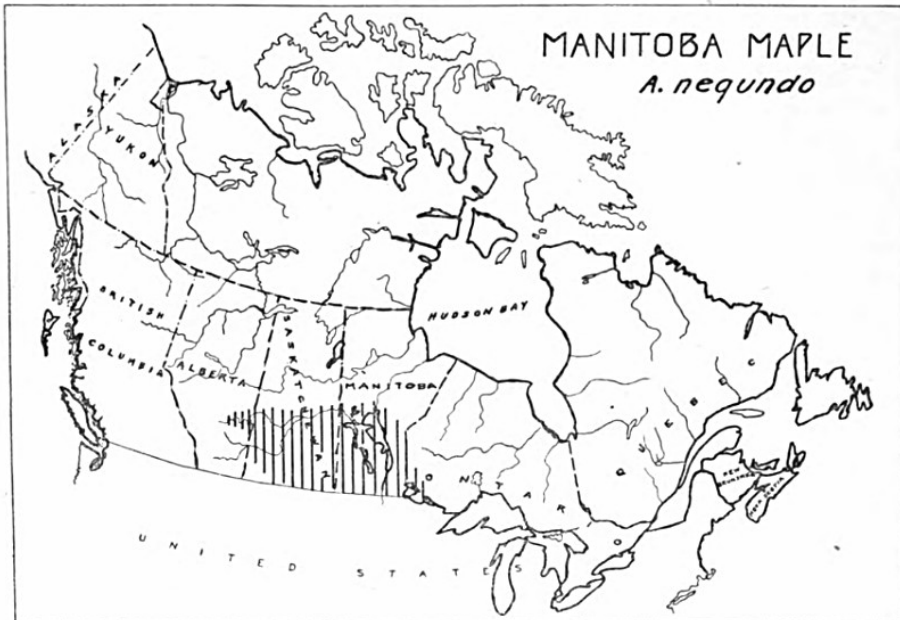
Manitoba Maple specimen collected in Toronto Humber Valley by Macoun on July 25, 1877 Can Nat Museum No. CAN797784 1822.

Admittedly, the expanding roots were causing the sidewalk to lift and to become uneven and a trip hazard. I doubt though that this is the reason that the tree had to go.

With my mother not wanting to be part of or even to witness the proceedings and hiding away in the house, my father proceeded to dispatch the tree. Lesser men (e.g., those with experience and appropriate equipment) would have balked at tackling such a large tree. But my father, being my father and one of the last men on the planet to accept that something could not or

should not be done, set to work. Fortunately, I was not there to witness the carnage and shame that ensued as I had left home by then to attend school or some other activity. The first part of the tree to be dealt with was the trunk that leaned into the yard. Down it came, right on the fence line with the neighbour's property. That damaged several cedar trees on the neighbour's property and demolished several sections of the wooden fence that my

Committee]. At that date, certainly no one would have been concerned about planting trees other than perhaps fruit trees. Instead, they would have been more concerned about cutting trees to clear the land for agriculture. The village grew up in the vicinity of the saw mill that followed the dam that was built on the Credit River in 1848. The post office arrived in 1873 at which time the village was given the name 'Huttonville', named after J.P.



Map 1. Distribution Range of Manitoba Maple after Morton 1917.

father had erected. Undaunted, he moved on to tackle the other trunk. The intent was that the tree would fall near the side of the road more or less in line with the sidewalk. Gravity prevailed and the tree fell directly across the road. Not only did it block traffic on the main street through the village for some time, it knocked down telephone lines on the opposite side of the street. In due course, the mess was cleaned up. Just a few days later, a township crew came by and asked if it was OK for them to use their power equipment to rout out the stump as they wanted to repair or replace the sidewalk. Father could not say "Yes" fast enough to their request. For years afterwards, Father would look all sheepish on the few occasions that anyone dared to mention the episode.

But where did such a large tree come from? There is little doubt it had been planted. Based on the size of the tree and even allowing for the tree to be a fast-growing species on a good site, it must have dated back to the very early 1900s, if not earlier. We have no details about this and there is no photograph of the tree that I could find, either from family albums, historical documents, or even paintings. European settlement in the area did not take commence until 1819 at the earliest [Huttonville Book

Hutton, the proprietor of the local saw mills. The historical atlas for the area [Pope, 1877] shows the residence of J.P. Hutton (about 200 metres west of the famous Manitoba Maple), as having various trees and orchards established at that date. The exact dates of individual houses and lots being developed is unknown. It should be remembered that the historical atlases being prepared in those years were illustrated with drawings of various establishments including farms and businesses. These illustrations were paid for by the owners of the establishments and thus they represented the most affluent individuals. It is to be expected that the illustrator would want to portray his patrons in the very best light and at their most prosperous state. The illustrations were likely embellished to not just show the present conditions but also to suggest what they might become. The frequent depiction of horse teams in such drawings is like a

'Photoshop'ed object insertion of their day. Nevertheless, the illustration does lend credence to the idea that trees were being planted around the village for landscape purposes prior to 1877.

But where would the property owners obtain a Manitoba Maple tree suitable for transplanting? The first provincial tree nursery was not set up until 1904 at the University of Guelph by Edmund Zavitz [Bacher]. It seems highly improbable that any Provincial nursery would be the source of Manitoba Maple planting stock. Even nurseries specializing in ornamental plants were absent from Canada up to 1912 [Butts]. As a consequence, Howard and Lorrie Huntington-Grubb established Sheridan Nurseries in 1913 to avoid the necessity of importing such planting stock from Europe. Based on this information, neither Provincial nurseries nor nurseries for ornamentals would be logical sources of the tree in question. We cannot rule out the possibility the tree was obtained locally. It would have been easiest to obtain such a tree if they had been growing in the nearby Credit River flood plain. This still leaves the question of how the species got to the Credit River if one subscribes to the idea that Manitoba Maple is not native to most of Ontario. Scott [1913] indicated

that the species was being planted around Toronto prior to 1913. The tree at Huttonville could certainly have come from the same location as those being planted in Toronto.

In addition to a wide native geographic range in North America, Manitoba Maple had been transplanted to

throughout the Mississippi River valley. It does not seem feasible that the species would have been introduced to Britain before it was introduced to France if the seed had originated from those territories owned or controlled by France so we should likely look to a seed source location in British-held territory. The species apparently was not present in the far east of the continent, at least not in those earliest years.

Table 1 - Time Line for Notable Historic Activities in North America

Date	Action/Person
1534	Jacques Cartier's first visit to North America
1584	Sir Walter Raleigh's first colony in North America
1620	Landing of Pilgrims at Plymouth (not at Plymouth Rock)
1658 to 1683	Radisson and Groseillier explorations
1670	Royal Charter of the Hudson's Bay Company given by King Charles II of England
1679	La Salle's expedition built Fort Conti at the mouth of the Niagara River
1740s	La Vérendrye first European to see the Rocky Mountains
1707-1778	Carl Linnaeus
1779 to 1821	Northwest Company Montreal
1803	Louisiana Purchase
1804-1806	Lewis and Clark Expedition

many countries from Sweden to Germany to Netherlands and Russia as well as Greenland, Iceland and the Faroe Islands [Mędrzycki, Table 2]. The earliest record outside of North America was a specimen in the Fulham Garden in England in 1688. Soon after, it was recorded in Holland in 1690 and in Germany in 1699. It has also been established in Australia [Harden]. In most of these locations, Manitoba Maple has demonstrated itself to be an invasive alien. It has exhibited similar aggressive tendencies throughout Ontario where, historically, it has generally been absent. Considering that there is so much suitable habitat for Manitoba Maple in the province and that the species is so abundant outside but in proximity to Ontario, it is rather surprising that it never occurred extensively. There is no readily obvious explanation for this pattern. Perhaps it was still in the process of expanding its native range when Europeans began to settle in Ontario.

The date of the appearance of the Manitoba Maple specimen in England is interesting. That point in time was still 65 years before the species was formally described by Linnaeus in 1753 (Table 1). For reference, some key dates for exploration of North America are included in Table 1. It is reasonable to assume that the specimen(s) involved came from seed obtained in the New World. Early exploration and settlement of North America included British colonies along the eastern coast of the continent and the French colonies in the St Lawrence River system and

By comparison, the Hudson’s Bay Company offers a feasible source of seed that introduced the species to England. The timing of a Royal Charter to that great company is appropriate. Their far southwest territory does extend into the native range of Manitoba Maple where seed could have been obtained.

Manitoba Maple does seem like an unlikely candidate for purposeful introduction to Europe when so many other species might have been selected. As a prolific seed-producer, one could imagine how some seed might have gotten mixed into the bundles of fur being transported along the river systems used by the HBC traders and how someone at the receiving end might decide to see what the seed might grow to be. We will never know for certain. It was not until the 1800s that Europeans sent their young collectors in earnest around the globe to bring back unusual species for their gardens [Gribben].

The question can be raised as to whether Manitoba Maple is truly a native species in Ontario. It is considered to be native by the Ontario Ministry of Natural Resources and Forestry (NHIC web site: <https://www.ontario.ca/page/get-natural-heritage-information>). That status is likely mainly based on the designation included in Newmaster et al. [1998]. Prior to that status assignment, it was also considered to be native by Morton and Venn [1990]. It is also considered to be a native species for Ontario on the VASCAN website (<https://data.canadensys.net/vscan/taxon/9206?lang=en>). At the present time therefore, Manitoba Maple is officially regarded as a native species in Ontario.

In an effort to determine whether the native status for Manitoba Maple is justified, as many sources of information as possible were consulted, and they are summarized in Table 2. As well, local herbaria were consulted to

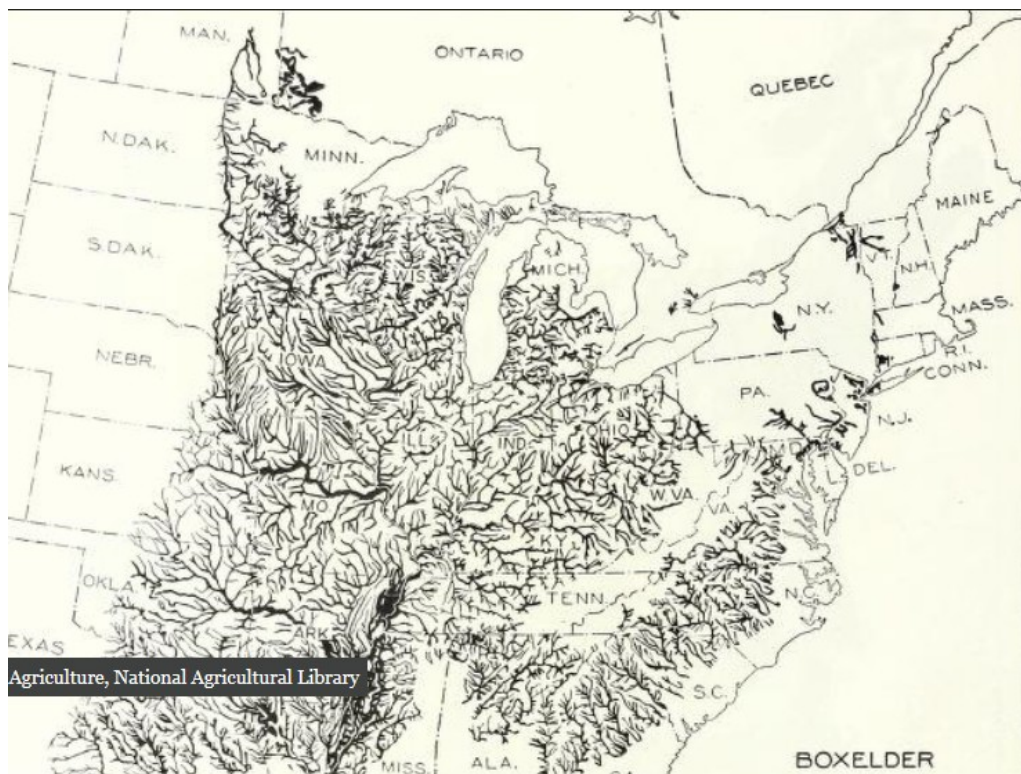
determine the dates of their earliest specimens. It must be realized that the absence of information is not proof that the species was not present in the Province. Unfortunately, few botanists were active in the most critical period so there are hardly any specimens or records to confirm that it was here from the earliest times.

The earliest reference to the species in Ontario appears to be the record cited by Riley where Macoun observed Manitoba Maple on the Kam River near Thunder Bay in 1869. Botham noted that it had been reported at Big Chicken Island in western Lake Erie as early as 1903. Many

actually taken at Heart Lake which is located about 2 km east of the village. The lake is a kettle lake with associated wetlands. Snelgrove appears to have been a study area favoured by University of Toronto staff.

The literature contains two older maps of interest showing the distribution of Manitoba Maple. The earliest is from Morton [1917] in his 'Trees of Canada'. That map (Map 1) lacks detail but suggests that the species occurred only in the vicinity of Lake of the Woods. It does not illustrate Manitoba Maple at any location in Southern Ontario when the specimen records clearly indicated

that it had been in Toronto at least thirty years previous, regardless of how it came to be there. Does Morton purport to show only the native species? The second distribution map comes from Munns [1938] which is about 20 years later. That map (Map 2) looks a little unusual in that it indicates that the Manitoba Maple is restricted to river valleys and these are illustrated in fair detail. It too confirms that the species is to be found in the vicinity of Lake of the Woods. While the resolution of the map may be limited, it strongly suggests that Manitoba Maple was present at Toronto, Burlington, Cambridge, and London. Again, it is not clear whether the mapping referred to native occurrences only because some of the known occurrences at Ottawa and Kingston are not included. More recent maps by Hosie and Munn show similar native distribution but add a few more small locations.



Map 2. Distribution Range of Manitoba Maple after Munns 1938.

other records suggest that it had been planted in different locales or the basis for the mapped distribution is unclear. The oldest specimen (photograph) was collected in the Humber River Valley on July 25, 1877 by John Macoun. Macoun later collected a specimen 'growing in the park in Ottawa on August 26, 1884. There are several specimens in the ROM collection prior to 1900. The earliest is from Toronto, dated September 7, 1881. The majority of the early specimens are from Toronto (including the Humber Valley) and Hamilton but there are also those from Ottawa, Cartwright (Durham Region), Queenston, Ottawa and Aylmer. There is also one collection from July 7, 1891, from Edmonton, Ontario. (Edmonton is a former name for the village of Snelgrove, which is now a part of Brampton.) We can make a guess that the specimen was

The overall picture concerning the status of Manitoba Maple is that it had an origin range within the Province that was likely highly restricted to the far southwest and far northwest. By definition then, Manitoba Maple is a native species in Ontario. Subsequent to the early settlement of the Province, it spread widely. It is difficult to know how much of the spread was related to planting and how much may have been natural into suitable habitat. It is quite possible that both mechanisms have had some role. We cannot be sure how far Manitoba Maple might have spread by that time if it indeed was already undergoing a rapid range extension at about the same time as European settlement was happening in a major way. Although the spread of the species is justifiably considered by many people to be invasive in character, the consequences of that spread are likely less severe

than the spread of some other well-known invasives (e.g., Phragmites). Generally, the definition of an invasive species requires it to be alien in origin. But since Manitoba Maple is a native in some parts of the Province, that definition prevents us from classifying the species as an invasive. It would appear that the definition of an 'invasive' should be updated or adjusted to include some natives that exhibit ecologically bad behaviour, even if that is a totally natural process (i.e. not reliant on human actions). Probably, only a few native species would be involved, and these could be designated on a case-by-case basis.

References

Anonymous. 1963. Native trees of Canada. Bulletin No. 61. Ottawa, Canada: Department of Forestry.

Bacher. J. 1911. Two Billion Trees and Counting: The Legacy of Edmund Zavitz, Dundurn Press, Toronto. 274 pp.

Britton, N.L., and A. Brown. 1913. An Illustrated Flora of the Northern United States and Canada. 3 Vols. 2nd Edition. 1913. Charles Scribner's Sons, New York. Dover Publications Reprint 1970.

Botham, W. 1981. Plants of Essex County: A Preliminary List. Essex Region Conservation Authority. 224 pp.

Butts, E., and K. Stensson. 1912. Sheridan Nurseries:

One hundred years of people, plans, and plants. Dundurn Press, Toronto. 288 pp.

Dickson, J.M. and A. Alexander. 1897. Flora of Hamilton District. Jour, and Proc. of the Hamilton Association 13: 95-127,

Farrar, J.L. 1995. Trees in Canada. Fitzhenry & Whiteside Ltd. Toronto. ON. 504 pp.

Gribben, M., and J. Gribben. 2008. Flower Hunters Oxford University Press, Oxford, U.K. 332 pp.

Haber, E. 1996. Impact of invasive plants on species and habitats at risk in Canada. Report foe Canadian Wildlife Service, Environment Canada. 16 pp.

Hosie, R.C. 1969. Native trees of Canada. Canadian Forestry Service, Department of Fisheries. Ottawa. 380 p.

Jellicoe, J. 1984. Checklist of Vascular Plants Point Pelee National Park. Parks Canada. 20. Pp.

Kevan, P. 2009, International Society of Arboriculture Ontario Inc. 2011 September-October www.isaontario.com/content/manitoba-maple-acer-negundo

Landon, M. 1960. Vascular Plants of Norfolk County Ontario. Big Creek Region Conservation Authority. 66 pp.

Mędrzycki, P. 2011: NOBANIS – Invasive Alien Species Fact Sheet – *Acer negundo*. – From: Online Database of the European Network on Invasive Alien Species – NOBANIS www.nobanis.org,

Morton, J.K. and J.M. Venn. 1990. A Checklist of the flora of Ontario - Vascular plants. University of Waterloo Biology Series 34.

Morton, B.R. and R.G. Lewis. 1917. Native Trees of Canada. Bulletin No. 61. Forestry Branch. Canada Dept. of the Interior, Ottawa. 233 pp.

Newmaster, S. G., A. Lehela, P.W.C. Uhlig, S. McMurray, and M.J. Oldham. 1998. Ontario plant list. Forest Research Paper No. 123. Sault Ste. Marie ON, Ontario Forest Research Institute.

Munns, E.N. 1938, The distribution of important forest trees of the United States. U.S. Department of

Table 2. Summary of Status Assignments for Manitoba Maple in Ontario.			
Author	Year	Information Relative to Occurrence in Ontario	Native
Dickson et al.	1897	Flora of Hamilton area based on earlier studies (Craigie, 1852; Logier, 1861; Buchanan, 1883), Lists <i>Negundo aceroides</i> as ' <u>Introduced</u> '	No
Sargant	1905	Distribution: Western Vermont, western Massachusetts, and Connecticut, central New York and southwestern Ontario southward to west central Florida	Yes
Britton	1913	Along streams Maine and Ontario to Manitoba south to Florida, Texas, and Mexico	Yes
Scott	1913	<i>Acer negundo</i> as well as <i>Acer <u>platanooides</u></i> and <i>Acer <u>pseudo-platanus</u></i> are planted (sic at Toronto)	No
Morton	1917	It is a native of the Prairie Provinces and is not found growing naturally in Eastern Canada. It is, however, planted extensively in the east because of its rapid growth. Map on Page 126 shows presence of Manitoba Maple east of Lake of the Woods.	Yes
Munns	1938	Distribution map indicates the natural range is in far northwestern Ontario, two spots near the Ontario: Minnesota border, far southwestern Ontario and a small area near Toronto	Yes
Landon	1960	"General weed" (in Norfolk)	No
Anonymous	1963	<i>A. negundo</i> is now naturalized in western provinces from Ontario to Nova Scotia	??

Agriculture Misc.
Publication 287. 114 pp

Oehmichen, F. 1983. *Acer negundo*, new future for a forgotten tree, Ecole d'Architecture de paysage, University of Montreal.

www.ces.ncsu.edu/fletcher/programs/nursery/metria/metria04/m49.pdf

Ontario Ministry of Natural Resources. July 2012, Ontario Invasive Species Strategic Plan. Toronto. Queen's Printer for Ontario. 58 pp.

Pope, J.H. 1877. Illustrated historical atlas of the county of Peel, Ontario. Walker and Miles, Toronto. 98 pp,

Pratt, P.D. 2000. Native Trees of Essex County (Version 22DEC00). Ojibway Nature Centre Home Page. Department of Parks & Recreation, Windsor, Ontario. <http://www.ojibway.ca/trees.htm>

Riley, J.L. 2013. The Once and Future Great Lakes Country: An Ecological History. McGill-Queen's University Press

Rosario, LC, 1988. *Acer negundo*. Fire Effects Information System. USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory. <http://www.fs.fed.us/database/feis/plants/tree/aceneg/>.

Sargent, C.S. 1905. Manual of the Trees of North America. Vol. 2.

Anonymous	1963	<i>A. negundo</i> is now naturalized in western provinces from Ontario to Nova Scotia	??
<u>Hosie</u>	1969	Map shows presence east of Lake-of-the-Woods, Thunder Bay, Toronto, Essex, Kent, and Lambton	Yes
Stewart	1969	Aug 21, 1951. Con VI Yarmouth. Native and cultivated trees here	Yes
<u>Scoggan</u>	1979	Common in southwestern Ontario. Manitoba Maple is native to the Prairies and possibly to parts of Ontario	??
Botham	1981	Big Chicken Island, 1903 and 1939 per Duncan and Stuckey, 1970	Yes
<u>Oehmichen</u>	1983	Native in southern Ontario and westwards through the Prairie Provinces and the Midwest where it grows usually on lakeshores and riverbanks, it has established itself far beyond its natural ranges.	Yes
Jellicoe	1984	Manitoba Maple listed as 'native to the (Point Pelee) Park'	Yes
Rosario	1988	Its range extends from New Jersey and central New York west through extreme southern Ontario	Yes
Farrar	1995	Frequently planted and naturalized beyond its natural range. Map indicates the natural range is in far northwestern Ontario, two spots near the Ontario: Minnesota border, far southwestern Ontario and a small area near Toronto	Yes
Haber	1996	Native to the Prairies and possibly to southwestern Ontario	??
Pratt	2000	<i>Acer negundo</i> is not native to Windsor and so no height/diameter data were shown	No
Waldron	2003	I don't consider Manitoba Maple a native and I am not alone in that view	No
Kevan	2009	There are small native stands in Ontario, but its common and familiar occurrence in eastern Canada, including the Maritimes and into New England and the Pacific Northwest, has come about through its being planted and becoming naturalized	Yes
<u>Medrzycki</u>	2011	The continuous range extends from New Jersey and central New York to the extreme southern Ontario,	Yes
OMNR	2011	Manitoba Maple, which is native to southwestern Ontario but has now spread to other parts of the province	Yes
Toronto Forestry	2013	Manitoba Maple is native to the prairie provinces in Canada but it is not native to Ontario	No
Riley	2013	In Ontario was observed as native in 1869 by John <u>Macoun</u> near Fort William along the Kam River, not native farther east where agencies promoted it for windrow plantings	Yes

Houghton Mifflin, New York. Reprinted by Dover Publications, New York. 910 pp.

Scoggan, H.J. 1978-79. The flora of Canada. 4 parts. Canadian Museum of Nature, Ottawa, Ontario. 1711 pp.

Scott, W. 1913. The seed plants of Toronto and vicinity. pp 100-140. In Faull, J. H. 1913. The natural history of the Toronto Region, Ontario, Canada. (Ed.) Canadian Institute, Toronto. 419 pp.

Toronto Forestry. 2013. Controlling Invasive Plants. Forestry Facts Urban Forestry.7 pp. www.toronto.ca/trees

Waldron, G. 2003. Trees of the Carolinian Forest. Boston Mills Press, Erin, Ontario. 275 pp.