FIELD BOTANISTS of ONTARIO Newsletter

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Great Plains Ladies'- tresses (*Spiranthes magnicamporum*) at Spring Garden Prairies – W. D. McIlveen

President's Message

As I write this article, I realize that the 2011 field season is over. At least it is for me because I am a warm weather botanist. I believe that it has been a good year for the FBO.

Our event at the Canadian Museum of Nature in April was a great way to welcome spring. We are planning to publish a complete report in the next issue of the Newsletter.

From the many comments I have received, it appears that our field trip season was very successful. Since joining the FBO ten years ago, I have never been on a trip that I didn't enjoy. Some have been more in line with my interests at the time, and some have expanded my horizons. I now photograph lichens and mosses, which ten years ago I didn't even look at. I believe that a vote of thanks is in order to Leah and Sarah for their hard work and dedication in organizing a fine field trip program.

The AGM in Simcoe was another success. I had to cut my two field trips short because the toe which I broke earlier in the year was not behaving very well. I was very impressed to learn of the great work that the NCC is doing to acquire and restore large tracts of Carolinian Canada in the general area of Simcoe. I wish to thank Canada's best-dressed botanist, Chris our VP, for his work in planning and organizing a first class AGM.

I have always thought that our Newsletter is an important part of the FBO program. This fact was driven home a few years ago when there was a significant delay in publishing the Newsletter. On the first field trip of the year, three members whom I did not know attacked me because the Newsletter was very late. In a sense, these attacks bothered me because I wasn't even a member of the board but they did emphasize the importance of our Newsletter to our membership. I do wish to thank Julia for her efforts in editing and publishing the Newsletter in reasonably good time while going through the joys, trials and tribulations of having her first baby.

In closing, I wish to express my appreciation to the members of the board for their work and dedication. In addition to doing the jobs to which they were elected or assigned, they also provide suggestions and wise counsel in the best interests of the FBO.

Bill Crowley

Standard source for scientific names and authorities of vascular plants:

Newmaster, S.G., A. Lehela, P.W.C. Uhlig, S. McMurray and M.J. Oldham. 1998. *Ontario Plant List*. Ontario Ministry of Natural Resources, Ontario Forest Research Institute, Sault Ste. Marie, Ontario. Forest Research Information Paper No. 123, 550 pp. + appendices.

Membership forms can be found on the FBO website www.trentu.ca/fbo. Annual memberships are $15.00 for individuals and $18.00 for families.

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FIELD BOTANISTS of ONTARIO
Newsletter

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Field Trip Reports

Nonquon Crown Area, Township of Scugog
July 9th, 2011

On the beautiful Saturday morning of July 9th, 2011, Steve Varga, the Inventory Biologist at the Ministry of Natural Resources (MNR), Aurora District, led a field trip to do the first inventory of the 140 hectare Nonquon Crown Area, just west of Port Perry. The trip began with the introduction of all the members and participants who were gathered there to help with the inventory and learn various botanical and ecological aspects for this area. The MNR Wetland Biologists, Maria Jawaid and Tristan Knight, participated in the trip and assisted Steve with recording

the species and collecting herbarium samples. Steve provided a map handout and a brief introduction of the area to familiarize everyone with the landscape features. The Nonquon Crown Area lies within the Township of Scugog in the Durham Region, and includes a part of a Provincially Significant Wetland - Nonquon Number 7 Wetland Complex. It is part of the Peterborough drumlins, which were formed by glaciation. Steve explained that the area supports a series of linear sandy, forested ridges intermixed with linear vernal pools. These are similar to the vernal pools and ridges of the Haldimand-Norfolk area.

We started the morning on the mid-reaches of Nonquon River, east of Scugog Line 8 and Hwy 7 intersection. The plant species and wildlife observed during the field trip were recorded in the plant and fauna lists and in wetland vegetation forms. The inventory began with the identification of species along the south edge of the closed bridge on Scugog Line 8. Species tolerant of disturbances were identified along the road edge, and included Cow Vetch (*Vicia cracca*), Smooth Brome (*Bromus inermis*) and Timothy Grass (*Phleum pratense*). Before heading into the marsh, Steve pointed at the distinguishing features of Blue-Joint Grass (*Calamagrostis canadensis*), which dominated the marsh vegetation. This grass has long hairs at the base of each floret and is distinguished by its generally tall habit and blue-coloured joints or nodes. In Ecological Land Classification (ELC) terms, we headed into a meadow marsh vegetation community, dominated by Blue-joint Grass. Tussock Sedge was also found here. Steve discussed how marshes with this sedge are hummocky, thus making it difficult to walk through. This became evident as we started to walk towards the river edge. Half of the participants managed to stay dry, whereas the others were often stuck in the muck! It seemed as if we were all playing that game – where the winner is the one who can stay dry for the longest time! No, I didn't win that game!

Blue-joint Grass (*Calamagrostis canadensis*) – Andrew Dean (AD)

Along the stretch of Nonquon River, Steve showed us various aquatic plants, including Columbia Water-meal (*Wolffia columbiana*), which is the smallest flowering plant in the world (less than 1.5mm long). Additionally, aquatic plants including Northern Water-meal (*Wolffia borealis*), Lesser Duckweed (*Lemna minor*), Star Duckweed (*L. trisulca*), Common Coontail (*Ceratophyllum demersum*), Broad-leaved Pondweed (*Potamogeton natans*), Sago Pondweed (*P. pectinatus*) and Curly-leaved Pondweed (*P. crispus*) were identified along the Nonquon River adjacent to the bridge on Scugog Line 9. We then continued the inventory along the north side of Scugog Line 9. Adjacent to the road, the dominant vegetation type included a marsh community, and this intergraded to a thicket swamp. Steve pointed out Fowl Meadow Grass (*Poa palustris*) which was occasional in the marsh. Along the road shoulder, and near the edge of the bridge, we noted remnants of turtle shells, evidence that proper road design is important to protect the turtles, and amphibians and reptiles in general, and minimize roadkill. We then walked towards the thicket swamp, and identified species including Slender Willow (*Salix petiolaris*), Silky Dogwood (*Cornus amomum*) and Crested Sedge (*Carex cristatella*). The Slender Willow has narrow galls on its leaves, which are characteristic of this species. The Silky Dogwood branches were intermixed with Red-osier Dogwood (*Cornus sericea*) and, to an untrained eye, the species would have looked similar. However, Steve quickly pointed out the striking feature of Silky Dogwood is that it has hairs on the new growth stem and has blue-coloured berries while the Red-osier Dogwood has a hairless new growth stem and white-coloured berries. For Crested Sedge, Steve taught us that the spike has dense and globular heads with some of the fruits or perigynia making up the head oriented downwards. This sedge is considered common in wetlands in Southern Ontario. Bebb's sedge (*Carex bebbii*) is similar to Crested Sedge, and is of the same section – Ovales (the hardest sedges to identify), but this species is smaller and has denser heads with dark brown perigynia that are all ascending. Other plant species identified in and around the thicket swamp included; Great Water Dock (*Rumex orbiculatus*), which has characteristic long leaves, Pussy Willow (*Salix discolor*), Highbush Cranberry (*Viburnum trilobum*), which has convex stipules at the base of the leaves as opposed to the concave stipules of the introduced Guelder Rose (*Viburnum opulus*), Wild Black Currant (*Ribes americanum*), which has resin dots on the undersides of its leaves, and Small Bedstraw (*Galium trifidum*), which has long stalks, downward-pointed teeth and flowers with three petals.

After lunch, we focused our exploration in the adjacent upland forests and its vernal pools. Before entering the upland forests, we studied other species along the road ditch including Spreading Dogbane (*Apocynum androsaemifolium*), Variegated Equisetum (*Equisetum variegatum*), Knotted Rush (*Juncus nodosus*), Little Blue-eyed Grass (*Sisyrinchium montanum*) and Northern Water-horehound (*Lycopus uniflorus*). We then started on a trail to explore the upland forests and vernal pools. Species including Bunchberry (*Cornus canadensis*), Drooping Wood Sedge (*Carex arctata*), Pink Pyrola (*Pyrola asarifolia*) and Gaywings (*Polygala paucifolia*) were

common along the trail. We also explored the linear vernal pools interspersed in the upland forests. These vernal pools supported typical Black Ash (*Fraxinus nigra*) swamp with organic soil. The species we encountered in these vernal pools included a variety of sedges, herbaceous, and fern species. These included the sedges: Necklace Sedge (*Carex projecta*), Bladder Sedge (*Carex intumescens*), Two-seeded Sedge (*Carex disperma*) and Awl-fruited Sedge (*Carex stipata*); the ferns: Lady Fern (*Athyrium filix-femina*), Sensitive Fern (*Onoclea sensibilis*) and Oak Fern (*Gymnocarpium dryopteris*); and the herbaceous species: Hemlock Water-parsnip (*Sium suave*), Hooded Skullcap (*Scutellaria galericulata*), Nodding Beggar-ticks (*Bidens cernuus*) and Bulbous Water-hemlock (*Cicuta bulbifera*).

Bulbous Water-hemlock (*Cicuta bulbifera*) - AD

The uplands were comprised of coniferous and deciduous forests with Largetooth Aspen (*Populus grandidentata*), American Beech (*Fagus grandifolia*), Eastern White Cedar (*Thuja occidentalis*), Balsam Fir (*Abies balsamea*), Eastern White Pine (*Pinus strobus*) and Eastern Hemlock (*Tsuga canadensis*). The forest floor was comprised of abundant Shinleaf (*Pyrola elliptica*), Bluebead Lily (*Clintonia borealis*), Wild Sarsaparilla (*Aralia nudicaulis*), Dewey's Sedge (*Carex deweyana*) and Long-stalked Sedge (*Carex pedunculata*). We then explored two other vernal pools – one of them was an open marsh with abundant shrubs along the edges, and the other was a thicket swamp. We came across Winter Holly (*Ilex verticillata*), Swamp Milkweed (*Asclepias incarnata*), Beaked Sedge (*Carex utriculata*), Retrorse Sedge (*Carex retrorsa*), Tufted Loosestrife (*Lysimachia thyrsiflora*) and Fringed Loosestrife (*Lysimachia ciliata*) in the thicket swamp. The vernal pools with their high water level and high duckweed cover appeared to resemble Amazonian swamps (of course safe without the crocodiles!).

Many of the participants were not able to visit the last site at the Nonquon Environmental Education Area. At this point, Nancy Falkenberg came forward and gave a well-deserved thank you speech to Steve Varga on behalf of all the FBO members present on the trip.

Those who continued on to the last site at the Nonquon Environmental Education Area located at Scugog Line 10 had the pleasure of enjoying the boardwalk, which provided a good view of the shallow aquatic and marsh areas. We saw many wetland plants including Water Smartweed (*Polygonum amphibium*), Northern Water-meal and Columbia Water-meal, Creeping Spike-rush (*Eleocharis smallii*), Water Arum (*Calla palustris*), Marsh Rose (*Rosa palustris*) in full flower, Marsh Cinquefoil (*Potentilla palustris*) and Marsh Bellflower (*Campanula aparinoides*). We also identified plants common in disturbed areas along the paths including Path Rush (*Juncus tenuis*), Foxtail Barley (*Hordeum jubatum*) and Teasel (*Dipsacus fullonum*).

At the end of the day, we had seen good many species and headed home with good memories of this area. It was definitely a very productive day, considering the species that were recorded during this field trip. Based on Steve's plant list, 262 taxa were recorded, of which 260 plant species were identified. This field trip was truly a wonderful opportunity to contribute, learn and appreciate the province's natural treasures. I look forward to similar field trips with Steve, and have a deeper appreciation of the natural ecosystems of Ontario. I would like to thank Steve Varga for providing the plant list and updates for this report and Andrew Dean for providing photographs from the trip.

Additional plant species:
Water Foxtail (*Alopecurus aequalis*)
Northern Short-husk (*Brachyelytrum erectum*)
Brown-headed Wood Sedge (*Carex alopecoidea*)
Silvery Sedge (*Carex canescens*)
Bristly Sedge (*Carex comosa*)
Peck's Sedge (*Carex peckii*)
Tuckermann's Sedge (*Carex tuckermannii*)
Bulblet Bladder Fern (*Cystopteris bulbifera*)
Sand Panic Grass (*Dichanthelium acuminatum*)
Northern Manna Grass (*Glyceria borealis*)
Leafy Pondweed (*Potomogeton foliosus*)
Northern Green Orchid (*Platanthera hyperborea*)
Yellow Water Buttercup (*Ranunculus flabellaris*)
Smooth Blackberry *(Rubus canadensis*)
Common Bladderwort (*Utricularia vulgaris*)
Marsh Speedwell (*Veronica scutellata*)

Prachi Patel

St. Williams Conservation Reserve, Turkey Point
September 10, 2011

We met at the Long Point Eco-Adventure Centre, which is actually at Turkey Point! Our leader, Kevin Kavanagh, has a background in botany and forest ecology and owns South

Coast Gardens & Consulting just down the road in St. Williams. He also works with the Nature Conservancy of Canada so he is very familiar with this area. He explained, while the "adventurers" glided overhead and into the forest on zip lines, that Long Point Eco-Adventures works to introduce their participants to sound ecological ideas. It was also a convenient point to meet and access the St. Williams Conservation Reserve. We had a stunning view of the extensive Turkey Point and Long Point Marshes. Much of this area is already under protection. Hunters were particularly influential in preserving the marsh in the past and, today, the Long Point Basin Trust is actively working on preserving more of the Turkey Point Watershed to further protect this unique area. Together, the Turkey Point Marsh and the Long Point Marsh form the largest conserved area of coastal wetlands in Ontario and have been ranked among the top ten for biodiversity within the Great Lakes watershed. Aside from plants, a number of amphibians and reptiles now 'at risk' are found there and bird species are numerous.

Our viewpoint was from the top of the massive beach ridge at the edge of the marsh. This is composed of alternate layers of clay (with high pH) and more acid sand, which were deposited in the inter-glacial and post-glacial periods. This, and the undulations carved over time, provides a great variety of habitat. The proximity to Lake Erie and the sheltered forest cover on the south-facing slopes that we descended modify the micro-climate so that snow does not accumulate for any length of time in the winter. Consequently, the slopes are a haven for Carolinian species. By contrast, the adjacent wetland hosts a mixture of species including many boreal plants such as Black Spruce (*Picea mariana*), Tamarack (*Larix laricina*) and Eastern White Cedar (*Thuja occidentalis*). In particular, this is the only site in Ontario where Northern Bayberry (*Myrica pensylvanica*), a species occurring mostly along the Atlantic Coast, can be found. Care needs to be taken when exploring because Climbing Poison Ivy (*Toxicodendron radicans*) and Poison Sumac (*Toxicodendron vernix*) are also present!

We clambered down the steps on the shrubby slope towards the marsh, noting Zigzag Goldenrod (*Solidago flexicaulis*) and a beautiful stand of huge Great Lobelia (*Lobelia siphilitica*) on the way, as well as the other Poison Ivy (*Toxicodendron rydbergii*). As we entered the more shaded and wet area, White Grass (*Leersia virginica*) was spotted. Extensive patches of Cone-Headed Liverwort (*Coniocephalum conicum*) carpeted the substrate and Bulblet Fern (*Cystopteris bulbifera*) was there. This is a most unusual environment for both species, which are usually found on rock, but it is an indication of a calcium-rich area. Flocculent patches of the fuzzy, yellowish-green liverwort *Trichocolea tomentella* were also visible in the swampy areas.

Spicebush fruiting (*Lindera benzoin*) – Walter Crowe (WC)

As we climbed into the dry areas of the wooded slope, the following species were noted: Hog Peanut (*Amphicarpaea bracteata*), Groundnut (*Apios americana*), Poison Sumac, Purple-stemmed Aster (*Aster puniceus*), Jewelweed (*Impatiens capensis*), Cinnamon Fern (*Osmunda cinnamomea*), Three-seeded Mercury (*Acalypha virginica* var. *rhomboidea*), and lush spikes of scarlet Jack-in-the-Pulpit berries (*Arisaema triphyllum*). Round-leaved Dogwood (*Cornus rugosa*) was present and it was here that we first saw the Northern Bayberry. In addition, Spicebush (*Lindera benzoin*) became abundant. Browsing deer are a serious problem for plants in the Lake Erie area and Spicebush benefits from the fact that deer do not like it!

Descending again into a moister area with Red Oak (*Quercus rubra*), Yellow Birch (*Betula alleghaniensis*) and Tulip Tree (*Liriodendron tulipifera*), we encountered the leaves of familiar, spring-flowering species, such as False Solomon's Seal (*Maianthemum racemosum*), Naked Mitrewort (*Mitella nuda*), Two-leaved Mitrewort (*Mitella diphylla*), Foam Flower (*Tiarella cordifolia*) and Goldthread (*Coptis trifolia*). These are an indication of the overlap of species found in this area where species common in the north are side by side with Carolinian species on the very northern edge of their range. This applies to trees as well as ground flora. Both Black and White Spruce (*Picea glauca*) occur in this preserve as well as Eastern Hemlock (*Tsuga canadensis*), Tamarack and Eastern White Cedar. Deciduous trees include Red Maple (*Acer rubrum*), Ironwood or Hop Hornbeam (*Ostrya virginiana*) and Sassafras (*Sassafras albidum*). The latter's range extends to Florida and Texas. Very noticeable in the better-drained areas was Shagbark Hickory (*Carya ovata*). Pignut Hickory (*Carya glabra*) was also present as well as Butternut (*Juglans cinerea*) and Red Elm (*Ulmus rubra*). American Sycamore (*Platanus occidentalis*) was also observed.

On the drier slopes of the St. Williams Conservation Area the trees include Black Oak (*Quercus velutina*), American Beech (*Fagus grandifolia*), White Ash (*Fraxinus americana*), American Sycamore, Sugar Maple (*Acer saccharinum*), Red Maple, and American Chestnut

(*Castanea dentata*) with its bristly fruits on the ground. Sassafras was also present and Large Toothed Aspen (*Populus grandidentata*). At the top of the ridge were some of the tallest Trembling Aspen (*Populus tremuloides*) that I have ever seen. Of shrubs, a gooseberry (*Ribes* sp.) and Red Raspberry (*Rubus idaeus*) were spotted, Spicebush was everywhere, and the non-native Multiflora Rose (*Rosa multiflora*) edged the trail. Maple-leaved Viburnum (*Viburnum acerifolium*) and Alternate-leaved Dogwood (*Cornus alternifolia*), as well as Drummond's Dogwood (*Cornus drummondii*), were recorded. Blue-stemmed Goldenrod (*Solidago caesia*) was in flower, as well as Rough Daisy Fleabane (*Erigeron strigosus*), White Snakeroot (*Prenanthes alba*) and Horse Balm (*Collinsonia canadensis*). The orange fruits of Horse Gentian (*Triosteum aurantiacum*) stood out and there was evidence of many of the early spring flowers such as trilliums (*Trillium* sp.) and Bloodroot (*Sanguinaria canadensis*), and fruits of Blue Cohosh (*Caulophyllum thalictroides*) and Doll's Eyes (*Actaea pachypoda*). We encountered some huge patches of Scouring Rush (*Equisetum hyemale*) in what seemed to be surprisingly well-drained areas. Christmas Fern (*Polystichum acrostichoides*) was seen and Bracken (*Pteridium aquilinum*), as usual, was along the trails.

Chestnut (*Castanea dentata*) – WC

Towards the end of the afternoon, the group descended a steep slope into another wooded area and added observations of the following species: Ostrich Fern (*Matteuccia struthiopteris*), Marginal Wood Fern (*Dryopteris marginalis*), Smoother Sweet Cicely (*Osmorhiza longistylis*), Running Strawberry Bush (*Euonymus obovatus*), Wild Sarsaparilla (*Aralia nudicaulis*), Yellow Mandarin (*Prosartes* (*Disporum*) *lanuginosum*), Large Tick Trefoil (*Desmodium glutinosum*), Wild Licorice (*Galium circaezans*) and Rough-leaved Rice Grass (*Oryzopsis asperifolia*). Several more trees were also recorded; White Oak (*Quercus alba*), Eastern White Pine (*Pinus strobus*), Basswood (*Tilia* americana), Eastern Cottonwood (*Populus deltoides*), and, most striking of all, a huge White Ash (*Fraxinus americana*) with a dbh (diameter at breast height) of almost 1 metre!

Probably the most interesting area came at the end of our circular tour when we climbed to the highest point of the trail. Here, with large Tulip Tree canopies in the foreground, one could look out over the wetland below where Black Spruce canopies mixed with other northern species, a testament to the extraordinary juxtaposition of northern and southern botanical elements. In one visual sweep, one can see species whose range extends northward to the treeline amid others that extend southward to peninsular Florida.

On our return to our starting point, we walked along a deeply cut Eastern Hemlock ravine with scattered American Beech and Sugar Maple and passed through a younger stand of Black Walnut (*Juglans nigra*). There we encountered unusually extensive stands of Wild Ginger (*Asarum canadense*).

Our thanks go to Kevin Kavanagh for leading us on a fascinating tour of this unique area.

Joan Crowe

Additional records from Mike McMurty and further assistance from Kevin Kavanagh.

Spring Garden Prairie, Windsor
September 18, 2011

Eight FBO members participated in the field trip to the Spring Garden Prairie in Windsor on September 18, 2011. After showing us a series of historical maps, our leader, Dan Barcza, took us to look at several parts of the property owned by the City of Windsor. Although I have been there several times before with the FBO, as well as on my own, I still saw many species I had not observed before and saw parts of the site that I had not seen or been to.

The first stop was a small field located behind the Southwood Community Church. The field had been regularly mowed for many years; however, when mowing was discontinued, a number of interesting species began to show up. Among these were Long-spine Sandbur (*Cenchrus longispinus*), Western Love-grass (*Eragrostis pectinacea*), Purple Love-grass (*Eragrostis spectabilis*), Two-flowered Cynthia (*Krigia biflora*) and Prairie Dock (*Silphium terebinthinaceum*), as well as Big Bluestem (*Andropogon gerardii*) and Virginia Broom-sedge (*Andropogon virginicus*).

The second area examined was a prairie habitat that had been allowed to grow for a much longer period and would likely be the kind of habitat that the area of Stop #1 would aspire to. Some of the main species at this location included Indian Grass (*Sorghastrum nutans*), Missouri Ironweed (*Vernonia missurica*), Tall Tickseed (*Coreopsis*

tripteris), Riddell's Goldenrod (*Solidago riddellii*), Virginia Mountain-mint (*Pycnanthemum virginianum*), Sullivant's Milkweed (*Asclepias sullivantii*) and Great Plains Ladies'-tresses (*Spiranthes magnicamporum*).

From here, we moved into an area that was more wooded with many of the same prairie species as seen at Stop #2 mixed into the understory. Noted in this area were Flat-topped White Aster (*Doellingeria umbellata*), Tall Nut-rush (*Scleria triglomerata*), Many-flowered Agrimony (*Agrimonia parviflora*), Common Sneezeweed (*Helenium autumnale*), Pale-spiked Lobelia (*Lobelia spicata*), and a magnificent stand of Great Lobelia (*Lobelia siphilitica*). We noted that the Glaucous White Rattlesnake-root (*Prenanthes racemosa*) appeared in two forms – one with a lot of hairs on the flower and another without. So far, it appears that both types can be referred to the same species.

Considerable discussion revolved around the distinction among dogwoods from the area. The Red-panicled or Gray Dogwood (*Cornus foemina* ssp. *racemosa*) will sometimes hybridize with Drummond's Dogwood (*Cornus drummondii*). We saw two different American Chestnuts (*Castanea dentata*) in the area and one of them (dbh of 19.4 cm) had spiny fruits. Further along, we passed through a forest patch that contained Sassafras (*Sassafras albidum*) that will need to be managed if some of the rarer species are to be preserved. At one point, there was a discussion about broad-leaved grass that keyed out to Deer-tongued Panic-grass (*Panicum clandestinum*).

The last part of the trip crossed through a site that I have seen a number of times. It contains some typical Oak Savannah species including Dense Blazing Star (*Liatris spicata*), Rough Blazing Star (*Liatris aspera*), Arrow Feather Three-awn (*Aristida purpurascens*) and Biennial Gaura (*Gaura biennis*). The site is home to many rare (S1 and S2) species. The list of species mentioned in this report does not cover all of the species seen or all that are known from the site. Instead, the list only contains some species so as to provide a sampling of the species that can be found. Many thanks to Dan for giving FBO members an opportunity to see one of the botanical treasures that the Windsor area has to offer.

W.D. McIlveen

(Photos from this field trip occur on the front and back covers)

the duff layer

A Call Down the Path: Trail Marker Trees in Ontario

The 'Mother of All Markers' in Kingsville near Point Pelee. Gerry Waldron and a White Oak marker pointing west along a trail that is documented on a map drawn by crown surveyor Patrick McNiff in the 1790's. There is little doubt this magical tree was marked by Aboriginals sometime in the 18th century – Paul O'Hara (PO)

It was a couple of years ago. I forget what I was searching for now. Something tree-related - dreams of discovering more grainy black and white shots of loggers enveloped in Southern Ontario old growth. I was scanning the Niagara Falls online digital library when I saw a photograph that has been burned into my brain to this day. It was labeled, "The Old Indian Trail - Marker Tree, Townline Rd. (at Thorold – Stamford)".

Go check it out. It shows a mature, roadside White Elm (*Ulmus americana*) on the Haldimand Clay Plain near Thorold with its side branches pulled down, the trunk and main branches drawing the shape of an 'M', the lateral branches forming the crown. Aboriginals had purposefully modified the tree at one time – early to mid 1800s, I would guess - to point along an ancient footpath. The tree was well known in the community, ravaged by Dutch Elm Disease in the early 70s, but saved as a snag until a windstorm brought it down December 28, 1982.

Gerry and a Shagbark Hickory marker at Maidstone Conservation Area. It points north up the nearby Puce River towards the shore of Lake St. Clair. - PO

Wow, I thought, dumbfounded and flooded with questions. Where do I find out more about Indian trail marker trees? Are there more photos of tree markers I could find? Are there marker trees standing on the landscape of Southern Ontario today?

My first couple of questions would be answered with a little more surfing. I came across two links about trail marker trees, both from the United States. The first one is run by the Mountain Stewards (mountainstewards.org) of the Southern Appalachians, the second, a link to the Great Lakes Trail Marker Tree Society

(greatlakestrailtreesociety.org) run by artist and trail marker tree researcher, Dennis Downes* from Illinois. Both sites show numerous photos of trail marker trees standing in the US today, but most of them didn't look like the Old Indian Trail Marker Tree in Thorold. Most were modified to point in one direction and, not surprisingly in the US, most of them were oak.

Downes' site dug deeper into the background on how marker trees were formed and provided tips on what constitutes a true trail marker tree (apparently, there is some debate over what constitutes a true marker as there are a lot of bad examples out there – folks calling any old misshapen tree a trail marker.). True markers were modified near the ground. A sapling was bent over and its leader was tied down with rawhide, grapevine or secured with heavy rocks. The lateral branch pointing directly upwards was retained while the rest were removed. Over time the tree settled into the bend, the rawhide was removed or withered away, and a 'nose' was often left to point the way. As the tree grew, the diameter of the main trunk remained larger than the lateral branch forming the crown. Other trees, like the branches on the Thorold marker, were just pulled down and secured. Either way, marker trees were meant to look very purposeful, distinguishing them from naturally bent trees.

I learned that marker trees were used by Aboriginals to point to all kinds of things: villages and camps, water sources and river fords, or to mark boundaries between Aboriginal tribes. It is thought that the practice of marking trees was taught to the first Europeans, and it is plausible that they and not the Aboriginals formed some of the markers remaining on today's landscape. Apparently, trail marker trees were common in pre-settlement times, most now lost to habitat destruction and the practice of removing ill-formed trees in woodlots.

One of three Sugar Maple markers near the shoreline of Big Cedar Lake in the Kawarthas. This one has two ascending trunks and a prominent pointer. - Kristine Tortora

My quest to find marker trees in Southern Ontario led me to spend a winter revisiting my old haunts in Hamilton, Halton and Niagara Regions to no avail. It was only when I started asking friends and fellow botanists that I started to get somewhere. None of them really knew about marker trees before. I just shared what little I had discovered and for some, a little light bulb went on above their heads as they recounted seeing a similar looking tree at such and such place. Some of the leads were dead ends, but some led me to the most magical trees I have ever seen.

A friend told me about seeing markers at her partner's cottage in the Kawarthas (see photo). Another told me about a tree in a Caledonia hedgerow. I learned of a grafted, double-trunked Sugar Maple that stood in Binbrook along the Welland River, believed to be a

boundary marker between Iroquoian tribes (that is, until some kids started a fire under it 10 years ago and burnt it to the ground). This past summer, my friend and tree colleague, Gerry Waldron, showed me a couple of amazing marker trees in Windsor-Essex (see photos). One of them is the most impressive tree I have seen (online or in person) to this day. And last fall I stumbled across a couple of Sugar Maple (*Acer saccharum*) markers less than 100 m apart (see photo) in north Burlington pointing in the same direction along a path from the Niagara Escarpment to Lake Ontario - the only marker trees I have discovered on my own thus far.

Perhaps early colonists to Southern Ontario modified the smaller trees, but it is thought that, because of the bends, the growth on marker trees is slow and the trees are older than they look. What is clear is that marker trees exist in Southern Ontario, and marking trees was an ingenious practice employed by the Anishinabe (Ojibway) and Haudenosaunee (Iroquois) Peoples of Southern Ontario. There is something so beautiful, sophisticated, and poetic about trail marker trees. It is incredible to think in this age of frenzied, electronic communication, that living, natural messages so simple and practical are still standing on the landscape today – a centuries old tap on the shoulder pointing us the way home. Reaching back to a time before the car, before roads and traffic lights, when sticking to the forest trail was crucial to survival, and a wrong turn could spell danger or death. For these reasons, I would argue that our oldest trail marker trees are the most historically important trees in Ontario today.

One of two Sugar Maple markers in north Burlington pointing southeast along a trail between the Niagara Escarpment and Lake Ontario. - PO

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I am continuing my search to find and document more trees, seeing it as a project with a 10 or 20-year horizon. Yes, researching and walking old Aboriginal trails is helpful, but again, I have found the best way to find out more about these special trees is just to ask around. Therefore, I am appealing to the FBO membership: Do you know of a trail marker tree where you live? In your wanderings, do you remember seeing trees like these? Do you know of a marker tree that once stood where you live, a document describing it, or someone who may know of a marker tree in your area? If so, I would be very pleased to talk to you by phone or email, please and thank you.

I just learned of a trail marker tree that was chopped down this year, unknowingly, by a property owner along the shoreline of Lake Erie at Port Dover. Once dead, or removed, we lose their untold stories, stories that tell us about who we are and where we come from, stories we can share with future generations about this very special land, and the incredible people that walked and marked its forest paths.

* Dennis Downes' new book Native American Trail Marker Trees: Marking Paths Through the Wilderness is available from the Great Lakes Trail Marker Tree Society at www.greatlakestrailtreesociety.org. It is the first comprehensive book on trail marker trees ever published.