

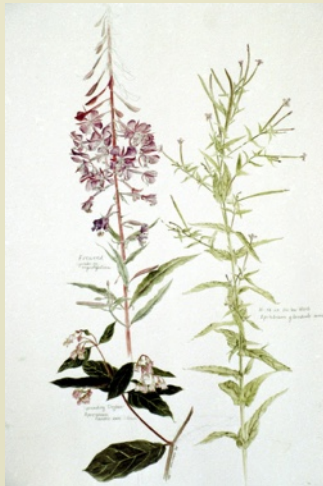
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# FIELD BOTANISTS OF ONTARIO

## NEWSLETTER

VOLUME 29(2/3) ISBN: 1180-1417

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# President's Message

The FBO held its Annual General Meeting (AGM) in Ottawa this year at the Fletcher Wildlife Garden on September 9 and 10. Four field trips were held in the area, providing opportunities to explore the flora of eastern Ontario. There was a strong turn-out for the banquet and evening program, which featured an excellent presentation on lichens by Irwin (Ernie) Brodo of the Canadian Museum of Nature.

Ernie Brodo was also honoured with the Goldie Award at the AGM, which is given annually to an individual who has made a significant contribution to the advancement of field botany in Ontario. A presentation by Bill McIlveen and Troy McMullin highlighted Ernie's distinguished career in the study and classification of lichens.

This year, the FBO delivered another diverse and high quality field trip program. We hosted 21 field trips and workshops across the province, exploring new areas and revisiting old favorites. I personally had the pleasure of attending five trips this year in eastern and south-western Ontario. On each trip I was fortunate to visit new places, connect with other botany enthusiasts, and see a number of plant species for the first time, including some rarities such as Smooth Yellow False Foxglove, Swamp Cottonwood, and a native stand of Kentucky Coffee Tree.

The success of our field trip program depends on our volunteer trip leaders who kindly share their time and expertise with us. When developing our field trip program, we reach out to both amateurs and professionals with knowledge of Ontario's flora and natural areas to lead trips for us. A special thanks to our 2017 trip leaders: Mary Anne Young, Dan Barcza, Lenore Keeshig, Chris Deduke, Pat Deacon, Tony Reznicek, Steve Varga, Walter Muma, Tyler Miller, Lisa Reiderer, Bill McIlveen, Leanne Wallis, Allen Woodliffe, William van Hemmessen, George Bryant, Inga Hinnerichsen, Will Kershaw, Troy McMullin, Eleanor Thompson, Holly Bickerton, Dan Brunton, Jennifer Doubt, Cassandra Robillard, and Roger Bull. The support of our FBO volunteers is very much appreciated.

If you haven't checked out the FBO Facebook page yet, please consider joining our on-line community. Members regularly share stories and photos of plants and related discoveries. It's a great forum to get help with plant identification, share your experiences in the field, and connect with other botanists.

Dan Westerhof

**On the cover:** Top: *Vines*, a painting by Irene McIlveen (1991). Bottom: Hybrid Rose (*Rosa* sp.), Riverwood, Mississauga, 2008; photo William McIlveen.

Sidebar artwork: *Epilobium angustifolium*, *Epilobium ciliatum* and *Apocynum androsaemifolium* (Irene McIlveen).

Trip location maps generated using NatGeo Mapmaker software.

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

Field Botanists of Ontario website: [www.trentu.ca/fbo](http://www.trentu.ca/fbo)

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

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

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## Editor's Note

Indeed, there are still some rich and rewarding botanical spots hidden somewhere in the outskirts of already overdeveloped new urban areas of the GTA, as documented by our correspondent Paul O'Hara. And an FBO trip may be the rare opportunity to find them and learn about the plants of such locations. (Authors: your outstanding trip reports come here!)

If Paul went to Caledon, Don Campbell participated in an entirely different experience on the Bruce: you will be surprised how many practical uses of plants the First Nations have discovered in the course of millennia of living on this continent. After you read his report, you may want to try using Balsam Fir resin to treat minor insect encounters which might annoy you during your botanical explorations.

Even if math is not your strength, Bill McIlveen's mini-paper will amaze you with new facts on numerical curiosities in the plant world and make you look at flowers or leaves from an entirely different point of view.

A different set of skills will be though required if you would like to help Mike Oldham in his search for new locations of *Rosa arkansana* in Ontario. This genus and species is not the easiest taxonomically, but if discover a suspect specimen, send it to Mike for verification. Who knows, the more eyes look for the true species (or even its hybrid) the sooner we can build a more complete picture of this species' geography in the province.

Happy fall botanizing everyone,

Chris Zoladeski

# Field Trip Reports

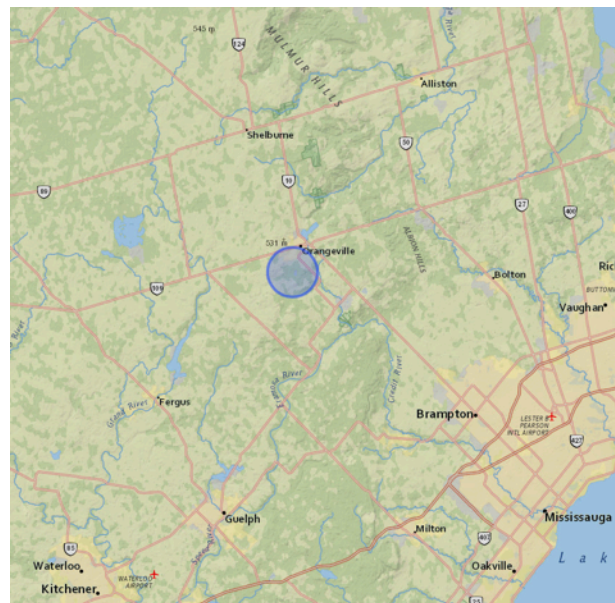
## Caledon Lake Forest

17 June, 2017

By Paul O'Hara

When I think of Peel Region, the phrase 'high quality natural area' is not top of mind. Most often I think of the suburban sprawl that was rolled out across the Peel Clay Plain under the reign of Hurricane Hazel McCallion. But a high quality natural area was exactly what FBO members experienced at Caledon Lake Forest on June 17<sup>th</sup> guided by Lisa Riederer, Credit Valley Conservation Authority Biologist.

Caledon Lake Forest is a 500 hectare wetland complex at the headwaters of the Credit River in north Peel Region (just south of Orangeville). Much of the land is owned by Credit Valley Conservation Authority with a small number of private landowners who live on the northern edge of the lake. It is comprised mostly of thicket swamp, conifer swamp, mixed swamp and a few small fens.



We entered the Caledon Lake Forest along a muddy path at the end of Mississauga Road near Alton and descended into a rich conifer swamp dominated by White Cedar (*Thuja occidentalis*), Black Spruce (*Picea mariana*), Balsam Fir (*Abies balsamea*) and Black Ash (*Fraxinus nigra*).

FBO members fawned over the Showy Lady's Slipper (*Cypripedium reginae*) and Larger Yellow Lady's Slipper (*Cypripedium parviflorum* var. *pubescens*) that grew along the narrow path. Other herbaceous goodies included Tufted Loosestrife (*Lysimachia thyrsiflora*), Purple Avens (*Geum rivale*), Pink Pyrola (*Pyrola asarifolia*), One-sided Wintergreen (*Orthilia secunda*), Three-leaved Solomon's-seal (*Maianthemum trifolium*), Bog Goldenrod (*Solidago uliginosa*), Twinflower (*Linnaea borealis*) and Bog Buckbean (*Menyanthes trifoliata*).

Lisa highlighted the great diversity of wetland shrubs (many of them regionally rare) including Swamp Fly Honey-suckle (*Lonicera oblongifolia*), Creeping Snowberry (*Gaultheria hispidula*), Velvet-leaved Blueberry (*Vaccinium myrtilloides*), Bunchberry (*Cornus canadensis*), Winterberry (*Ilex verticillata*), Mountain Holly (*Ilex mucronata*), Alder-leaved Buckthorn (*Endotropis (Rhamnus) alnifolia*), Black Chokeberry (*Aronia melanocarpa*) and Dwarf Birch (*Betula pumila*).

There was much discussion among the group on the diversity of wetland sedges which included *Carex tuckermanii*, *C. magellanica*, *C. interior*, *C. vulpinoidea*, *C. hystericina*, *C. trisperma*, *C. leptalea*, *C. lacustris* and *C. canescens*. In the higher light areas on the sides of the path grew *Carex flava*, *C. gracillima* and *C. granularis*.



Showy Lady's Slipper (*Cypripedium reginae*). Photo: P. O'Hara.



Stunted Tamarack-*Carex aquatilis* fen. Photo: P. O'Hara.

The end of the line for the morning portion of the trip was a fen whose water level exceeded the shin-high rubber boots of most participants. The fen was dotted with stunted Tamarack (*Larix laricina*) and the vegetative growth of *Carex aquatilis*. On the hummocks grew Pitcher-plant (*Sarracenia purpurea*) and a species of Sundew – probably *Drosera rotundifolia*. Here, Lisa drew our attention to the Sage-like leaves of Hoary Willow (*Salix candida*) and the glossy leaves of Shining Willow (*Salix lucida*) that grew in the fen.

The skies started to darken and rumble after lunch but we pressed on to visit the nearby Peel Board of Education's G.W. Finlayson Field Centre. Here, Lisa showed us a rare Shrubby Cinquefoil (*Dasiphora fruticosa*) fen and used a soil auger to show us the marl deposits (a gray putty type material) on which the fen sits. Lisa said most fens have peaty substrates, so this already rare habitat type is even rarer because of its marl substrate. Lisa added that Grass of Parnassus (*Parnassia glauca*), a common fen indicator, could be viewed here in flower later in the season.

Under increasingly unsettling skies, we got in our vehicles and followed Lisa to another part of the Caledon Lake Forest. At this point, I called it a day as the Town of Orangeville was under a Severe Thunderstorm Warning (by the time I got home there were tornado warnings across the area). FBO member, Philippa Kilbourn, relayed to me later that, in the drenching rain, a few remnants of the group followed Lisa along a path off a sideroad to see two regionally rare species: Daisy-leaf Moonwort (*Botrychium matricarifolium*) and Dwarf Rattlesnake Plantain (*Goodyera repens*). She said the former was smack dab on the path and could have been easily trampled. ✨

The author thanks Philippa Kilbourn for her detailed field notes. 🌿

## *Cameron Lake, Bruce County*

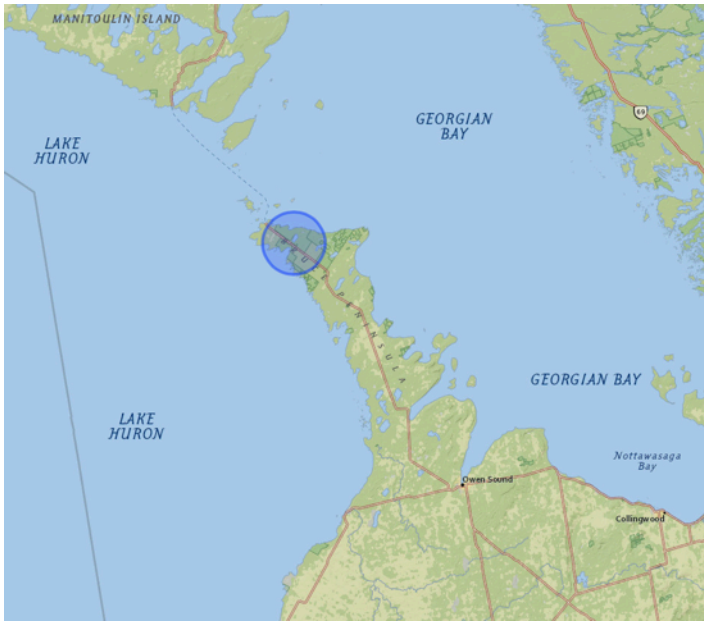
20 May, 2017

By Don Campbell

**O**n May 20<sup>th</sup>, 2017, six FBO members and one guest began a very different walk through the forest south of Cameron Lake, Bruce County. The purpose of this trip was primarily to explore the many uses that First Nations Peoples make of plants, with a few animal stories added for relevant explanations.

As is the custom with First Nations, we began in a circle, with Lenore Keeshig as our leader. Lenore introduced herself in her Anishinaabe language and then translated the introduction into English for us. She also had us practice saying where she lived: Neyaashiinigiing, which is on the eastern shore of Bruce County, just north of Colpoys Bay. Lenore described how four herbs are of major importance to the First Nations people: White Cedar (*Thuja occidentalis*), for purification;





Sage (*Salvia sp.*), for emotions; Tobacco (*Lobelia inflata*, although we used *Nicotiana tabacum*) for relationships; and Sweetgrass (*Hierochloa odorata*, now called *Anthoxanthum hirtum* or *A. nitens*), for persuasion.

Thus, to start the walk, we needed to establish a relationship with the forest. We all participated in a tobacco ceremony, a ceremony to ask for permission to be in the forest, that the forest reveal itself to us, and for the forest to allow us to have a good experience during the day.

First we saw a few plants of Three-leaved False Solomon's Seal (*Maianthemum trifolium*), in bloom and then several clumps of Dwarf Lake Iris (*Iris lacustris*), blooming, in spite of some ill-placed bets among members present against finding it in bloom east of Highway 6. In the background was Labrador Tea (*Rhododendron groenlandicum*), a plant used after giving birth to contract the uterus and get mothers back to their normal shape (over 4 years)! Labrador Tea is also used with Bearberry (*Arcostaphylos uva-ursi*) and Red-osier Dogwood (*Cornus sericea*), as a ceremonial smoking mixture known as kinnikinnick. At that point in the hike, one person had a very red and itchy insect bite so we found a blistered tree of Balsam Fir (*Abies balsamea*). The blister was broken and the exudate caught on the thumb nail. This exudate was put onto the bite and within minutes the itch was gone, and by the end of the trip the redness was less. This natural remedy worked very well. Back on the trail, we found Wild Sarsaparilla (*Aralia nudicaulis*) in bud, Oak Fern (*Gymnocarpium dryopteris*), Gaywings (*Polygaloides paucifolia*) in bloom, Pipsissewa (*Chimaphila umbellata*), Pink Pyrola (*Pyrola asarifolia*), and Menzies' Rattlesnake-plantain (*Goodyera oblongifolia*). The opening fronds of Bracken Fern (*Pteridium aquilinum*) were compared to eagle's claws. On the sand dune, was Common Milkweed (*Asclepias syriaca*), Striped Maple (*Acer*

*pensylvanicum*), Bastard Toadflax (*Commandra umbellata*), and Basswood (*Tilia americana*).

The difference between the canopies west and east of the dune was striking. West of the dune, conifers of White Spruce (*Picea glauca*), White Cedar and Balsam Fir were predominant with Large-tooth Aspen (*Populus grandidentata*), the deciduous tree species. East of the dune, the forest was Red Oak (*Quercus rubra*), Maple (*Acer sp.*), Hemlock (*Tsuga canadensis*), American Beech (*Fagus grandifolia*), White and Yellow Birch (*Betula papyrifera* and *B. alleghaniensis*), Hornbeam (*Ostrya virginiana*), and White Ash (*Fraxinus americana*). We then learned of the four sacred trees: Cedar, Maple, Birch and Ash. Cedar is the tree of life: tea made from Cedar is both medicinal and gives positive energy. Maple is used to get sugar: a preservative for food. Birch too has a sweet sap which is used as a preservative, but also yields bark for boats and baskets, and wood for bows. The fungus that grows on both White and Yellow Birch is dug out to make a small well, and within that well is used to hold fire as coals. When the smoke from these fungi are in the air, they too are medicinal, particularly the fungus from Yellow Birch. The effect of



Bear claw scratches on beech tree. Photo: D. Campbell.

inhaling this smoke calms children. Ash is used for fire wood, tool handles, lacrosse sticks, bows, and arrows. The inner bark of ash is medicinal and Black Ash (*Fraxinus nigra*) is used for basket making. Medicinal teas can also be made from Balsam Fir (very astringent) and Hemlock. If one does try Labrador Tea, apparently it is an acquired taste! In the lower hardwood canopy, there was at least one Canada Fly-honeysuckle (*Lonicera canadensis*) in bloom.

At lunch we had a wonderful show and tell of the uses of plants, that included Black Ash baskets, Black Spruce (*Picea mariana*) bark baskets, Tamarack (*Larix laricina*) birds with wonderful scent still in the wood, split "Red Willow" (*Cornus sericea*) ornaments and chewing sticks, dried Wild Ginger (*Asarum canadense*), and we sampled Wild Ginger tea, a very easy flavor to like. It is used for gastric cleansing and even as a precaution if you think you are going to overdo eating at a feast or a really big meal. Lenore passed around a dreamcatcher with red willow as the hoop and this particular one was adorned with amethyst. Also circulated were several Emerald Ash Borers as the discussion did include the impending loss of the White Ash in this forest. Lenore also brought ropes she had made from the inner bark of Milkweed and another she made from Broad-leaved Cattail (*Typha latifolia*). Both ropes were very strong even though only double stranded.

As we continued after lunch, Lady Fern (*Athyrium filix-femina*) was well up and more Oak Ferns were found. The joy of a small number of people meant we could go off trail to the leaning Beech tree. Once at its base, we could see that there were bear paw scratches from many years of climbing on the bark much as people leave carvings in beech bark. This was the bear's climbing tree, and source of beech nuts for their diet. It was suggested that the sharp barbs of beech nuts were an intestinal cleanser for the bears. This also brought into the discussion that bears are a sacred animal for they showed man how use plants. Bears cared for the children of the forest. It was Moko, the bear, that showed that children needed flesh for their diet and hence the source for their B vitamins. For First Nations, bears are healers. Wolves are known as protectors of children.

As we left the forest on a road allowance, we had to stop several times for cars, and Downy Yellow (*Viola pennsylvanica*) and Downy Blue Violets (*Viola sororia*) were seen, as well as one, as yet unopened, Striped Coralroot (*Corallorhiza striata*). Unfortunately, no one on the trip was interested in sedges or grasses and while there were many seen, none were identified.

The trip ended as it began, with a circle, to thank Lenore for a most interesting and informative trip. But our tobacco ceremony had guaranteed that. ✨

## *Botanical Mathematics*

*By W.D. McIlveen*

One could say that I am quite a lucky fellow. I do recognize that I have much to be grateful for but specifically I am referring to my ability to find four-leaved clovers. When I was young, I could easily find, collect and press those in a book. It didn't take long to get to 60 or 70 specimens in the first part of any given year after which my enthusiasm for the hobby waned until the following spring. Had I been more dedicated to that hobby, I could easily have collected several hundred



Annual Sunflower (*Helianthus annuus*), Huttonville, 2004.

each year. I could have done that with only casual note of the things, not through any systematic searching, for my eye could catch on to the abnormal structure or pattern. But finding such clovers is regarded by some people as 'good luck' and they even carry them as good luck charms. I sincerely doubt that they attract anything in the realm of luck that could be transferred to the owner of such plant parts. Owing to the rarity of four-leaved forms, estimated as about 1 in 10,000 leaves, just finding them could be viewed as somewhat lucky. Overall, it would seem that any 'luck' that they do bring is all consumed in the act of locating them. Did having a collection of them improve my odds at winning the lottery? Not in the least.





Fig. 1. 'Four-leaved' form of Alsike Clover (*Trifolium hybridum*), Windsor, 2010.



Fig. 2. 'Four-leaved' form of Red Clover (*Trifolium pratense*), Prairie Bee River, 2010.



Fig. 3. 'Four-leaved' form of Jack-in-the-Pulpit (*Arisaema triphyllum*), Campbellville, 2015.



Fig. 4. 'Eight-petal' form of Hybrid Tulip (*Tulipa* sp.), Hanmer, 1978.



Apart from the supposed mythological properties of relatively rare plant parts, just what does a four-leaved clover represent? In fact, it is not a four-leaved structure at all. It is, instead, a 'four-leaflet' clover consisting of a petiole plus one extra leaflet above and beyond the normal three. But clovers are not restricted to only one extra leaflet. There can be two, three, four or more leaflets though the frequency of occurrence drops with each increment in leaflet number. The Guinness Book of Records claims that the largest



Fig. 5. 'Five-petal form of White Trillium (*Trillium grandiflorum*), Oakville, 1996.

number of leaflets in a clover leaf ever found was 56. This particular number may have been the result of directed breeding rather than a natural occurrence and therefore the record number is considerably tainted.

Several causes for the appearance of extra leaflets have been suggested. These include a recessive gene, somatic mutation, development error in the meristem, or environmental factors. And it is possible that several of these factors might be at work. A single plant may have multiple four-leaflet leaves as this writer has witnessed. Perhaps some geneticist could explain why, if a plant is genetically disposed to producing extra leaflets, why all of the leaves do not have the same extra leaflet. In most four-leaved clovers, it can be noted that the petiole splits into three, as usual, but one of the leaflets has simply split into two. One of these might often be slightly smaller than the other. An environmental factor is most probably involved with this. But when the leaf is evenly divided into four separate leaflets, each with its own separate leaflet stem, this is likely a genetic mutation. The multiple-leaved characteristic has been used as a genetic marker when studying the genetics of White Clover (*Trifolium repens*) [Tashiro].

In addition to White Clover, the four-leaved character occurs in Alsike Clover (*T. hybridum*) (Fig. 1) and Red Clover (*T. pratense*) (Fig. 2). Although I have not encountered any references to other legume species with extra leaflets, there is no reason to believe that

this could not occur. But I have observed a similar phenomenon with Jack-in-the-Pulpit (*Arisaema triphyllum*) (Fig. 3). Perhaps it is just a coincidence that it, too, is normally a three-leaflet species. Instead of being arranged as a triangle, the new 'square' format is more visually conspicuous.

As well, I have photos of at least two different Tulip cultivars (*Tulipa* hybrid) (Fig. 4) and Tarda Tulip (*Tulipa tarda*) in which the flowers have eight tepals (four petals and four sepals, all of similar appearance) instead of the normal six. Figure 5 shows a Trillium with at least five petals. In this instance, the plant is obviously infected by a mycoplasma organism which likely had a role in changing the characteristics of the flower. Such abnormalities are well known in Trilliums [Case and Case] and sometimes infected plants are sold commercially at a premium. As well, some double-flowered Trilliums (AKA *flore plenum*) of *Trillium grandiflorum* are available in the horticultural trade.

Plants with unusual forms have been of interest to botanists for a very long time [Shull]. Abnormalities with extra, more numerous, or smaller foliage are known for diverse groups of plants; some examples include potato [Anderson], peach [Frisby], *Caladium* [Polston *et al.*], *Arabidopsis* [Serrano-Cartagena *et al.*; Vernon *et al.*], and corn [Thomison *et al.*].



Fig. 6. Prickly Rose (*Rosa acicularis*), Hearst, 2008.

It seems probable that if one were to look long enough, every plant species would be found to have a few members with some sort of abnormal growth. Depending on the particular cause of an abnormally formed plant, affected plants may persist in the population if the abnormality does not confer some disadvantage to the species. Having an extra leaflet is surely no great disadvantage to clover. By contrast, situations where the cause is a pathogen such as a virus, affected plants are likely to be lost from the population. When the cause is a genetic change, that alteration in the genetic



makeup may not be lethal to the affected individual but it may not be able to make normal pollen or egg cells. If the plant cannot produce viable pollen or be fertilized, then that genetic profile will eventually be lost.

But to the minds of many plant breeders in the horticultural industry, abnormal plants are very welcome. In addition to size and colour differences, unusually-shaped flowers are desirable and saleable. A classic example would be roses. Almost all of the wild forms of rose have a typical five-petal arrangement (Fig. 6). Many, if not most, of the cultivated hybrids of rose (Front page cover) have a much higher number of petals. Hybrid roses do have a very elegant appearance while they are in the stage between buds and being fully open. It would not be at all fair to call fully-open roses unattractive but the early stages of opening are the ones with the greatest visual appeal.

In addition to the roses, many other cultivated ornamentals enjoy the attention of plant fanciers. The horticultural industry has provided us with multi-petal or 'double-flowered' cultivars of Hollyhock, Petunia, Dahlia, Hibiscus, Tulip, Kerria, Marigold, and Poppy to name but a few. Many of these have been in cultivation for two or more centuries and sometimes their provenance is obscure. Two of our common wild species that are commercially available as double-flowered types include Bloodroot (*Sanguinaria canadensis*) and Yellow Marsh Marigold (*Caltha palustris*).

Although we may regard plants with abnormal numbers of leaves, petals or other structures as freaks or make fun at their apparent lack of math skills, a much greater achievement among plants is that they maintain such consistency of form across the species. While there may be some minor differences in size or shape in the normal structure, it is truly amazing that these structures remain virtually identical across millions or billions of leaves or flowers. We should remain in awe of how the genetic blueprint for any given species maintains nearly identical appearance (morphological) and physiology across the whole population. ✨

All photographs by the author. 📷

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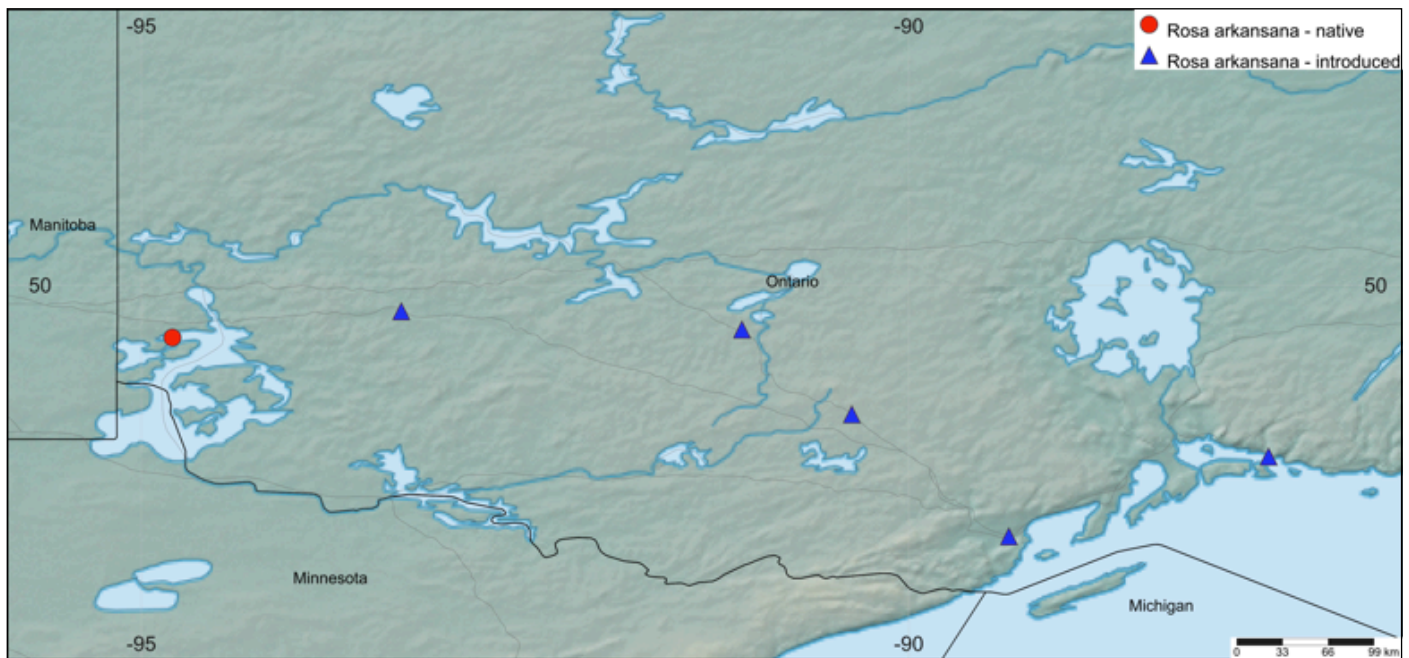
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## *An update on the status of Prairie Rose (Rosa arkansana) in Ontario*

*By Michael Oldham*

In the Fall 2008 issue of the FBO Newsletter two articles appeared concerning the status of Prairie Rose (*Rosa arkansana*) in Ontario. In one article, Joe Johnson discussed a 1984 report of Prairie Rose from the Bruce Peninsula, a first for the province, which was recorded during a field trip associated with the first meeting of the Field Botanists of Ontario at Red Bay Lodge (Johnson 2008). Joe provided evidence that this report was in error and presumably based on atypical Prickly Rose (*R. acicularis*) which was present at the same site. In the second article, I reported on the presence of two nearby stands of Prairie Rose near Tupperville, Chatham-Kent County, where first found by Ross Brown and Allen Woodliffe in 1996, and two additional populations in northwestern Ontario in Thunder Bay and Kenora Districts where found by myself and Wasyl Bakowsky (Oldham 2008). Since these populations were all found along railway lines and associated with weedy species I concluded that Prairie Rose was a rare but established introduction in the province along railways. Since 2008 additional information on Prairie Rose in Ontario has come to light and the purpose of this article is to provide an update to the status of the species in the province.



Distribution of Prairie Rose (*Rosa arkansana*) in Ontario.

While conducting botanical surveys in northwestern Ontario between 2000 and 2008 Wasyl Bakowsky and I encountered six *Rosa arkansana* populations. Five of these populations occurred along railway lines (light grey lines on the figure above) in disturbed ground growing with weedy associates, but most exciting was one population growing on a rocky, south-facing slope on Victoria Island in Lake of the Woods. This population seemed certainly native and grew in an intact natural vegetation community with other rare and characteristic western prairie species (e.g., *Agastache foeniculum*, *Artemisia frigida*, *Carex inops*, *Carex saximontana*, *Carex torreyi*, *Dichanthelium perlongum*, *Drymocallis arguta*, *Hesperostipa spartea*, *Koeleria macrantha*, *Muhlenbergia racemosa*, *Packera pseudaura*, *Pascopyrum smithii*, *Ranunculus rhomboideus*, *Woodsia oregana*, and others) and well away from any obvious sources of introduction. A flowering specimen documenting this population (M.J. Oldham #35603) is deposited in the Missouri Botanical Gardens herbarium (MO) and has been verified by rose taxonomist Walter Lewis.

In 2010 Sam Brinker and I thought we had discovered another Prairie Rose population in southwestern Ontario when we found a rose colony along an abandoned railway line at West Lorne Woods in Elgin County. The population seemed to be an introduction as it was growing in the cinders of the abandoned railway and it appeared to be *Rosa arkansana* so we collected a voucher specimen (M.J. Oldham #37357 at DAO, MO, NHIC).

Because roses can sometimes be tricky to identify I have been sending *Rosa* specimens to North America's foremost expert on the genus and senior author of the Flora of North America *Rosa*

treatment (Lewis *et al.* 2014), Dr. Walter H. Lewis of the Missouri Botanical Garden. One of the reasons roses can be hard to identify is because some of the species hybridize with others. These hybrids can be difficult to detect since they usually combine the characteristics of their parental species. Based on examining specimens from the two southwestern Ontario *Rosa arkansana* populations Dr. Lewis determined both to be hybrids. Not only did he identify specimens from both populations as hybrids, but they were hybrids with different parentage. The original Tupperville (Chatham-Kent) population was identified as a hybrid between *Rosa arkansana* and *Rosa woodsii* (a western species not known from Ontario) and the West Lorne Woods (Elgin) population was identified as a *Rosa acicularis* X *Rosa arkansana* hybrid.

In 2016, Lewis published a paper on nomenclatural novelties in North American roses in which he described and named twelve new hybrids (Lewis 2016), including the two *R. arkansana* hybrids from southwestern Ontario. Lewis named the *R. acicularis* X *R. arkansana* hybrid as *Rosa Xharmisiana*, after Vernon H. Harms, a prominent Saskatchewan botanist with a strong interest in roses of the Canadian prairies. I was very honoured when Dr. Lewis named the Chatham-Kent County *R. arkansana* X *R. woodsii* hybrid as *Rosa Xoldhamii*, in recognition of my efforts at documenting *R. arkansana* in Ontario and the many *Rosa* specimens I'd sent him over the years.

Among the twelve *Rosa* hybrids described by Lewis in his 2016 paper are four others that are known from Ontario. *Rosa Xgilmaniana*, a hybrid between *R. blanda* and *R. carolina*, has been collected at two sites on Pelee Island, Essex County, by Sam Brinker



and myself. Lewis (2016) cites a specimen of *Rosa Xhainesii* (*R. blanda* X *R. virginiana*) from Point Abino, Niagara Regional Municipality, collected by J. K. Small in 1896. *Rosa Xhodgdonii* (*R. nitida* X *R. virginiana*) is reported from Ontario by Lewis (2016) though he does not cite any actual specimens. *Rosa Xper-axeliana* (*R. acicularis* X *R. blanda*) is reported from two sites in Sudbury District and from the type locality which is on Sable Island Provincial Nature Reserve in Lake of the Woods, where I collected the type specimen in 2008 with Sam Brinker and Wasyl Bakowsky (see right).

Ontario botanists should be on the lookout for *Rosa arkansana*, which is similar to *R. acicularis* (Prickly Rose) and *R. blanda* (Smooth Rose), both widespread and common species in the province. From *R. acicularis* it can be distinguished by its usually stipitate-glandular sepals (typically glabrous in *R. acicularis*) and from *R. blanda* by its prickly upper leafy branches (typically few or no prickles in *R. blanda*). A useful field character is that *R. arkansana* usually has 9 to 11 leaflets while *R. acicularis* and *R. blanda* have 5 to 9 leaflets (with 9 leaflets typically only on younger vigorous shoots). Rose plants that do exactly fit one of the known Ontario species may be interspecific hybrids. ✱

If anyone would like a pdf copy of the 2008 FBO Newsletter articles on *Rosa arkansana* or Walter Lewis' 2016 article on *Rosa* hybrids, feel free to contact me.

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The type specimen of *Rosa Xper-axeliana* collected on Sable Island, Lake of the Woods, Ontario (Lewis 2016).

The Round-leaved Greenbrier (*Smilax rotundifolia*) is a plant species listed as 'Threatened' under the *Species at Risk Act*. This wood-climbing vine has oval- to heart-shaped leaves and woody stems that are armed with prickles. In Ontario, this species can be found in Essex County, Norfolk County and the Niagara Region in moist deciduous forests typically dominated by Red Maple, Red Oak or Pin Oak trees.

High intensity logging, alterations to the moisture regime, and habitat loss and fragmentation are identified as major threats to the Round-leaved Greenbrier's survival. During the 60-day consultation period now underway, Environment and Climate Change Canada (ECCC) is seeking any information you may have about the species and its needs, as well as threats to the species or its habitat. ECCC is also seeking your views on the conservation and protection measures proposed in the recovery strategy.

You are invited view the document and provide your comments online at [www.sararegistry.gc.ca](http://www.sararegistry.gc.ca) (click on **Get Involved – Public Consultations**).



Photos: S.J. Baskauf.

Just released by the Carolinian Canada Coalition and Ontario Ministry of Natural Resources is a "List of the Vascular Plants of Ontario's Carolinian Zone (Ecoregion 7E)" which can be downloaded from [https://www.sse.gov.on.ca/sites/MNR-PublicDocs/EN/ProvincialServices/List%20of%20the%20Vascular%20Plants%20of%20Ontario%27s%20Carolinian%20Zone\\_Final\\_June\\_7\\_2017\\_2.pdf](https://www.sse.gov.on.ca/sites/MNR-PublicDocs/EN/ProvincialServices/List%20of%20the%20Vascular%20Plants%20of%20Ontario%27s%20Carolinian%20Zone_Final_June_7_2017_2.pdf)

*This list contains information on 2,545 vascular plants known from Ontario's Carolinian floristic zone (Ecoregion 7E), including which ones are native to the area and which are introduced from elsewhere. Also indicated is whether each plant is restricted in its Ontario distribution to the Carolinian Zone or occurs elsewhere in the province. Legal status as a species at risk provincially and nationally and provincial conservation rank (S-rank) as determined by the Ontario Natural Heritage Information Centre are provided. Rarity in the Carolinian Zone is indicated as well as status in each of eleven areas within the zone (mostly counties and regional municipalities). Scientific, English, and family name is provided for each species, with synonyms and notes provided for many. It is hoped that this list will support efforts to conserve and restore native species and natural habitats in the Carolinian Zone.*



Members of FBO will be saddened to know of the passing of long-time member Irene McIlveen on June 25, 2017 after a lengthy illness. She was a regular participant on field trips, especially in the earlier years. She acted as the Field Trip Coordinator in 1993 and 1994. Among other things, she was a highly talented artist completing mainly paintings and sketches of botanical subjects (such as the one on the left). She was a frequent contributor of line drawings for early editions of the FBO Newsletter. She will be truly missed by all that knew her.