WINTER 2014

FIELD BOTANISTS OF ONTARIO

NEWSLETTER

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President's Message

In October we received a copy of the member-sponsored illustration of Barren Strawberry, Waldsteinia fragarioides, from Nancy Morin of the "Flora of North America" office in California, along with an appreciative letter. The drawing is displayed in this issue. It was a modest donation, but it is through contributions like this that significant projects like the "Flora of North America" are possible. An impressive number of authors, reviewers, editors, artists and donors have contributed to this project.

Ours is an organization of people who give their time and resources to the FBO: executive members, trip leaders, event organizers, trip reporters, authors of newsletter articles, car poolers, financial donors and those who share their knowledge on field trips. If you have enjoyed our outings, learned about some aspect of field botany from a leader or another member, or appreciated the content in the newsletter, please think about how you can give back to our organization and to the conservation community. We have had an excellent response to our call for trip reports for the newsletter and I am confident this will continue. You may be interested in taking on the challenge of leading a field trip to an area you know well, write an article about your research , volunteer for an executive position, or make us aware of a conservation issue that we can have an influence on. This is how the Field Botanists of Ontario will continue to provide enjoyable, informative outings and workshops and have a positive impact in the conservation scene in Ontario.

If you are in the doldrums about the upcoming winter with few opportunities for botanizing, you can look forward to another of our very-popular winter woody plant workshops, to be held in the Guelph area in the New Year. Details will follow soon. It is one of many interesting events we are planning for 2015. There will be visits to tried and true locations and a few surprises as well.

Best wishes for the holiday season,

Mike McMurtry

On the cover: Fasciation of Fireweed (*Chamerion angustifolium*), Thessalon, 2006, photo by Bill McIlveen.

Sidebar artwork: Fireweed (*Chamerion angustifolium*) - "normal" plant.

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**

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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.

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

Editor's Note

Your editor had initially planned to test your botanical knowledge by not revealing the name of the pink wildflower on the cover page, and instead giving you a few clues as to what species the severely twisted, flat-stemmed plant might be. But, the fruits being too obvious, he gave up on the idea. Still, it is a very unusual specimen indeed and no wonder that it caught the photographic eye of Bill McIlveen. In his most interesting article Bill elaborates on the causes (unknown, in the final account) of this morphological phenomenon and gives examples of several other species prone to develop it.

Our usual trip reports in this issue take you on a journey through space and time, literally. The Ojibway Prairie in Windsor has a formidable competitor in the Spring Garden Prairie Complex. We went there to explore its great flora, even more spectacular in the fall, and Bill brings back the events of the day. While the prairies particularly excel through their wildflower showcases, the FBO did not forget their much less flamboyant relatives - the graminoids (grasses, sedges, rushes, bulrushes, spikerushes, etc.). Steve Varga took a contingent of interested folks on a tour of these interesting plants, with Pat Deacon documenting the findings.

As for that journey back in time, we have a report by George Bryant in which he documents wildflower displays (plants' flowering peaks), as meticulously recorded by the author over some past 50 years. Probably all of us can say when and where certain species generally reach their blooming pinnacle, but George put all these precise records together in one package. However, 50 years is nothing compared to the long evolutionary history of ferns and fern allies; although not explicit in Nadine Price's report on the fern-oriented trip to Parry Sound, the participants of that outing essentially looked at many "living fossils", the grandest of them being the otherwise common Osmunda claytoniana, apparently unchanged since the Triassic!

The AGM in Windsor was not only the occasion to discuss formal matters but also to meet friends and to acknowledge contribution of long-time members. Few of them can match the accomplishments of Dorothy Tiedje, and so the FBO was proud to award her our annual John Goldie Award. A tribute to Dorothy and her late husband John is included in this issue.

All the best to Dorothy from all of us and see everyone next year.

Chris Zoladeski

Field Trip Reports

Autumn in the Spring (Garden)

7 September, 2014

By Bill McIlveen

This field trip of nine hearty souls was ably led by Russ Jones who grew up in the area and was therefore quite knowledgeable about the habitat and all of its inhabitants. The trip started with a short visit to the Titcombe Park, then the major part of the day was spent in the Spring Garden Complex.

Titcombe Park was used by the City of Windsor as a baseball playing field for many years. Its importance as a natural area was not realized as long as the grass was kept mowed; however, when staff from the City of Windsor were on strike several years ago, the grass was left to

Rough Blazing-star (*Liatris aspera*).
Photo: B. McIlveen.

grow. As a consequence, natural vegetation developed from the seed bank and from suppressed plants. What developed was a whole suite of prairie species including a number of rare ones. At that point, it was realized that the field could no longer be used in the previous manner and so the area has reverted to savannah habitat. It is not a great surprize that the site would be so ecologically important for it lies immediately adjacent to the Ojibway Prairie Provincial Nature Reserve.

The new prairie now supports the growth of Big Bluestem (*Andropogon gerardii*), Virginia Mountain Mint (*Pycnanthemum virginianum*), Willowleaf Aster (*Symphyotrichum praealtum*), Dense Blazingstar (*Liatris spicata*), Yellow Indian Grass (*Sorghastrum nutans*), Ridell's Goldenrod (*Solidago riddellii*), Field Thistle (*Cirsium discolor*), Colicroot (*Aletris farinosa*), Nodding Ladies'-tresses (*Spiranthes cernua*), Acuminate Panic-grass (*Dichanthelium acuminatum*), Slender Fragrant Goldenrod (*Euthamia caroliniana*), and Missouri Ironweed (*Vernonia missurica*), among others. Several non-native species such as Autumn Olive (*Elaeagnus umbellata*) are also present on the site and will require management.

After the visit to Titcombe Park, we crossed the road to the much larger Spring Garden Natural Area, now owned by the City of Windsor. Some parts of it are wooded with large Black Oaks (*Quercus velutina*), Pin Oak (*Quercus palustris*), and Sassafras (*Sassafras albidum*). Other parts are open, with dry sandy areas and some moist areas. The wooded sections have well developed understory vegetation while other parts have been partly cleared in the past. Species seen in the wooded sites included Indian-pipe (*Monotropa uniflora*), Virginia Stickseed (*Hackelia virginiana*), Swamp Agrimony (*Agrimonia parviflora*), Early Lowbush Blueberry (*Vaccinium pallidum*), and Pignut Hickory (*Carya glabra*). The open sites supported Gray-headed Prairie Coneflower (*Ratibida pinnata*), Eastern Stiff-leaved Goldenrod (*Solidago rigida*), both Dense and Rough Blazing-stars (*Liatris aspera*), Arrowfeather Three-awned Grass (*Aristida purpurascens*), Purple Lovegrass (*Eragrostis spectabilis*), Round-head Bush-clover (*Lespedeza capitata*), and Leathery Grapefern (*Sceptridium multifidum*) in the drier sections. In the moister areas there were many species noted earlier in Titcombe Park. As well, Ohio Spiderwort (*Tradescantia*

Field Thistle (*Cirsium discolor*). Photo: B. McIlveen.

ohiensis), Large Purple Agalinis (*Agalinis purpurea*), Climbing Prairie Rose (*Rosa setigera*), Grass-leaved Rush (*Juncus marginatus*), Brownish Beakrush (*Rhynchospora capitellata*), Swamp Lousewort (*Pedicularis lanceolata*), and Trailing Wild Bean (*Strophostyles helvula*) were seen.

The Spring Garden Natural Area has at least three American Chestnut (*Castanea dentata*) trees. Russ was aware of two rather healthy individuals. Stem diameter measurement showed the largest to be 20.9 cm while the nearby one had two separate stems of 12.7 and 9.5 cm respectively. A third tree was located by Bill McIlveen. It had been pointed out to us on a Field Botanist trip several years ago. The tree consists of a number of small stems though all but one had succumbed to the Chestnut Blight in the intervening years. The still-living stem of that one was about 3 cm in diameter.

The trip was not strictly focused on plants. Indeed, we were able to see other types of organisms that make this site ecologically diverse. In total, my list of butterflies for the day totalled ten species including two Monarchs. The list of moths included a large hairy caterpillar of Spotted Apatelodes (*Apatelodes torrefacta*) and a caterpillar of the Small Purplish Gray (*Anacamptodes humaria*) that was remarkably well-camouflaged as it matched the colour of the stems of the Willowleaf Aster on which it was feeding. We saw at least three mushroom species, including a highly toxic Destroying Angel (*Amanita bisporigera*), White Saddle (*Helvella crispa*), and a cluster of Stalked Stereum (*Cotylidia diaphana*). There were several spider species, two Eastern Garter Snakes, and a host of other insects. Most notable amongst the latter were three Great Spreadwing dragonflies (*Archilestes grandis*). Although there might have been a few more nearby, we quite possibly were witness to the entire Canadian population of the species within just a few square meters.

The foregoing is certainly not a complete list of all the species seen on the day of the visit but they do give some idea of the richness of the oak savannah sites in Windsor. The trip was enjoyed by all of the participants.

Steve Varga explains the graminoids

8 July, 2014

By Pat Deacon

A group of about a dozen botanists keen to refine their sedge identification skills descended upon the Lake Simcoe Lowlands on a gorgeous Sunday morning in July. This area was formed during the last glaciation and the presence of Lake Algonquin. The result was a landscape with a series of valleys formed by sub-glacial floodwaters which in turn created an impressive network of wetlands including the Holland Marsh. The two subwatersheds that we would visit that day, the Beaver River and Pefferlaw River, boast an impressive 32% and 43% natural cover, respectively (LSRCA 2012a, 2012b).

Our meeting point was just southwest of the small community of Blackwater on an abandoned railway. The railway was constructed in 1868 by the Toronto and Nipissing Railway Company to carry grain to Toronto distilleries and lumber to fuel the booming construction (YDHR 2014). The ultimate goal of connecting the railway to Lake Nipissing was never realized due to economic limitations and rugged terrain, and Coboconk in Kawartha Lakes became the northern terminus for the railway (YDHR 2014).

Our trip leader, Steve Varga, provided us with copies of his wetland sedge/rush/grass identification guide which proved quite handy on the trip and will no doubt be a great resource to refer to on future excursions. As the group assembled it became apparent that the fashion sense of a field botanist was in full effect. Some opted for swamp sneakers, a few tucked pants-in-socks, the scent of bug-spray lingered in the air and a selection of prized hand lenses adorned necks.

Our day started with a bang. Not fifty metres down the rail bed we headed down into an area of broad-leaved cattail (*Typha latifolia*) marsh to have a look. Feet squelching into the saturated organic soils we gathered around Steve who already had a sedge in hand. When Steve's interest is perked with an "Oh!" you know you've got something good. Our first sedge of the day was determined to be Hairy-fruited Sedge (*Carex trichocarpa*), ranked S3 provincially. This species is distinguished from Wheat Sedge (*Carex atherodes*) by its glaucous leaves and a thickened and strongly purple-red tinged leaf sheath apex versus leaves with long, spreading hairs and a brownish or sometimes red-spotted sheath apex (Michigan Flora Online 2011). Hairy-fruited sedge also resembles Lake-bank Sedge (*Carex lacustris*) which was observed later in the day. The differentiation between these

species is evident in the length of the perigynium teeth and the height of vegetative culms and hybrids are known to occur (Catling et al. 1989).

Occurring sporadically among the cattails was Blue-joint Grass (*Calamagrostis canadensis*). Discussion turned to identification of the American Common Reed (*Phragmites australis* ssp. *americanus*) from the introduced European Common Reed (*Phragmites australis* ssp. *australis*). The native common reed grows in scattered, open patches, and has shiny reddish to purplish lower stem internodes whereas the introduced species forms dense monocultures and has dull yellow-brown lower stem internodes (Michigan Flora Online 2011). Stands of the native common reed can be seen at the Minesing Swamp.

Surrounded by graminoids, plus a few forbs, the group discusses diagnostic features of awl-fruited sedge (*Carex stipata*). Photo: A. Dean.

Next, we observed Bearded Sedge (*Carex comosa*) which can be confused with Cyperus-like Sedge (*Carex pseudocyperus*). Both have reflexed perigynia but the perigynia of Bearded Sedge are longer and bifid meaning that the two perigynia teeth are divergent while the teeth of Cyperus-like Sedge are straight and shorter. Hybrids can occur between *C. comosa*, *C. pseudocyperus* and Porcupine Sedge (*Carex hystericina)*.

Moving into an area of Speckled Alder (*Alnus incana*) thicket we observed Fowl Bluegrass (*Poa palustris*) with its long white ligules, boat-shaped leaf tips and delicate looking inflorescence. Another common wetland grass, Ridged Mannagrass (*Glyceria striata*), grew nearby; Steve joked that the planar growth form of the leaves makes it ready-to-press.

Climbing back up onto the rail bed we noted large areas of the ditches dominated by Reed-canary Grass (*Phalaris arundinacea*) growing within the moist ditch, and a number of other introduced species growing among the rail ballast including Timothy (*Phleum pratense*), Smooth Brome (*Bromus inermis*), Quackgrass (*Elymus repens*) and Downy Brome (*Bromus tectorum*).

Farther down the railway we entered a hummocky Freeman Maple (*Acer* x *freemanii*) swamp. Jumping right into the Ovales group of sedges we determined our first specimen to be Crested Sedge (*Carex cristatella*). Crested Sedge can be distinguished from Necklace Sedge (*Carex projecta*) and Blunt Broom Sedge (*Carex tribuloides*) by its stiffly spreading perigynia. Also, the pistillate scales are hidden in Crested Sedge whereas they are evident in Necklace Sedge and Blunt Broom Sedge (Michigan Flora Online 2011).

We passed through a patch of Awl-fruited Sedge (*Carex stipata*) identifiable by its elongated mace-like inflorescence, fleshy, triangular stems and thin, wrinkled leaf sheaths. (Smooth-sheathed Sedge (*Carex laeviwaginata*) has thicker leaf sheaths which are smooth.)

After enjoying lunch on the rail bed beneath a White Elm (*Ulmus americana*) we proceeded to explore other areas of wetland farther south. Wading into another area of marsh we encountered Rice Cutgrass (*Leersia oryzoides*) armed with sharp barbed leaves. With its ability to inflict small lacerations, summer after summer, this grass is the bane of my career as a hand model.

Our next stop was near Leaskdale where we explored a road right-of-way rich with forbs and graminoids. It appeared that the regular grubbing beneath the hydro lines had allowed the herbaceous species to flourish in the absence of competition from woody species. A small colony of Tussock Sedge (*Carex stricta*) was present; the dense tussocks comprised of narrow bluish leaves with red stem bases. The leaves of tussock sedge

produce a ladder-like formation of fibers when torn apart whereas Water Sedge (*Carex aquatilis*) does not exhibit these fibers when the leaves are torn. The native Alder-leaved Buckthorn (*Rhamnus alnifolia*) was spotted growing along a fenceline. I find that at first glance the species resembles New Jersey tea (*Ceanothus americanus*) as both belong to the family Rhamnaceae; however, they are situated at opposite ends of the soil moisture spectrum with Alder-leaved Buckthorn preferring wet to mesic soil conditions.

A population of Dudley's Rush (*Juncus dudleyi*) was identified growing within the ditch. This species can be distinguished from Path Rush (*Juncus tenuis*) by leaf auricles. The auricles, found at the leaf sheath apex, are fine and membranous in Path Rush and cartilaginous and somewhat rounded in Dudley's Rush. Dudley's rush also tends to grow taller than Path Rush.

Golden Sedge (*Carex aurea*) was observed with its characteristic bright orange, rounded nutlets. The crunchy fruits are edible and taste surprisingly sweet. A patch of spikerush with bright red stems at the base was found growing in a muddy flat which was determined to be Red-stemmed Spikerush (*Eleocharis erythropoda*).

In a last-ditch attempt (literally) to add to our species list prior to wrapping up for the day we were able to locate another easy overlooked species, Toad Rush (*Juncus bufonius*) as well as Bristle-stalked Sedge (*Carex leptalea*), which has perigynia resembling rice grains that are appressed to the stem. It can be difficult during a graminoid-themed outing to turn a blind eye to the broad leaved species and both Golden Groundsel (*Packera aurea*) and Swamp Fly Honeysuckle (*Lonicera oblongifolia*), rare in Durham County, were spotted in the last few moments of the trip.

It was great to spend a day immersed in high quality wetlands identifying sedges, rushes and grasses and sharing tips and tricks on how to differentiate similar species. Steve mentioned that in general, within southern Ontario, upland sedges are best identified in mid to late June while wetland sedges are best identified in late June into early July. Mark your calendars!

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Fern heaven in Parry Sound

23 August, 2014

By Nadine T. Price

I recently joined the Field Botanists of Ontario and had the opportunity to attend my first field trip on August 23, 2014. We travelled to Parry Sound on a lovely Saturday morning to embark on a day filled with observing, identifying and learning all about ferns, clubmosses and horsetails of the Parry Sound area. Rick Snider and George Bryant led the trip, with assistance from fern expert Jim Goltz. They led this trip in honour of the late Don Britton, co-author of Ferns of Canada, who was a trip leader to the same location in 1987. Our leaders did a marvelous job of sharing their knowledge of ferns and their allies with us.

The first site that we visited in the morning was by Haines Lake in a rich wet woods area. At this site we saw an unusually large number of fern species as well as a few horsetail species. One of the first ferns our leaders pointed out to us was the Northeastern Lady Fern (*Athyrium filix-femina*), identified by the arched and tapered shape of the fronds, and by the curved shape of the sori looking like a lady's eyebrows. Another interesting species, the

Rick Snider and his Northern Beech Fern (*Phegopteris connectilis*). Photo: J. Lane.

Northern Beech Fern (*Phegopteris connectilis*), can be identified, in part, by the two bottom pinnae, which point downward unlike the rest of them higher up on the frond. Rock Polypody (*Polypodium virginianum*), unlike many of the other fern species we saw, almost always grows on rock boulders and can also be distinguished by the frond pattern that progressively widens from the top to the bottom of the plant. Some other species we saw at this site included: Silvery Spleenwort (*Deparia acrostichoides*), Common Oak Fern (*Gymnocarpium dryopteris*), Marginal Wood Fern (*Dryopteris marginalis*), Ostrich Fern (*Matteuccia struthiopteris*),

Looking for ferns in all directions. Photo: B. Crowley.

Sensitive Fern (*Onoclea sensibilis*), Interrupted Fern (*Osmunda claytoniana*), Royal Fern (*Osmunda regalis*), New York Fern (*Parathelypteris noveboracensis*), Christmas Fern (*Polystichum acrostichoides*) and Bracken Fern (*Pteridium aquilinum*). Of the horsetail species, we saw Field Horsetail (*Equisetum arvense*), Water Horsetail (*Equisetum fluviatile*), Common Scouring-Rush (*Equisetum hyemale*) and Woodland Horsetail (*Equisetum sylvaticum*).

We next headed to Rose Point Trail to see two other interesting fern species of small stature: Mackay's Brittle Fern (*Cystopteris tenuis*) and Rusty Woodsia (*Woodsia ilvensis*), a fern noted for having many old stem bases each of the same length. The old fronds of this plant had broken off at a dark node towards the bottom of the stems.

After having lunch near our original meeting spot, we travelled to an old sand pit area on Portage Lake Road to see some clubmosses. Rick noted here that the Blue Ground-cedar (*Diphasiastrum tristachyum*) develops a blue cast as it matures and has both sun and shade forms of the same species. We also saw Running Clubmoss (*Lycopodium clavatum*) at this site, identified by the branched pattern and a small hair at the tip of each leaf. Most notable was the One-cone Clubmoss (*Lycopodium lagopus*); a species seldom encountered by southern Ontario botanists, distinguished by branches that are more upright, fewer in number and less spread out than branches of Running Clubmoss. In addition, the fertile stems of this species have single spore-bearing cones at the top rather than two or more found on Running Clubmoss. We also saw Hickey's Clubmoss (*Dendrolycopodium hickeyi*) at this site.

We then headed along the same road to a small marsh at the edge of McKechnie Lake. Here, we saw Cinnamon Fern (*Osmundastrum cinnamomeum*), identified by the cinnamon-coloured rusty tuft of hair found at the base of each pinnae on the plant. We also saw Spinulose Wood Fern (*Dryopteris carthusiana*) and *D. triploidea*, a hybrid between Spinulose Wood Fern and Intermediate Wood Fern. Additionally, we saw Evergreen Wood Fern (*Dryopteris intermedia*), Eastern Marsh Fern (*Thelypteris palustris*), Cutleaf Grapefern (*Sceptridium dissectum dissectum*), Flat-branched Tree-clubmoss (*Dendrolycopodium obscurum*) and Northern Bog Clubmoss (*Lycopodiella inundata*). Of particular note was Virginia Chain Fern (*Woodwardia virginica*), a seldom-seen Atlantic Coastal Plain species concentrated in Muskoka. This fern species only grows in marshes and stands out from the rest due to the easily noticed jet-black stalk.

At our final site, by the Ministry of Natural Resources and Forestry White Pine Seed Orchard, our trip leaders pointed out a number of interesting species. They noted how the Leathery Grapefern (*Sceptridium multifidum*) is always found growing very close to the ground. They also pointed out how Stiff Clubmoss (*Spinulum annotinum*) feels spiky to the touch and Variegated Horsetail (*Equisetum variegatum*) has white edges on the leaves near the cones seen at the top of the plant. At this site we also saw Eastern Hay-scented Fern (*Dennstaedtia punctilobula*), Crested Wood Fern (*Dryopteris cristata*), Boott's Wood Fern hybrid (*Dryopteris boottii* = *D. cristata* x *D. intermedia)*, both forms of Cutleaf Grapefern (*Sceptridium dissectum obliquum* and *Sceptridium dissectum dissectum*), Round-branched Tree-clubmoss (*Dendrolycopodium dendroideum*), Southern Ground-Cedar (*Diphasiastrum digitatum*) and Shining Firmoss (*Huperzia lucidula*).

By the end of the day I felt like I had gained an incredible amount of knowledge about the fern, clubmoss and horsetail species of the Parry Sound area. In total, we saw 24 species of

ferns with both forms of *Sceptridium dissectum*, 2 fern hybrids, 10 species of clubmosses and 5 species of horsetails. According to Rick, there are few locations in Ontario to see as many species of ferns and their allies as we did within short distance to each other, in the time allotted. Rick, George and Jim did an incredible job of teaching us about this fascinating group of plant species and I could not have asked for a better introduction to the Field Botanists of Ontario.

Botanical roots

Fascination with fasciation

By W.D. McIlveen

Every once in a while, people looking at plants will come upon plants that exhibit unusual growth form. There are several different types of unusual growth possible but the specific subject of this account is that known as "fasciation".

The condition of fasciation typically involves a change in the appearance of normal plant tissue due to an alteration that happens at the growing point or meristem. Instead of growing at a single point to produce a cylinder of new tissue, the dividing cells are arranged in a crescent or in an elongated group. As these meristematic cells continue to divide and grow, the resulting growth forms a flattened, ribbon-like structure that, except for the shape, is much like normal tissue. Often the affected tissue is quite flat but sometimes it is curved or contorted into a crested or comb arrangement. Almost any tissue (shoots, roots, fruits and flowers) can be affected but shoots and flowers are the ones most often noted. The general appearance of the fasciation remains quite consistent across most affected species despite the fact that the list of species displaying it is well over 100 and occurs in many different plant families.

Double-faced flower of Sneezeweed (*Helenium autumnale*), Acton, 2014. Photo: B. McIlveen.

Possible causes of fasciation have been attributed to viruses, bacteria, fungi, genetic changes and environmental factors. In reality, the cause of the vast majority of occurrences is simply unknown. Whatever its origin, fasciation acts through an alteration in the normal hormonal controls within the meristem. A commonly-ascribed factor is an infection by the bacterium *Rhodococcus fascians* (formerly *Corynebacterium fascians*). However, the bacterium cannot always be isolated from the affected tissue, leaving the true cause in doubt. It lives on the surface or in the surface layers of the host tissue and causes dormant buds to commence growth. The bacterium can survive in soil for some time and that will allow the condition to persist in an area from year to year.

Fasciation of Blue Vervain (*Verbena hastata*), garden, Georgetown, 2014. Photo: B. McIlveen.

In the majority of cases, fasciation has very little economic or ecological impact on the affected species, primarily because the frequency of occurrence is so low. In some cases, there is a positive economic influence because the affected tissue has a decorative value for horticultural purposes. To be useful, such fasciation has to remain constant during propagation of the plant species, whether vegetatively or via seed. This generally requires that the feature is under genetic control. The most often cited instances of a desirable fasciation is that of cockscomb *Celosia* (family Amaranthaceae), certain cultivated cacti, and the Japanese Fantail Willow (*Salix sachalinensis*). Plant cultivars with fasciation might be designated as 'monstrosa' and 'cristata'.

Ontario's wildflower spectacles

By George Bryant

In *The Flora of Manitoulin Island* (2000, University of Waterloo) J. K. Morton and J. M. Venn wrote:

> *The display of wild flowers along roadsides, in abandoned gravel pits and on wasteland is one of the attractive features of Manitoulin Island. It provides a rich kaleidoscope of colour from May until October; most of the colour comes from weeds, the majority of which are ubiquitous and common. Few of these weeds are native to the region but without them the landscape would be relatively drab and colourless for much of the year.*

Arguably, the most attractive views in Ontario include Lake Superior shorelines, the Niagara Escarpment (particularly along the Bruce Peninsula) and Muskoka's rocky shorelines backed by majestic White Pines. Granted, these landscapes cannot compete with the dramatic views in the Canadian Rockies, but – rocks, trees and water are only one component of beautiful landscapes. Another aspect, often underappreciated although not by Charles Darwin, is vegetation and plants. In *The Voyage of the Beagle* he advises: "A traveller should be a botanist for in all views, plants form the chief embellishment." I try to follow Darwin's dictum and have recorded over the years many roadside wildflower concentrations.

The colour and texture of our scenery generally improves during the growing season from April to October. First, come the woodland splashes of colour in late April and May created by spring ephemerals such as White Trillium (*Trillium grandiflorum*) and Yellow Trout lily (*Erythronium americanum*). Then, for almost two months, new leaf growth predominates —an early June drive along back roads provides a monochromatic verdant green. Towards the end of June, wildflowers again become evident, the trend continuing until September when asters and goldenrods generate a kaleidoscope of colour along roadsides. In late October, earth colours become dominant and with the first heavy frost most plants turn brown. Within a few weeks this is replaced by unremitting white which may seem to last a perpetuity but is only about four months (admittedly longer last winter!).

Here is a list of some more impressive plant displays that I saw and recorded over the last 50 years in Ontario, which includes both native and non-native plants, with a few ornamentals. (Muskoka receives some emphasis as it is where we spend our summers.)

May 4: White Trout-lily (*Erythronium albidum*)
Sheridan Point, Pelee Island.

May 10: Wisteria (*Visteria* sp.) and Redbud (*Cercis canadensis*)
York Rd. from Queenston to St. David's. The old Upper Canada Road follows the base of the Niagara Escarpment, fostering a warmer microclimate which supports a profusion of flowering shrubs reminiscent of Virginia.

May 11: Wild Geranium (*Geranium maculatum*) and Dwarf Ginseng (*Panax trifolius*)
Kopegaron Woods, Wheatley. This little woodlot has been spared the onslaught of White-tailed Deer, the bane of spring ephemerals. If you are lucky, you might also witness a fall-out of spring migrant warblers only a metre above the wildflower carpet.

May 16: Canada Violet (*Viola canadensis*)
Bruce Trail descending Mount Nemo to Walker's Line. When hiking the Bruce Trail, much time is spent looking down to avoid tripping hazards. Inadvertently, this lets us botanize.

May 20: Wild Columbine (*Aquilegia canadensis*)
Honey Harbour. Some of the rock ridges are covered in masses of this pink and white beauty.

May 20: Three-leaved False Solomon's-seal (*Maianthemum trifolium*) and Bog Laurel (*Kalmia polifolia*)
Muldrew Lake Rd., Muskoka. Normally, you need to get your feet wet to appreciate wetland plants but at one spot the cottage road transects a bog allowing close viewing of these pink and white acidophiles.

May 25: Tall Buttercup (*Ranunculus acris*)
Highway 169 north of Gravenhurst. A Eurasian introduction, this species is toxic to and therefore avoided by cattle. A heavily grazed pasture was a mass of yellow.

May 24: Common Lilac (*Syringa vulgaris*)
Prince Edward County Lilac Festival. Lilacs love limestone and hence the profusion throughout The County.

May 30: Ragged Fringed Orchid (*Platanthera lacera*) and Dragon's-mouth (*Arethusa bulbosa*)
Sifton (Byron) Bog. Update: sadly, *Arethusa* has now been extirpated from the bog which is now surrounded by apartment towers of London.

June 4: Venus's Slipper (*Calypso bulbosa*), Common Butterwort (*Pinguicula vulgaris*), Fringed Polygala or Gay-wings (*Polygala pauciflora*), Dwarf Lake Iris (*Iris lacustris*)
All on Bruce Peninsula.

June 7: Moccasin Flower or Stemless Ladies' Slipper (*Cypripedium acaule*)
St. William's. During an FBO outing to Norfolk County in 1987, we saw 10,000 including some white varieties. This stand is now much reduced, probably as a result of White-tailed Deer.

June 10: Wild Ginger (*Asarum canadense*)
Winona Conservation Area. Another Bruce Trail discovery, this rich woods is located between Fifty Rd. and Woolverton Rd. As a bonus, I heard Winter Wren, a boreal species, and Hooded Warbler, a Carolinian species, a strange conjunction indicating the high quality of the forest.

June 12: Prairie Smoke (*Geum triflorum*)
Wylie Rd., Victoria County; Wylie Rd near Lake Dalrymple transects Carden Alvar. When the wind is blowing, as it almost always is, the fields of Prairie Smoke become pink waves.

June 24: Lance-leaved Coreopsis (*Coreopsis lanceolata*), Orange and Yellow Hawkweeds (*Hieracium piloselloides*, *H. aurantiacum*)
Highway 400. Coreopsis from the prairies and hawkweeds from Europe provide an assemblage of yellow and orange bloom along the

shoulders of Highway 400 north from Honey Harbour, peaking around Parry Sound but continuing all the way to Sudbury.

July 3: Cloudberry (*Rubus chamaemorus*)
Moosonee. Given the diversity and quality of its flora, Moosonee is the most under-botanized area of the province. Cloudberry (Bake-Apple in Newfoundland) carpets the quaking bogs through which the Polar Bear Express makes its way.

July 6: Butterfly-weed (*Asclepias tuberosa*)
Altmann Rd., Walpole Island. Orange flowers are special—of the 418 colour-coded pages in the classic Peterson Field Guide to Wildflowers, only two are devoted to them. One of many reasons why any day with a view of Butterfly-weed is a special day.

July 8: Pickerelweed (*Pontederia cordata*)
Rankin River, Bruce County. One of our few (maybe only) native plants to occur as far south as Argentina but surely the displays there cannot match those in many of our shallow lakeshores and meandering rivers.

July 9: Common Blackberry (*Rubus occidentalis*)
Axe Lake Rd., Huntsville. You may not think of blackberry as creating an aesthetic reward but the bracken field behind an old cemetery was a profusion of tangled white blooms on this date.

July 9: Chicory (*Cichorium intybus*)
Tiny Marsh. Surely no plant can match the intense blue of chicory, one of many non-natives that add to our roadside landscapes.

July 10: Wild Thyme (*Thymus* sp.)
Highway 11 north of Orillia. A cemetery specialist, this non-native mint creates a lavender carpet along the road shoulders.

July 12: Orange Day Lily (*Hemerocallis fulva*)
South of Lindsay. The twelfth of July, an important day in the old Ontario calendar but now virtually forgotten, is commemorated by its trademark colour on road shoulders and pioneer gardens throughout central Ontario.

July 12: Blueweed (*Echium vulgare*) and Wild Bergamot (*Monarda fistulosa*)
Wylie Rd, Carden Alvar. The fields of waving Prairie Smoke are now replaced by a sea of blue Bugloss while pink Bergamot adorns road shoulders.

July 15: Cardinal-flower (*Lobelia cardinalis*)
Oxford County Rd. 19 near Otterville. A real black muck lover, this lobelia is abundant in swamps bordering the road for many kilometres.

July 17: Buttonbush (*Cephalanthus occidentalis*)
Muskoka Rd. 13 west of Torrance. An unusual shrub, a member of the coffee family with globular flower clusters, Buttonbush dominates the shores of Brandywine Creek as it transects the road just west of Torrance.

July 19: Hollyhocks (*Alcea* sp.)
County Rd. 8 east of Waupoos. Somebody once planted a row of Hollyhocks for one kilometre along the south shoulder and they continue to persist

July 25: Labrador Tea (*Rhododendron labradoricum*)
Jevins Lake, Gravenhurst, east of Highway 11. There are many acid bogs in Muskoka—they all have the white blooms of this heath.

Aug 2: Bouncing Bet (*Saponaria officinalis*)
Gravenhurst railroad. The unused railroad sidings south of Gravenhurst are a great place for butterflies and wildflowers. Patches of this Eurasian weed create a mass of pink, appropriate for a member of the Pink family.

Aug 10: Fall Dandelion (*Leontodon autumnalis*)
Highway 169 near Torrance. I did a double-take as I drove by the Torrance baseball field about 10 a.m. one morning. What was the bright yellow bloom covering the diamond? There are many dandelion look-alikes so I stopped, collected a sample and identified it later with a field guide. At 2 p.m., I drove by again—no sign of the flower—the individual flower heads had closed up completely!

Aug 20: Black-eyed Susan (*Rudbeckia hirta*)
Highway 12, Coldwater. This prairie native is orange, an unusual colour for temperate zone wildflowers. Although in June, you may see hundreds of fields covered in white Ox-eye Daisies (*Chrysanthemum leucanthemum*), very few are dominated by this similar-patterned composite sibling.

Aug 30: Goldenrods (*Solidago* spp.)
Torrance Barrens, Muskoka Rd. 13. There are about ten species of goldenrods in Muskoka, all readily distinguished. Grass-leaved (*Euthamia graminifolia*) and Rough Goldenrod (*Solidago rugosa*) are the most abundant species on the barrens. The other species also all occur but lack the showy display.

Sept 21: Asters (*Aster* spp.)
Muskoka. Asters can be white, pink, blue or purple with several species often intermixed creating a lovely mosaic. Three aster species are particularly noticeable in Muskoka. Flat-topped White (*Doellingeria umbellata*) covers some fields and is aptly-named. Arrow-leaved Aster (*Aster sagittifolius*) is brilliant white, has a distinctive narrow upright stance and dominates roadsides. Swamp Aster (*Aster puniceus*) is gangly with profuse blooms and creates gorgeous patches of blue in low-lying areas. Our most spectacular Ontario roadside views are saved for the last of the growing season. ✹

2014 John Goldie Award

By Bill McIlveen

In 2014, the Field Botanists of Ontario present the 8th John Goldie Award to Dorothy Tiedje. This award is given annually to an individual or organization whose efforts have made a significant contribution to field botany in the province of Ontario. The award honours John Goldie who conducted botanical surveys in Upper Canada and beyond in the early 1800s, mostly on foot.

Dorothy and her late husband, John Tiedje, have been members of the Field Botanists of Ontario since its creation in 1984 and were present at the first meeting at Red Bay that year. They thoroughly enjoyed the many FBO outings and workshops and the friends they made. Dorothy was on the FBO board at one time, with meetings in Toronto. She led at least five field trips for FBO including Walpole Island (1989), Ausable River (1992), Sarnia Howard Watson Trail (1995), and Port Franks (2005 and 2008).

It must be emphasized that Dorothy and John acted as a team for many of the botanical activities for which she is being recognized by FBO. The Goldie Award is not the first award that recognized their combined efforts. In 1999, they were given a Meritorious Service Award by Lambton Wildlife Incorporated and they were included on the Lambton Wildlife Incorporated President's Honours list three times. Dorothy served on the Board of Lambton Wildlife for many years and as president for one term. In 2007, she and John were given an individual Conservation Award by Carolinian Canada for their work. In 2009, the Lambton Woodlot Owners' Association gave them their yearly award.

Dorothy and John worked together for over 40 years to compile a complete inventory of the vascular plants in Lambton County. In that time they published 13 editions of that inventory [Tiedje, 2010]. That inventory served as the basis for contributions to the Guide to the Natural Areas of Lambton County [Catterson] in 2009 and to The Huron Shore Flyway report [Sarnia Urban Wildlife Committee] in 2007. During her field inventories, she made a number of significant plant discoveries, one of the most exciting of which was the discovery of a new genus of native grass for Canada, *Diarrhena obovata* which she found in 1988 in the Ausable River Valley, Lambton County [Oldham, 1995].

Dorothy poses for picture with her well-deserved award.
Photo: B. McIlveen.

Jane Bowles once said that John was good at spotting unusual plants, with Dorothy doing the collecting, preserving, identifying and cataloguing. Starting in 1963, (with Queen Anne's Lace), Dorothy created a herbarium of Lambton Co. vascular plants. They took a duplicate of each collection to UWO where Jim Phipps, personally, in Dorothy's presence, approved or corrected the ID. From all available records, and from their own collections, Dorothy compiled the list which John persuaded the computer to organize numerically as to plant families and alphabetically as to species within the families. John looked after the reproduction and printing. Dorothy also has a small collection of Lambton mosses, liverworts, and lichens.

Dorothy's contribution extended to helping students complete their thesis work. In 1988 she helped Pascale Rettien with her thesis on *Ulmus fulva* (*U. rubra*, Slippery Elm from the Hungry Hollow woodlot) for the Diplôme d'état de Docteur en Pharmacie at the Université D'Aix, Marseille. She worked with Nikki May on her M.Sc. on Volunteer Monitoring of Forest Restoration at the University of Guelph in 2004 by identifying many plants collected for that project. Also in 2004, she assisted Pak Kin Chan at York University with field work for a thesis related to the Karner Blue Reserve at Port Franks. That thesis was entitled: "Plant Communities in Oak Savannahs in Ontario: are we ready for reintroduction of the Karner Blue Butterfly (*Lycaeides melissa samuelis*)?". Dorothy and John were involved with hands-on efforts to aid FON/NCC volunteers remove the invasive Dog Strangling Vine (*Cynanchum nigrum*) at the Port Franks Forested Dunes Nature Reserve and to reduce the amounts of Knapweed on the Howard Watson Nature Trail in Sarnia.

Dorothy and John made at least 25 wildflower presentations, based on John's superb photographs. Dorothy inventoried and listed plants on the Howard Watson Trail, Canatara Park, and many other Lambton locations.

In April 2009, John and Dorothy donated the Tiedje Woods in Hungry Hollow to the Thames Talbot Land Trust. The 6.1-ha (15-acre) wooded property is located in the Ausable River Valley Area of Natural and Scientific Interest and the Ausable River Valley Carolinian Canada site. It has been certified as ecologically sensitive through the Eco-Gift Program administered by the Canadian Wildlife Service.

Dorothy Tiedje has made outstanding contributions in documenting Ontario plants, supporting the Field Botanists of Ontario and conserving natural places. The Field Botanists of Ontario is very pleased to recognize these accomplishments by honouring Dorothy with the 2014 John Goldie Award.

References:

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Tiedje, J, and D. Tiedje. 2010. Vascular Plants of Lambton County, Ontario. 14th Edit. Published by the authors. 66 pp.

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Local conservation group wins Ontario Nature award

"City of Kawartha Lakes Flora" recognized for leadership in the protection of nature

On June 21st 2014, Ontario Nature, a leading conservation organization, recognized the exceptional contributions to natural habitat protection made by six individuals and two groups. The award ceremony was part of Ontario Nature's 83nd Annual General Meeting and Gathering which took place at YMCA Geneva Park, located on the shores of Lake Couchiching.

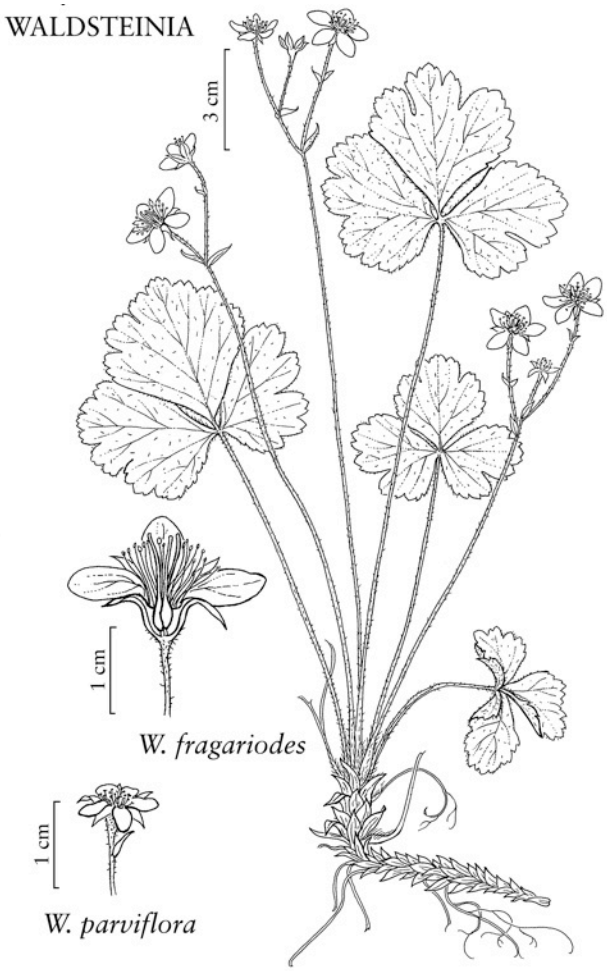
"CKL Flora", a project designed to document the flora of the City of Kawartha Lakes, received the W.E. Saunders Natural History Award for making a significant contribution to natural science research. Dale Leadbeater and Anne Barbour (in photo) accepted the award on behalf of the project's 125 volunteers.

Project participants have collected five years' worth of data as well as plant specimens from 89 Kawartha properties. About 1, 600 of these specimens are part of the Royal Ontario Museum's permanent herbarium collection.

CKL Flora is an example of the leadership and volunteerism that is so essential to the protection of Ontario's wild species and spaces.

For more information on this award recipient, or to arrange an interview, please contact:

Colleen Cirillo, Communications Coordinator, Ontario Nature
(416) 444-8419 ext. 238 colleenc@ontarionature.org



The illustration FBO sponsored for the next volume of *Flora of North America*.

Thank-you note from Dorothy Tiedje:

Dear Mike,

Thank you and the FBO, again, for giving me the Goldie Award. I really appreciate it and am greatly honoured to be in the company of the seven distinguished botanists. Also, thank you for paying for our 5 dinners. That was very generous of the FBO. I did enjoy seeing many of my old friends. John and I enjoyed the group so much. We joined at about the same time as John retired.

I read your President's report in the latest Newsletter and agree that the outing write-ups with lists of plants are very important. I enjoyed your St. Mary of Egypt Refuge story and I will look up the plants that I didn't recognize. I was very tired afterward. I had had a very busy time even before the Windsor trip. Tom stayed for an extra day. Yesterday, one of my precious White Oaks fell across my driveway, but a very good tree service cleared it up promptly. I am feeling much better now. I'm sorry that I have not had an opportunity to get to know you personally.

Best regards,
Dorothy

Erratum

The trip to St. Mary of Egypt Refuge (report written by Mike McMurtry, in the Spring-Summer 2014 issue) took place on 12 May, 2014, and not 2013, as we erroneously claimed. In Matt Wheeler's report on Lost Lake wetland in the same issue (page 6), *Gymnocarpium robertianum* listing should be replaced with *Gymnocarpium dryopteris*.