



*FIELD*  
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**Craig Campbell in Sudden Tract, Waterloo Region. Credit: Brett Woodman**

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## President's Message

This time of year brings flashbacks to past years of being a botanist on the steep side of the learning curve. Suddenly, after the trickle of growth in the spring, where you see scatterings of flowers in woodlands, you face the deluge. You drive yourself crazy collecting *Eleocharis* and *Juncus* specimens and poring over tubercles and seeds that are too young to help with identification anyway. Puzzle over the styles of sedges to see if they are continuous with the achene and hardened, or whether they will just drop off and send you down the other side of the key. Ask yourself if the stipule on that pondweed is likely to separate itself from the stem or not.

Cheer up, it does get better.

Sarah Mainguy  
President

## Editor's Corner

Like this year's growing season, the content for this summer issue is abundant and robust! New member Geri Poisson of Bracebridge suggests *Quercus* as the new name for this *Newsletter*: "There are numerous species of oaks native to Ontario, and the name suggests quests, queries, questions, and is a bit oddball, which might describe many field botanists!" Keep the quest for a new name in mind for our publication as you wend your way among the plants.

Cheryl Hendrickson  
Editor

### Standard source for most scientific names and authorities of vascular plants:

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

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# Field Trip Reports

## Natural Heritage Management Through Fire: Pinery Provincial Park October 4, 2003

Pinery Provincial Park on Lake Huron is one of the most botanically unique landscapes in Ontario. With the 2008 Annual General Meeting scheduled in the park, it is worth looking back to a field trip led to the park in 2003 by Dr. Brent Tegler of North-South Environmental which provided context for the origin and management of vegetation communities and plant species that are dependent on disturbance. Pinery Provincial Park managers have used fire since 1993 to maintain the vegetation, and Dr. Tegler discussed the rationale for using this somewhat controversial management technique within the park.



Oak savannah near picnic site. Credit: W.D. McIlveen

As Dr. Tegler described, the oak savannah of Pinery Provincial Park is the largest example of this globally rare vegetation community in Ontario, and one of the largest in North America. The park's physical setting is a result of some unusual and dramatic events in Ontario's glacial and post-glacial history. When Lake Algonquin, and subsequently Lake Nipissing, shrank westward to the current Lake Huron Basin, the receding water left an unstable, deep, droughty layer of sand. The combined forces of lake water currents which deposit sand along the coastline and prevailing westerly winds that blow sand inland led to the formation of large coastal dunes, sand bars, undulating beach ridges and sand plains forming the unique sand substrate that characterizes Pinery. A specific assemblage of plant species that could tolerate the stressful warm, dry environment came to dominate. In addition, approximately 6000 years ago, when eastern North America experienced a period of climatic warming known as the "hypsihermal", some of the drought-tolerant species of the western plains that colonized Ontario's Prairie Peninsula were also well-adapted to this

xeric environment and became established within the shoreline sand environments of the Great Lakes.

Some areas of Pinery Provincial Park are naturally open as a result of ongoing natural physical disturbance. Where the Pinery's shores are affected by modern rising and falling lake levels, ice scour and lakeshore winds, they still remain as open beaches, swales and sand dunes, colonized mainly by grasses and forbs, with scattered, hardy shrubs and trees. The vegetation is largely native and these active dunes continue to sustain some of the rarest plant species in Ontario. In contrast, the ancient dunes further inland were more stable and became colonized by trees. Rather than a closed-canopy mature forest that was the norm in most parts of Ontario, historical accounts document that much of the vegetation was open and park-like, with scattered open-grown oak and pine, accompanied by sun-loving grasses and forbs within the intervening open understory. Approximately 50 percent of the Pinery presently consists of open oak



savannahs and woodlands which support numerous prairie indicator species including the dominant tree Black Oak (*Quercus velutina*), Big Bluestem (*Andropogon gerardii*), Wild Bergamot (*Monarda fistulosa*), Indian Grass (*Sorghastrum nutans*) and Spiked Blazing-Star (*Liatris spicata*). This habitat is interspersed by patches of forest. How did this vegetation mosaic persist?

There is evidence that tree and shrub growth in the Pinery was periodically suppressed by fires, many of which were a regular part of First Nations cultural practices. Oak is only moderately shade-tolerant and ceases to regenerate in forest with closed canopy. Most of the oaks growing in savannah have branches that spread widely: a pattern that tends to appear when oak grows in the open, providing evidence that the open, park-like appearance of the savannah, so remarkable to the early settlers, was its characteristic condition. In addition, Pinery Provincial Park supports one of the southernmost native populations of Red Pine, which needs contact with mineral soil to germinate. Mineral soils are characteristically exposed after fire.

With fire now a rare disturbance in the landscape, savannah is imperilled throughout its global range by growth of woody vegetation. Without some kind of disturbance to remove woody vegetation, dense shrubs



**Pinery South - burned site. Credit: W.D. McIlveen**

and trees shade out sun-loving savannah species, which then become replaced by shade-tolerant forest species. If the interval between disturbances is too long, eventually the seed bank for savannah species dies out, and savannah is lost even if the canopy is removed. Prescribed fire, mimicking practices that existed in Ontario for hundreds, if not thousands of years, is a highly effective management technique used to reduce woody growth and restore woodland, savannah and prairie in Ontario. Dr. Tegler literally walked us through Pinery Provincial Park's prescribed fire program, showing the results of burns in 1993 and 2001. The savannah burned in 1993 was rich with rare species such as Plains Puccoon (*Lithospermum caroliniense var. croceum*), Cylindric Blazing-Star (*Liatris cylindracea*), and the nationally and provincially threatened Dwarf Hackberry (*Celtis tenuifolia*).

Ideally, the burns are conducted frequently enough that a "cool" fire results. The fire is meant to kill off woody regeneration of shrubs and young trees, but leaves larger open-grown trees alive. There is a concern that burns that are too hot, over too large an area, could affect the Pinery's rare wildlife species such as Hognose Snake. Cooler fires have been the norm throughout most of the park, however, the results of the hotter 2001 burn were still evident.

Dr. Tegler's conclusion was that a balance exists between the periodic removal of woody species and the maintenance of open habitats that sustain prairie and savannah species. Reduction or elimination of regular fires, combined with the relatively easy conversion of



**Cut pine stems. Credit: W.D. McIlveen**



open woodland and prairie sites for agriculture, is responsible for the current rarity of these ecosystems and their associated plant and animal species. The most logical management technique for maintaining the ecosystem is prescribed fire. Pinery has embarked on a park-wide fire management program. Over the past fifteen years a series of prescribed fires have incorporated much of the park. Four prescribed burns were conducted in 2003: two in the spring, two in the fall. Occasionally, as in 2001, a fire may be hot enough to kill larger trees as well as the regenerating understory. However, in an area the size of Pinery Provincial Park, there is some leeway for erring on the side of larger openings.

Resource management is complex. There are some who do not agree with the use of fire to manage the ecosystem at Pinery Provincial Park, because it may have effects on some insect and other animal species, and because it may eliminate mature forest that was also a part of the Pinery's ecosystem. The Pinery is taking an experimental approach to ensure that management techniques are adaptive. In addition, two issues at the Pinery are intertwined with the fire management program. One is that conifers (mainly Red and White Pine) were planted throughout the Park in the 1950's and 1960's. These have matured to form large trees, sometimes in dense stands, that completely shade out the savannah environment. In some areas, we could see that the progeny of the planted pines were 2-3 cm dbh and only 1-2 m apart. The flora under the dense pines was extremely sparse, consisting mainly of forest species such as Downy Arrow-wood (*Viburnum rafinesquianum*) seedlings and Creeping Partridge-berry (*Mitchella repens*). Fire management is being used as a cost effective restoration tool, specifically targeting the removal of planted pine where it is still young and intolerant of fire. Additionally, one million of the three million pines that were planted at Pinery Provincial Park had been removed by cutting up to the end of 2003.

The second issue is a deer population that in the 1990s was approximately eight times larger than what was considered sustainable. Dr. Tegler....*cont'd on page 10...*

## **An Update to the Pteridophytes of Waterloo Region**

**I**n 1977 Campbell and Britton published an article, "Pteridophytes of the Regional Municipality of Waterloo, Ontario", in the *Canadian Field Naturalist*. The following table is an updated list of ferns and allied plants in the Region. During the intervening 30 years (1978-2008) as much field and herbarium study as possible was carried out by Campbell, Dr. D.M. Britton and Woodman. We offer this table in advance of a monograph which will discuss in detail the history and status of the Region's pteridophyte flora from its earliest known collections, by William Herriot, beginning in 1883.

The landmark publication of *Ferns and Fern Allies of Canada* (1989), by Cody and Britton, the *Ontario Plant List* (1998), by Newmaster *et al.*, and the *Flora of North America* (1993), as well as revised editions of Wherry (1961), Cobb *et al.* (2005), and Gleason and Cronquist (1991), have drawn much attention to this fascinating and sometimes overlooked group of plants. It is hoped that these books, as well as articles, will stimulate new enthusiasm among field botanists and result in additional knowledge before development or land use changes within the Region eliminate more plant habitats. Early threats to pteridophytes came from over-collecting for herbariums, livestock (grazing, trampling, habitat degradation), and forest harvesting. Currently, these plants face some of the same and some different obstacles to their continued survival, such as global warming, acid rain, agricultural drainage, and sale and transplantation. Perhaps the most striking recent example of decline and loss of regional pteridophytes is occurring at the Kossuth Bog. This bog provide habitat for the largest and most species diverse stand of clubmosses (*Lycopods*) in the Region. Recent years have shown extensive dieback in this population. Successive dry summers in conjunction with tile drainage of the adjacent fields are believed to have lowered the water table resulting in this ongoing die-off.

Not included here are pteridophyte hybrids, subspecies, and well marked varieties, and forms. These will be discussed in the sequel to this paper. Discussion about *Selaginella eclipses* and *S. apoda* will address the

unresolved debate concerning their taxonomic treatment as well as ranges. Here they are treated separately as per *Flora of North America*. A total of 61 species are included in the chart below. *Cystopteris protrusa* is not included but was known historically from within 1 concession of the Regional boundary.

Table 1 constitutes our current knowledge of pteridophyte populations within the Regional Municipality of Waterloo. Extra-limital species are not included here but will be in the monograph. Species presence has been determined based on herbarium records as well as recent field work. We have not yet assigned species abundance within the Region below common (x). All potentially rare or infrequent species have been designated abundance “status not assigned” (sna), as we hope that this publication will elicit feedback from other field botanists who can contribute records of various species. Any records of *Botrychium* species in particular would be appreciated. Please contact either author to submit records, all input is welcome.

Table 2 (on page 10) updates nomenclature from the *Ontario Plant List* to recognize the extensive phylogenetic studies that have been completed for ferns (e.g. Smith *et al.* 2006), and also helps the reader track how various genera have been reassigned. The same work has not yet been completed for Lycopods. 🌿

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**Table 1. A Checklist of Pteridophytes in the Regional Municipality of Waterloo**

Waterloo	Scientific Name	Common Name	S Rank
	<b>Lycopodiaceae</b>	<b>Clubmoss Family</b>	
x	<i>Diphasiastrum</i>	Southern Ground-cedar	S5
x	<i>Huperzia</i>	Shining Fir-moss	S5
sna	<i>Lycopodiella</i>	Nothern Bog Club-moss	S5
sna	<i>Lycopodium</i>	Bristly Club-moss	S5
sna	<i>Lycopodium</i>	Running Club-moss	S5
sna	<i>Lycopodium</i>	Prickly Tree Club-moss	S5
sna	<i>Lycopodium</i>	Hickey's Tree Club-moss	S4
sna	<i>Lycopodium</i>	Ground-pine	S4
	<b>Selaginellaceae</b>	<b>Selaginella Family</b>	
sna	<i>Selaginella</i>	Meadow Spike-moss	
sna	<i>Selaginella</i>	Buck's Meadow Spike-moss	S4
	<b>Ophioglossaceae</b>	<b>Adder's Tongue Family</b>	
x	<i>Botrychium</i>	Cut-leaved Grape Fern	S5
sna	<i>Botrychium</i>	Daisy-leaf Moonwort	S4
sna	<i>Botrychium</i>	Leathery Grape Fern	S5
sna	<i>Botrychium</i>	Blunt-lobed Grape Fern	S3
sna	<i>Botrychium</i>	Rugulose Grape Fern	S2
sna	<i>Botrychium</i>	Least Moonwort	?
x	<i>Botrychium</i>	Rattlesnake Fern	S5
sna	<i>Ophioglossum</i>	Northern Adder's-tongue	S4
	<b>Equisetaceae</b>	<b>Horsetail Family</b>	
x	<i>Equisetum</i>	Field Horsetail	S5
sna	<i>Equisetum</i>	Water Horsetail	S5
x	<i>Equisetum</i>	Scouring-rush	S5
sna	<i>Equisetum</i>	Smooth Scouring-rush	S4
sna	<i>Equisetum</i>	Marsh Horsetail	S5
sna	<i>Equisetum</i>	Meadow Horsetail	S5
x	<i>Equisetum</i>	Dwarf Scouring-rush	S5
x	<i>Equisetum</i>	Wood Horsetail	S5
sna	<i>Equisetum</i>	Variiegated Horsetail	S5
	<b>Osmundaceae</b>	<b>Royal Fern Family</b>	
x	<i>Osmunda</i>	Cinnamon Fern	S5
sna	<i>Osmunda</i>	Interrupted Fern	S5
x	<i>Osmunda</i>	Royal Fern	S5
	<b>Dennstaedtiaceae</b>	<b>Bracken Fern Family</b>	
sna	<i>Dennstaedtia</i>	Hay-scented Fern	S5
x	<i>Pteridium</i>	Bracken	S5
	<b>Pteridaceae</b>	<b>Maidenhair Fern Family</b>	
x	<i>Adiantum</i>	Northern Maidenhair Fern	S5
sna	<i>Pellaea</i>	Smooth Cliff-brake	S4
	<b>Aspleniaceae</b>	<b>Spleenwort Family</b>	
sna	<i>Asplenium</i>	Ebony Spleenwort	S4
sna	<i>Asplenium</i>	Walking Fern	S4
sna	<i>Asplenium</i>	Maidenhair Spleenwort	SU
	<b>Thelypteridaceae</b>	<b>Marsh Fern Family</b>	
sna	<i>Phegopteris</i>	Northern Beech Fern	S5
sna	<i>Phegopteris</i>	Broad Beech Fern	S3
sna	<i>Thelypteris</i>	New York Fern	S4
x	<i>Thelypteris</i>	Marsh Fern	S5



Waterloo			
	Scientific Name		Common Name
x	<i>Athyrium</i>	<i>filix-femina</i>	Northern Lady Fern
x	<i>Cystopteris</i>	<i>bulbifera</i>	Bulblet Bladder Fern
sna	<i>Cystopteris</i>	<i>fragilis</i>	Fragile Fern
sna	<i>Cystopteris</i>	<i>tenuis</i>	Mackay's Brittle Fern
sna	<i>Deparia</i>	<i>acrostichoides</i>	Silvery Glade Fern
sna	<i>Diplazium</i>	<i>pycnocarpon</i>	Narrow-leaved Glade Fern
x	<i>Gymnocarpium</i>	<i>dryopteris</i>	Oak Fern
<b>Onocleaceae</b>			
x	<i>Matteuccia</i>	<i>struthiopteris</i>	Ostrich Fern
x	<i>Onoclea</i>	<i>sensibilis</i>	Sensitive Fern
<b>Dryopteridaceae</b>			
x	<i>Dryopteris</i>	<i>carthusiana</i>	Spinulose Wood Fern
x	<i>Dryopteris</i>	<i>clintoniana</i>	Clinton's Wood Fern
sna	<i>Dryopteris</i>	<i>cristata</i>	Crested Wood Fern
sna	<i>Dryopteris</i>	<i>filix-mas</i>	Male-fern
sna	<i>Dryopteris</i>	<i>goldiana</i>	Goldie's Fern
x	<i>Dryopteris</i>	<i>intermedia</i>	Evergreen Wood Fern
x	<i>Dryopteris</i>	<i>marginalis</i>	Marginal Wood Fern
x	<i>Polystichum</i>	<i>acrostichoides</i>	Christmas Fern
sna	<i>Polystichum</i>	<i>braunii</i>	Braun's Holly Fern
sna	<i>Polystichum</i>	<i>ionchitis</i>	Holly Fern
<b>Polypodiaceae</b>			
sna	<i>Polypodium</i>	<i>virginianum</i>	Rock Polypody

#### LEGEND

##### Waterloo

x - confirmed as present and common (more than 3 stations) in Waterloo based on field observation or herbarium specimen  
sna - "status not assigned" by authors for regional abundance; we request any records

**S-rank** - Provincial status assigned by Ontario Ministry of Natural Resources

**S1** - Critically Imperiled

**S2** - Imperiled

**S3** - Vulnerable

**S4** - Apparently Secure

**S5** - Secure

**SU**

- Status uncertain



**Royal fern (*Osmunda cinnamomea*) credit: C. Hendrickson**

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## Hawthorns at the Royal Ontario Museum November 10, 2007

Half of the FBO members on this late fall trip to the Royal Ontario Museum began the afternoon portion by listening to Tim Dickinson and his research colleagues discuss the genetics of hawthorns (*Crataegus*). I had naively hoped for a hand-out with a list of Ontario hawthorn species and how to identify them. After hearing Tim talk about the reproductive biology of the species, I realized that I hoped in vain! This group of small trees has caused taxonomic difficulties since the beginning. Only a few dozen hawthorns were recognized in North America up until the late 19<sup>th</sup> century, but in the early 20<sup>th</sup> century Arnold Sargent of Boston had given names to over 700 entities. In Ontario, Phipps and Muniyamma (1980) described 39 species, which they felt were about a third of the North American hawthorn species.

The difficulty in identification lies in the way the hawthorns reproduce, which can result in individuals of the same species which look a little bit different when growing even a few hundred metres away from each other. Many species of hawthorn exhibit polyploidy and hybridization. Polyploidy (for example triploids and tetraploids) occurs when there are more than two sets of chromosomes in an organism. Apomixis, a type of asexual reproduction can occur in polyploid individuals, resulting in many different individual trees with very few differences. When the same species reproduces sexually, relatively more characteristics are visually different. Thus it is difficult to tell how much variation there is within one species. It is possible to accidentally identify one genotype (many individuals that have asexually reproduced) as one species, rather than as one set of individuals within a species. Hybridization also occurs relatively frequently, such as between Dotted Hawthorn (*Crataegus punctata*) and English Hawthorn (*C. monogyna*) and between *Crataegus punctata* and Cockspur Thorn (*C. crus-galli*).

After the talk, we went into the ROM herbarium section and looked at hawthorn specimens, both pressed and frozen, as well as a variety of hawthorn references. Julia Talent had collected a fresh branch of Medlar (*Crataegus*

or *Mespilus germanica*) an Asian and European cultivated species which is grown for its fruit. The fruit, which is larger than most Ontario hawthorns, is eaten with whipped cream once it has softened and browned at room temperature. She gave me a Medlar fruit which I put on my kitchen window ledge where I watched it slowly wrinkle and brown. I had intended on eating it, but I seemed to have no cream in my house at the right time, so it sits there still in a much more wrinkled and dried state. Apparently the fruit can also be used to make jelly and wine.

So, what do you do if you want to try and identify hawthorns in the field in Ontario? Many parts of the plants are examined, including leaf shape, thorn shape and length, shoot length, and of course the flowers and fruits. Tim felt that Phipps and Muniyamma (1980) is still the best source of identification information, and that it is certainly possible to identify hawthorns into 'series' or species groups. This long journal article includes a key, plus descriptions, drawings, and range maps of most of the Ontario species. This article, fully cited below, is available at:

<http://pubs.nrcnrc.gc.ca/rpps/journalDetail.jsp?jcode=cjb&lang=eng> under the 'Previous issues'. You can pay \$10 by credit card to receive that article or you should be able to find the article at good university libraries in Ontario. He did not recommend *Shrubs of Ontario* by Soper and Heimburger for hawthorns, but did say that he was waiting for the next volume (Volume 9) of the *Flora of North America* series to come out. This will be authored by Phipps, will cover *Crataegus* in North American and once published should be the definitive source for hawthorn nomenclature and identification in Ontario. 🌿

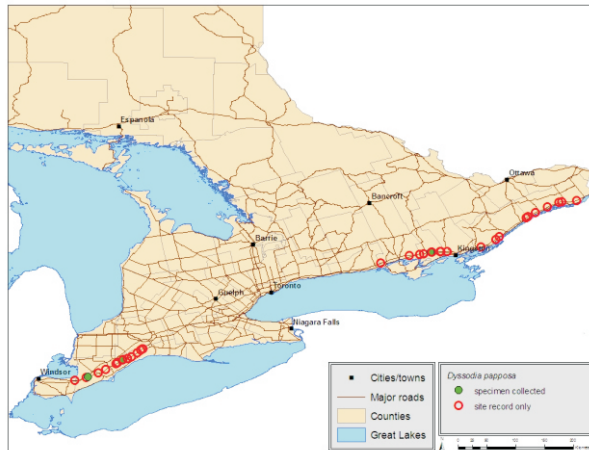
Rosalind Chaundy-Smart

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## Stinking Marigold - Coming to a Freeway Near You



**Distribution of Stinking Marigold (*Dyssodia papposa*) in Southern Ontario based on records of Mike Oldham, Credit: Ontario Natural Heritage Information Centre**

Set in play as a dollar-saving measure, the reduced mowing of highway verges has had unintended consequences to nature lovers generally and field botanists in particular. Rather than short-clipped fairways with a monochromatic green backdrop, motorists now experience a cornucopia of botanical delights—wildflowers actually achieving bloom—a palette of colours amidst a medley of species. This change is no more apparent than on the 400-series highways where traffic flows at high speed and motorists are prohibited from stopping. I have reveled in the high speed drive-by identification of patches of Butterfly-weed (*Asclepias tuberosa*) on Highway 401 near Brighton, Amur Silver Grass (*Miscanthus sacchariflorus*) on Highway 400 near Barrie and Tall Joe-Pyeweed (*Eupatorium altissimum*) on Highway 403 at Hamilton. As the growing season progresses, spring greenery is replaced by species-distinct colours and patterns; the roadsides attain a patchwork-quilt-like character. But then I am frustrated—because of both the law and the risk—I can't stop to identify these plants.

This challenge was never more evident than on

September 16, 2006 as I sped eastward along highway 401 east of Belleville. I caught sight of a patch of orange flowers covering the shoulders on both sides. Initially I thought it the result of a wildflower seed mix introduction (doubtless well-intentioned but generally quite transitory). However, the orange patches continued kilometer after kilometer—in some places covering the entire median and both shoulders. Finally I could stand it no longer—I pulled over, leapt out and grabbed a specimen. Still holding it as I maneuvered back into traffic, I realized it was an orange-rayed composite and one I had never seen before! Moreover it exuded a powerful turpentine-like stink. A breeze to identify, I thought!

Not so easy! I reviewed a dozen of my trusty field guides and obtained not one hit. These included the recent and otherwise extensive: *Weeds of the Northeast*; *Weeds of Canada*; and *Wildflowers in the Field and Forest—Northeastern United States*. So I consulted Dan Brunton who quickly identified it primarily by the scent. It was Stinking or Fetid Marigold aka False Dog-fennel *Dyssodia papposa* (G5 SE1). Dan has not recorded the plant in his Ottawa area as yet but as it is “galloping east” along Highway 401, he expects its imminent arrival.

It turns out that *Dyssodia* is included in Gleason & Cronquist's *Manual of Vascular Plants of Northeastern U.S. and Canada* (1991). From that compendium I learned that it is native to the western US and Mexico; hence it is excluded from my European and eastern US weed guides. It prefers dry open places, is often weedy and is now introduced in north-eastern US. Given its predilection for road shoulders, sometimes forming extensive mats right up to the asphalt, it is clearly halophytic.

In subsequent correspondence with Michael Oldham of the Natural Heritage Information Centre, I learned that he has GPS'd this plant at 35 sites along Highway 401. He pointed out that “*Dyssodia* is an interesting story about a rapidly spreading roadside introduction, reminding me of Very Slender Sedge (*Carex*



**Stinking Marigold (*Dyssodia papposa*).**  
**Credit: George Bryant**

*praegracilis*) a few decades ago. It is one of several species which I think have undergone a major increase in distribution and abundance in Ontario in the past decade or so along major highways (Another that comes to mind is Two-scale Orache (*Atriplex heterosperma*)). I think it would be of interest to naturalists since it is distinctive and readily recognizable.”

Mike Oldham advises me that he typically has his GPS mounted on the vehicle dashboard and takes waypoints for species like this in order to help document their spread. He is sure it is more widespread than his records indicate—despite traveling many highways in Ontario including such logical possibilities as the QEW towards Niagara or the Trans-Canada highway, he has noted it only on Highway 401. From Dan Brunton’s and Mike Oldham’s records it would seem that this plant is a recent arrival to Ontario perhaps confined only to highway 401 with two main areas of concentration—in south-west Ontario (Essex, Kent, Elgin) and around the Kingston-Belleville area (Frontenac, Hastings). It has only recently arrived and doubtless will continue to spread.

Stinking Marigold is very distinctive being our only

roadside composite with a turpentine-like smell and orange rays. Mike Oldham points out: “Even when finished flowering it is recognizable; patches often seem to turn blackish and the dense low colonies are still fairly obvious.”

I think a guide to the plants that spread along Ontario’s 400-series highways would be of value—something that the FBO might consider sponsoring! 🌱

George Bryant

#### References

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#### Ranking *Spergularia salina*

**B**ecause I was finding the Marine Sand Spurrey (*Spergularia salina*) matted everywhere on Toronto boulevards, I was puzzled to see it listed as extirpated in Ontario (SX). A query to Mike Oldham of the Ministry of Natural Resources brought me a most generous response – photocopied material, plus an explanation. “For this species, (as for a few others) ... we assign ranks based only on the native populations and track only natural populations.” *S. marina* was once known on salt flats on the west side of James Bay.

In Toronto this annual was discovered in 1975 near salt storage yards and has since spread with the salt to highway verges and other Ontario cities. My own observations taught me that each tiny pink flower lasts only a day during high summer, in fact from about 11 AM to 4 PM, so that early walkers will have difficulty spotting it. 🌱

Alan Proctor



# Botanical Roots

## Botanical Place Names

W.D. McIlveen

*During my working career supplemented with travel for FBO field trips and personal trips, I have seen a lot of Ontario.* One place in particular caught my attention though it does not appear on provincial road maps. It does, however, show up on regional maps. The name of that place is “Botany” and the road leading to it is the aptly named “Botany Line”. That prompted me to think about the use of botanical topics in the naming of places within Ontario. The following is a brief synopsis of my discoveries.

Many towns and cities have streets named after trees (*e.g.* Elm Street, Cedar Street, *etc.*). Then there are numerous lakes such as Pine Lake. There are too many of these kinds of names about to discuss them here – some may have reference to some notable botanical feature in the early days. Most likely, the street names were just a convenient road epithet employed by the early planners. Instead, this article will deal mainly with whole municipalities with botanical names.

Cedar is the most frequently named plant occurring in six places names ranging from Big Cedar to Cedar Springs. The other species that get recognized include Alder, Apple, Ash, Balsam, Birch, Cherry, Elm, Hickory, Maple, Myrtle, Oak, Pine, Rose, Rowan, Poplar, Spruce, and Violet.

Places given distinct plant names are noted here along with the populations recorded in 1999 (in brackets). The folks that settled two spots south of Barrie were obviously of a similar mind when they named their settlements. These two, Holly (201) and Ivy (103), are located only about 6 km apart. Both Laurel (45) and Primrose (29) are located north of Orangeville as is Violet Hill (33) though the latter is likely named after some feature other than the plant. Myrtle (100) is located on Highway 12 north of Whitby. Shamrock (unreported population) is located on Highway 132 west of Renfrew in Renfrew County. Poplar is located on Manitoulin

Island south of Gore Bay. It does not appear on most typical road maps and is really not more than an intersection of two rural roads. The largest settlement in this category is Maple (2500). It can be found in Vaughan north of Toronto at the intersection of Keele Street and Major MacKenzie Drive. It was once a well-recognized location in that it used to be the headquarters for the former Ontario Department of Lands and Forests when that agency was able to undertake forest research.

General plant habitats, with several variants, are also recognized. This list includes Field, Floral Park, Flower Station, Forest, Fruitland, Garden, Glen Orchard, and Sylvan. As well, place names with other botanical relationships include Barkway, Driftwood, Eden, Goodwood, Grassy Narrows, Greenbush, Hardwood Lake, Shining Tree, Woodbridge, and Woodstock.

Back to the settlement that caused me to investigate the present topic in the first place. Botany is located in Howard Township between Thamesville and Ridgetown. Early settlers started to transform the area from a dense wet forest to agriculture in about 1830. Currently, the area is highly productive in corn and soybeans. Although the hamlet was always small, it did support several small commercial enterprises that were consistent with the agricultural area in the early days. The community was well-enough established that by 1846, they had built a school. The school celebrated its centennial in 1946 although the one pictured was not the original building. So where did the place get its unusual name?

The Atkinson website regularly reports on the history of the area owing to the family’s long association with the place. That site states *“It may have been the verdant wildlife that gave this community its name. More likely, though, the name was a dubious tribute to Botany Bay, the infamous Australian penal colony of the 18th century. A newspaper recorded the complaint of a less-than-enthusiastic pioneer in this area. ‘This is worse than Botany Bay. Once here, work hard, get nothing for it, here*

till you die." Despite what the complainant said, the area has provided well for the residents, even though the urban expression never really materialized.

There is another interesting botanical side note to this story. One of the local residents, Mr. Clarke Atkinson, father of the Atkinson website keeper, as a young man in the 1930s, had planted a number of Black Walnut (*Juglans nigra*) and Butternut (*Juglans cinerea*) trees along the roadside. He had taken a course in botany in either elementary school or high school and felt inspired to plant the trees. This rewarded the family who were later able to collect the nuts and save them for winter treats. As well, the planting of the Butternut trees served to increase the numbers of a tree species that we now know is classed as endangered owing to the spread of Butternut canker.

So, as they travel about this province, FBO members might want to keep the origin of place names, botanical or otherwise, in mind as they pass through. Owing to their small size, the settlements with the most interesting names are likely to be lost as they are swallowed up by larger communities nearby. In many cases, the locations of the settlements are now not much more than roadside markers. 🌿

... cont'd from page 4... also showed a 10 x 10 m deer enclosure full of lush vegetation, used to indicate the visible effects of deer browsing in different areas of the park. Some species, such as Fragrant Sumac (*Rhus aromatica*), are browsed by deer more than others, and this species dominated the enclosure. When fire management was first introduced the hyper-abundant deer population rapidly consumed new growth stimulated by fire, including valued prairie species. Consequently the fire management program was suspended, a deer management program was introduced that substantially reduced the deer population allowing fire management to once again proceed.

The AGM for 2008 will again showcase the Pinery's extraordinary landscape. As stewards of this landscape, we should be prepared to re-evaluate our own opinions on whether fire is the appropriate technique for managing the unique resources there. We can do no better than to see the results for ourselves. 🌿

Thanks to Dr. Brent Tegler for reviewing this trip report.

Sarah Mainguy

...cont'd from Campbell and Woodman, page 5

**Table 2. Nomenclature departures from the Ontario Plant List for Pteridophytes**

	<b>Scientific Name</b>	<b>Common Name</b>	<b>Comment</b>
Family	Genus	Species	
<b>Selaginellaceae</b>			<b>Selaginella Family</b>
	<i>Selaginella apoda</i>	Meadow Spike-moss	recognized as a separate species from <i>Selaginella eclipes</i> as per <i>Flora of North America</i> vol. 2
<b>Equisetaceae</b>			<b>Horsetail Family</b> now classified as ferns as per Smith <i>et al.</i> 2006
	<i>Equisetum</i>		
<b>Woodsiaceae</b>			<b>Woodsia Family</b> new family as per Smith <i>et al.</i> 2006
	<i>Athyrium</i>		re-classified from Dryopteridaceae
	<i>Cystopteris</i>		re-classified from Dryopteridaceae
	<i>Deparia</i>		re-classified from Dryopteridaceae
	<i>Diplazium</i>		re-classified from Dryopteridaceae
	<i>Gymnocarpium</i>		re-classified from Dryopteridaceae
<b>Onocleaceae</b>			<b>Sensitive Fern Family</b> new family as per Smith <i>et al.</i> 2006
	<i>Matteuccia</i>		re-classified from Dryopteridaceae
	<i>Onoclea</i>		re-classified from Dryopteridaceae
<b>Dryopteridaceae</b>			<b>Wood Fern Family</b> various genera have been reclassified to new families as indicated above