Field Botanists of Ontario

Newsletter

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Round-lobed Hepatica (*Anemone americana* (D.C.) H. Hara).
Photo by Ed Morris, Burnt Island Harbour, Manitoulin Island, May 2003.

FIELD BOTANISTS of ONTARIO

FIELD BOTANISTS OF ONTARIO NEWSLETTER

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

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The **deadline** for submissions for **Volume 16(4)** is **February 21st, 2004**.
Note that Volume 17(1) may follow soonafter.

Standard source for scientific names of vascular plants:

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

Review of the 2003 AGM and Message from the President

The 2003 Field Botanists of Ontario AGM, held at the Ganaraska Forest Centre, was well received and many thanks are owed to our trip and workshops leaders, and guest speaker. Thanks to Steve Varga, Todd Farrell, Carole Ann Lacroix, Gordon Vogg, Rick Beaver, and Natalie Helferty. Highlights included the addition of over 20 species of plant records to the Ganaraska Forest Headwater candidate Area of Natural and Scientific Interest (ANSI), a diverse showing of fungi at Peter's Woods despite a sudden dry spell leading up to the AGM, and the making of 15 additional Ontario botanists that are now much more fluent in the world of grass taxonomy. Suggestions for next year's AGM included Manitoulin Island and Muskoka.

We have had a number of changes in the FBO board of directors that start with Carle Ann Lacroix stepping down as president. Carole Ann's boundless enthusiasm for and knowledge of the study of plants, particularly in taxonomy and ethnobotany, has sparked many people's interests in botany. This has also contributed to the FBO membership expanding to a whopping 290 members, possibly the largest yet. Carole will continue to contribute to the executive as past president. George Bryant, who has served as our trusted treasurer since 2001, will be stepping down in February. George has contributed a lot of time and effort to the FBO, having served on the executive once before. He has done an excellent job over the past three years keeping our finances on-track and ensuring that we dust off the FBO constitution every now and then.

Kelly Bonnici our long-serving webmaster since 1999 will be handing off the website. Many thanks to Carole Ann, George, and Kelly.

These vacancies have resulted in the reshuffling of some of the board members as well as some new people joining. As of last year's AGM I have become the new president. Mary Ann Johnson (our previous field trip coordinator) has become the new vice president, and Nick Hodges (our previous secretary) will be our new field trip coordinator.

Dan Barcza, a recent graduate of York University and aspiring botanist, has stepped in to become our new secretary. Bill Draper, a long-time botanist and former FBO board member, has kindly agreed to become our new treasurer. Bob Bowles, botanist, all-round naturalist, and former FBO president, will be volunteering with the FBO board as a director at large. Melinda Thompson, an ecologist and environmental consultant, will be our new webmaster. Welcome Dan, Bill, Bob, and Melinda.

As the new president I look forward to working with our current board of directors to provide a successful and interesting year for the FBO members. Throughout the year I am looking forward to meeting and getting to know many of our members. We are a group of skilled naturalists that collectively bring a diverse range of knowledge and experience to the organization. There is always much to be learned on each field trip and I encourage all to partake. Participation in the Field Botanists of Ontario is such an excellent way for both amateur and professional botanists to meet and exchange knowledge on the flora of Ontario. As many universities, governments and funding sources are focusing on the "modern sciences" such as biotechnology, the more "traditional sciences", such as botany and zoology, are falling to the side. I can't help to think that organizations such as the FBO are increasingly more important and help provide the needed foundation for other fields of study such as ecology, conservation biology, and natural heritage planning. As a non-profit organization for those interested in botany and conservation the FBO is defined by its members. We on the executive want to provide what you the members are looking for as botanists and naturalists. If you have contributions, questions, or comments remember to feel free to contact me or other board members to provide your input.

Dirk Janas,
President

Field Trip Reports

Nogies Creek

Leader: Bill Crins, August 24th, 2002.

FBO aquatic botany trips are tranquil and luxurious. It comes of floating effortlessly past a parade of interesting plants. Canoes bump companionably against one another in the sunshine. Water snakes slip off the shore. Like-minded botanists pass limp masses of tangled milfoils and bladderworts from one canoe to another on paddle blades. There are none of the familiar voices from our normal lives demanding that we paddle faster, cover more distance, find a better spot for fishing, go somewhere more interesting! Bill Crins led just such a trip to Nogies Creek in the Kawarthas, with the purpose of searching for significant features on a beautiful waterway unspoiled by cottages or motorboats. The creek is just west of the Kawartha Highlands Signature Site, and south of the Kawartha Barrens Enhanced Management Area. Provincially significant wetlands are associated with other parts of Nogies Creek, but the stretch we visited, south of Bass Lake, was as yet relatively unexplored.

The group was into tricky aquatics as soon as we drifted under the bridge into the current. A diverse array of pondweeds (*Potamogeton* spp), lurked in the creek. Memorize the species or have Bill along: chances are there won't be a handy waterproof field guide that can quickly identify these bastards. The most easily recognized, the broad, arching, submersed leaves of Large-leaved Pondweed (*P. amplifolius* Tuckerm.), waved in deeper water near the middle of the channel. Broad, lanceolate leaves marked Richardson's Pondweed (*P. richardsonii* (A. Bennett) Rydb.), long, broad leaves with a spinulose tip distinguished Illinois Pondweed (*P. illinoiensis* Morong). The familiar heart-shaped floating leaves of Floating Pondweed (*P. natans* L.), with fragments of decaying submersed leaves still clinging to the stems under water, were closer to the shore. The floating leaves could be distinguished from similar species by their heart-shaped base (tapered base and change in petiole colour is distinctive in the much rarer *P. oakesianus* Robb.). Two-ranked, stiff, fern-like submersed leaves were Fern Pondweed (*P. robbinsii* Oakes). Note the example of the strange poetry of pondweeds in these last two species: botanists James Robbins and William Oakes were *Potamogeton* enthusiasts, corresponding for decades in the early to mid-1800s and naming pondweeds after each other. Grass-leaved Pondweed (*P. gramineus* L.) formed mats of narrow submersed leaves and small floating leaves in shallows. Flat-stemmed Pondweed (*P. zosteriformis* Fern.) was one of the most common and distinctive plants of the genus, with flat, pale stems

and stiff leaves. Most interesting was a tentative identification of Northern Pondweed (*P. alpinus* Balb), with a very distinct midrib, but with more shape to the leaves than the common and similar Nuttall's Pondweed (*P. epihydrus* Raf.). If correct, this species would be at the southern limit of its range and a new Peterborough County record.

Bill demonstrated the distinguishing characters of many other aquatic species. The rubbery Water Star-grass (*Heteranthera dubia* (Jacq.) MacMill) and bushy Bushy Naiad (*Najas flexilis* (Willd.) Rost. & W. Schmidt) provided a welcome break from pondweed madness. There were few water-milfoils: Whorled Water-milfoil (*Myriophyllum verticillatum* L.), distinctive with fruits in leaf axils along the top of the stem, was the only species represented from this diverse genus. We found Lake Water-cress (*Armoracia lacustris* (A. Gray) Al-Shebaz & V. Bates), a new county record. The combination of leathery aerial leaves lobed at the base, almost woody stems, and finely dissected submersed leaves was very distinctive, though many aquatic plants have dissected submersed leaves, an adaptation that facilitates gas transfer in water. This species is fragile and sensitive to boat washes, and is rare throughout its range. Wild celery (*Vallisneria americana* Michx.) displayed another adaptation to its watery medium. The male flower floats free on the surface, releasing a matte finish of pollen when it drifts to a female flower, still attached to the plant by a coiled stem. We were able to compare the two subspecies of Fragrant Water-lily: Tuberous Water-lily (*Nymphaea odorata* Ait. spp. *tuberosa* (Paine) Wiersma & Hellquist) with its striped petiole, and the more common, less garishly-petioled fragrant water-lily (*N. odorata* Ait. spp. *odorata*). The species intergrade and the taxonomic status is still being debated.

Several species of bladderwort (*Utricularia* spp.) were present in quieter water. The bladders are minute underwater insect [and other zooplankton] traps, and their arrangement, as well as leaf shape and dissection, distinguished the species well in their vegetative state. The aptly named Common Bladderwort (*U. vulgaris* L.), lay with its much dissected leaves and black bladders in tangled mats. Flat-leaved Bladderwort (*U. intermedia* Hayne) was distinctive: some stems bearing pale bladders and some only leaves. Tiny specimens of humped bladderwort (*U. gibba* L.), the tiny leaves with only one or two divisions, were almost lost among the rest.

Canoes allowed us to see the wetter parts of shorelines that are often out of reach. Wild Rice (*Zizania* sp.) grew in water 1-2 m deep along the channel. One species (*Z. palustris* L.) is more northern than the other (*Z. aquatica* L.), but on this sleepy day nobody went so far as to measure the stem height and the width of the leaves, which would have distinguished the two. They both grow in Ontario, often together. Two species of bur-reeds, Green-fruited Bur-reed (*Spargianium emersum* Rehmann ssp. *emersum*, formerly known as *S. chlorocarpum*) with female flower heads raised above the bracts, and Nuttall's Bur-reed (*S. americanum* Nutt.), with a bract under every head, grew on the shore in shallower water. Cardinal flower (*Lobelia cardinalis* L.) grew on the higher areas of the shore. Discoid Beggar's-ticks (*Bidens discoidea* (Torr. And A. Gray) Britton), a frail species at one time thought to be provincially rare but now known to be overlooked, grew between clumps of the more robust grasses and sedges. It could be distinguished from other Beggar's-ticks by cilia on the bracts at the base of the inconspicuous discoid flower head.

The diversity of flora along the creek shows us how vitally important is the unprotected "matrix" between parks in maintaining wetland biodiversity in Ontario. Nogies Creek is well known by fishermen, but there are undoubtedly still many surprises in the fauna and flora. The Field Botanists of Ontario can serve a useful purpose in scouting out such areas with a view to helping establish priorities for future conservation.

Sarah Mainguy

Algonquin Liberation: FBO orienteering trip in Algonquin Provincial Park.

Leader: Paul Rothfels; May 2nd-3rd, 2003.

At 8:45 am on a cool (47°F) but sunny May 3rd morning, ten confident FBO trekkers set out on an Algonquin trail to go where no FBOers had gone before. Following our fearless leader, Paul Rothfels, we headed out for a triangular journey in the trailless wilderness, from lake to lake to lake. For some of us, orienteering was a new skill, for others the outing gave an opportunity for review and refinement of previously learned skills.

The journey began at the Algonquin Park Wildlife Research Station on Sasajewun Lake. After a warmup hike along an old logging trail, we arrived at the Madawaska River. A couple braved the icy, brown water in bare feet, most of us exchanged hiking footwear for other shoes, and we all plunged in.

Once on the other side and ready to proceed, we calculated our first bearing, to Kathlyn Lake. We arrived there soon after and rested briefly on a sandy spot on the shore. After taking another bearing, we headed off to Longspur Lake, where we had lunch a few yards from where we had seen the skeletal remains of a moose. After eating, some of us searched for and sighted the heronry on the lake, complete with a couple of herons in residence.

Starting the previous night, Paul Rothfels, a long-time Algonquin explorer, had shared his knowledge, skills, and experience with map and compass. During lunch, he talked about the freedom that map-and-compass skills can confer on botanists. Learning to navigate through the bush means "you no longer have to be restricted to trails," he said with conviction and added, "You have been liberated." After lunch, we calculated the new heading to take us back to Sasajewun Lake and headed off.

Unlike trail hiking, which is comparatively relaxed, bush navigation demands high alertness: keeping an eye on the ground and on the sighted tree, stump, or rock; being alert for branches snapping behind the person ahead of you; and watching for shin-scraping branch stumps on fallen trees. We bushwacked uphill, downhill, around rock outcrops, and through swampy spots; always following where the compass bearing led.

Despite our attention to direction details, different group members managed to spot a few flowering wildflowers; a lot of wildlife scats; a rabbit, shrew, and live moose; and skeletal remains of two moose (one female, one male). Lucky Bill and Jennifer Kilburn spotted a marten. The most colourful fungus was a solitary Scarlet Cup (*Sarcoscypha austriaca* (formerly *S. coccinea* in Ontario) next to a small stream. No doubt, many more fungi were hidden under the leaf mulch.

The weather was perfect: a sunny, blue sky and not too cold or windy. About seven kilometres and nine hours later, we descended the slope behind the research station's cookhouse and emerged into Algonquin-style civilization. Tired, but triumphant, we had enjoyed this introduction to navigating in the wild. Our liberation from trail bondage has begun.

Judy Hernandez

FBO Trip to North Oakville

October 18th, 2003.

The final hike of the 2003 season was in an area new to nearly all of us, though not to our leader. Paul O'Hara, when a lad, had built forts here with his buddies, little thinking he'd be back as an adult to learn its botanical complexities, and then to fight for its preservation.

Sixteen Mile Creek flows more or less easterly along the bottom of a broad ravine ravaged originally by glacial meltwater. Left behind are steep north- and south-facing scarps of Queenston shale, limestone and clay (Fig. 1). These plus a sandy flood plain create a remarkable congestion of habitats within a few kilometres' space.

Our hike of scarcely more than a kilometre went upstream from a point 4.5 km above the creek's mouth, at the juncture with Highway 5. We followed the brow of the south-facing slope and thereby sampled remnant southern habitats, white oak savannah and prairie, along with deciduous forest and fragments of hemlock and red pine stands reminiscent of the north.

Figure 1. Queenston Shale exposure north of Lions Valley Park, Oakville. Photo by W.D. McIlveen.

After scaling the scarp and regaining our breath, we started in. The tableland (Fig. 2) here shared its carpet of the slender-leaved Pennsylvania Sedge (*Carex pensylvanica* Lam.) with Thin-leaved Snowberry (*Symphoricarpus albus* (L.) S.F. Blake var. albus), New Jersey Tea (*Ceanothus americanus* L.), Canada Buffalo-berry (*Shepherdia candensis* (L.) Nutt.), and some Downy Arrow-wood (*Viburnum rafinesquianum* Schultes). Dried out to fruiting stage were stands of Woodland Sunflower (*Helianthus divaricatus* L.), plus specimens of Silver-rod (*Solidago bicolor* L.), Yellow Pimpernel (*Taenidia integerrima* (L.) Drude), and Bastard Toad-flax (*Comandra umbellata* (L.) Nutt.). Wiry Chinquapin Oak (*Quercus muehlenbergii* Engelm.) trees clung to the clay and limestone scarp on our left, along with our only sighting of a young Sassafras (*Sassafras albidum* L.). While mature sassafras grew on the flood plain downstream from our hike, this one surprised us for growing here on clay.

Figure 2. Open tableland above cliff face. Photo by W.D. McIlveen.

Further on we met blueberry patches, the common Lowbush Blueberry (*Vaccinium angustifolium* Ait., but also Pale Blueberry (*Vaccinium pallidum* Ait.), a southern species identifiable by its thicker leaves. Another southern species was a patch of Carolina Rose (*Rosa carolina* L.) with its abrupt, well-spaced perpendicular thorns. While it's not rare in Ontario, its site here is not marked on the map in Soper & Heimberger (1982).

Paul pointed out the stout twigs and thick buds of the Black Oak (*Quercus velutina* Lam.), and its leaves with moderately deep sinuses.

Then to our left, the Chinquapin Oak was no more, replaced by maple-ash-red oak stands. The sandy loam here supported the attractive Broad-leaved Sedge (*Carex platyphylla* J. Carey), its blue-green leaves subtly striated with bands of a faint grey bloom (Figure 3). By contrast, a few Eastern White Pine (*Pinus strobus* L.) towered absolutely straight up at a point protected by the scarp; the experts among us estimated a height of 110 feet.

Figure 3. Broad-leaved Sedge (*Carex platyphylla* J. Carey). Photo by A. Procter.

Then the landscape changed again to a harsh, nutrient-poor open shale bluff, where gnarled Eastern White Cedar (*Thuja occidentalis* L.) grew reminiscent of the ancient trees of the Niagara Escarpment. Here at the bluff's top edge was our promised stand of native Red Pine (*Pinus resinosa* Sol. ex Ait.), consisting of one tree of perhaps 50-plus years and 7 or 8 youngsters growing near the southern limit of their range.

Figure 4. Eastern White Cedars growing on open shale slope above Sixteen Mile Creek. Photo by W.D. McIlveen.

Then we were back to forest encircling fragments of white oak savannah the size of a city front yard, and tiny stands of Big Bluestem (*Andropogon gerardii* Vitman) pushed by forest literally over the edge of the

bluff. It was easy to imagine that at one time in the past the prairie-oak savannah complex had been far more extensive, assisted perhaps by burns set by aboriginal inhabitants. Paul pointed to other open-land indicators as Hairy Beardtongue (*Penstemon hirsutus* (L.) Willd.), Northern Bedstraw (*Galium boreale* L.), Stout Goldenrod (Solidago squarrosa Muhl. ex Nutt.), and Seneca Snakeroot (*Polygala senega* L)

Then we lunched, enjoying the yellow and tawny colours of maple and oak, the pale red-wine leaves of the Maple-leaved Viburnums (*Viburnum acerifolium* L.), the yellow blooms of Witch-hazel, the orange fruit of ground Euonymus (*Euonymus obovata* Nutt.). Retracing our route, we saw again the mix of environments we had passed through.

Figure 5. Fruit of Maple-leaved Viburnum (*Viburnum acerifolium* L.). Photo by W.D. McIlveen.

Sixteen Mile Creek flows out through the centre of Oakville, well-named for its six species (Red, White, Black, Bur, Chinquapin, Swamp White) of oak to be found there. It's also home to one of the most affluent communities in all of Canada, eager to become even richer, to expand, and build and subdue much more of the land that feeds the creek. This was Paul's parting thought, making us glad at least we has seen as much this day as we had.

Alan Procter

Soper, J.H., and M.L. Heimburger. 1982. Shrubs of Ontario, Royal Ontario Museum,. Toronto, 495 pp.

Feature:

Significant Plant Records from the Herbarium of Royal Botanical Gardens (HAM): 2002.

Contribution from Royal Botanical Gardens #116.

Carl J. Rothfels (CJR), Royal Botanical Gardens

Last year (2002) was a busy year for new records here at the Royal Botanical Gardens Herbarium (HAM). Over the course of the field season we collected or processed a wide variety of regionally or provincial significant specimens (species designated SE1; SE2; S1; S2; or S3 in Newmaster *et al*. 1998).

The following list refers to 2002 collections (with some earlier collections mentioned) of species which are new regional records or are provincially significant records. These records are all represented by specimens at HAM. Non-native occurrences are indicated by an "*".

Species listed as "New for City of Hamilton" are those that are not listed in Oldham (1997), Pringle (1997), or Goodban (1995). There may be post-1995 records for some of these species of which I am unaware. Species listed as "New for Halton Region" are those that are not listed in Varga *et al*. (2000). For a more detailed account of records from Hamilton and RBG (including new RBG records) see my earlier article in the *Wood Duck*, the journal of the Hamilton Naturalists' Club (2003). The taxonomy used follows Newmaster *et al*. (1998) where applicable, with the exception of *Actaea* x *ludovici* (see Pringle 2003).

AMARANTHACEAE

**Amaranthus lividus* L.

Purplish Amaranth

New for Halton Region. Determined by J.S.Pringle, CJR. This purple-leaved amaranth is scattered irregularly around some of the parking pods at RBG Centre where it appears to be being dispersed by Canada Geese. CJR 303, D.Gugler.

APIACEAE

**Aethusa cynapium* L.

Fool's Parsley

New for the City of Hamilton and for Lambton County (Tiedje & Tiedje 2002). Fairly common along wooded paths in sections of the Devil's Punchbowl ESA, Hamilton. Also common in the floodplain of the Rock Glen Conservation Area, Lambton County. The Lambton specimen appears to be *A. cynapium* ssp. *cynapioides*. CJR 243, J. Shearer; CJR 274.

**Anthriscus caucalis* M. Bieb.

Bur-chervil

New for Halton Region and Ontario. Determined by CJR, J.S. Pringle. This species was common on disturbed ground near the parking lot for RBG's Laking Garden. Shortly after the discovery, the

site was mowed by the owner. Doh! We will track the site and see if the *Anthriscus* reappears next year. CJR 115, J.L. Reader.

Conioselinum chinense (L.) B.S.P.
Chinese Hemlock-parsley (S3)
Thirteen plants found in mossy cedar swamp south of Glen Morris, Brant County. CJR 364.

**Myrrhis odorata* (L.) Scop.
Scented Myrrhis
New for Halton Region. This large bushy carrot-relative has a strong anise smell to its foliage. It is spreading into the ravines by the RBG scent garden where it was planted. CJR 190.

ASTERACEAE

Ambrosia x *helenae* Rouleau
Hybrid Ragweed
New for City of Hamilton, and Ontario. This taxon is a hybrid between Common Ragweed (*Ambrosia artemisiifolia*) and the very-different appearing Giant Ragweed (*Ambrosia trifida*). Although the ranges of these two species overlap frequently, the hybrid is very rare. D. Gugler. HAM 15959.

**Tagetes minuta* L.
Wild Marigold
Needs to be **removed** from City of Hamilton, Ontario and Canada lists. All records of this species from Canada have been re-identified as *Artemisia biennis*. Determined CJR, J.S. Pringle. See Pringle (2002).

BALSAMINACEAE

**Impatiens glandulifera* Royle
Himalayan Balsam
New for City of Hamilton. This species is not on Goodban's checklist, but was known to have been established at RBG (in the Hendrie Valley) since the 1950s, and we also have a 1950s specimen from McMaster Ravine. We found it this year along the Hamilton/Brantford Rail Trail. This species has the potential to be invasive. CJR 278.

BRASSICACEAE

**Arabadopsis thaliana* (L.) Heynh.
Mouse-ear Cress
New for City of Hamilton. This species has apparently been missed in Goodban's checklist; our first collections date to 1957, and it is now fairly common in weedy areas around the RBG arboretum and McMaster University. CJR 25;33.

**Cardamine hirsuta* L.
Hairy Bitter-cress
New for City of Hamilton, and Halton Region. Identification verified by P.W. Ball. This small cress is a common weed of flower beds in RBG, and is also in a few other weedy locations – lawns, path edges, etc. It has a strong basal rosette, with few to no stem leaves. Four locations in Hamilton, and three in Halton. CJR 10;11;41;52;57;73;74;122;256, D. Gugler, J.L. Reader, C. Almack.

**Cardamine impatiens* L.
New for City of Hamilton. Four plants of this interesting *Cardamine* were found around the RBG boathouse. Origin unknown, but apparently not planted. CJR 88.

**Coronopus didymus* (L.) J.E.Sm.
Lesser Wart-cress
New for RBG and City of Hamilton. Determined by J.S. Pringle. This bizarre-looking little mustard is a common weed in some of the Rock Garden flower beds. CJR 71.

CARYOPHYLLACEAE

Cerastium pumilum Curtis
Dwarf Chickweed
New for City of Hamilton, and Halton Region. Identification verified by J.K. Morton. This small annual chickweed is very similar to *Cerastium semidecandrum* and is rarer and probably overlooked. One record from Westdale, and one record from the RBG Rose Garden lawn. CJR 288; 430.

**Sagina procumbens* L.
Bird's-eye
New for City of Hamilton. This tiny flower grows in cracks in paving stones, the edges of roads, and other exposed inhospitable sites. We collected it from four sites in Hamilton this year, and it is common to uncommon in driveways in the Westdale area (I saw it several times while looking for a house to rent: a classic botanizing opportunity). CJR 87; 89; 110; 132, J.L.Reader, J.C. Shearer.

**Vaccaria hispanica* (Miller) Rauschert
Spanish Cowherb
New for City of Hamilton. This species was overlooked in Goodban's checklist. We have a Burgess specimen from 1888, which he collected along the railway between Hamilton and Dundas. It has apparently not been collected since. Burgess. HAM 11573.

CYPERACEAE

Carex sychnocephala J.Carey
Dense Long-beaked Sedge
Second City of Hamilton record. At the edge of a seasonal pond in the Milgrove Loam Pits fen. Ironically, research at HAM after the discovery unearthed a previously overlooked *C. sychnocephala* specimen from the same location, collected in 1957 by F. Caesar. J.S. Pringle, CJR 268.

Carex trisperma Dewey var. *billingsii* Knight
Billings' Sedge
New for City of Hamilton. This taxon is common in the Copetown Bog, where it has apparently been

collected previously (Bill Crins, pers. comm.), but it is not on Goodban's checklist. At Copetown it co-occurs with the more commonly found *Carex trisperma* var. *trisperma*, but is relatively easily separated by its filiform leaves and smaller spikelets and perigynia. Researchers at the University of Michigan are looking at the relationship between these two taxa, and attempting to determine whether *C.t.* var. *billingsii* warrants elevation to species status. CJR 277.

Carex x *subviridula* (Kükenth.) Fern.
Hybrid Greenish Sedge
New for City of Hamilton. Determined by J.S.Pringle, CJR. *Carex* x *subviridula* is the hybrid offspring of *C. viridula* and *C. flava*. It is fairly common at the Milgrove Loam Pits fen, where it occured with *C. flava*, *C. viridula*, and *C. cryptolepis*. CJR 377; 381; 382, J.S. Pringle.

Cladium mariscoides (Muhlenb.) Torr.
Twig-rush
New for City of Hamilton. This tall sedge looks similar to the true rushes – *Juncus* spp., and is dominant in sections of the Milgrove Loam Pits fen. CJR 264.

Cyperus diandrus Torr.
Small Cyperus
New City of Hamilton. A small *Cyperus*, very closely related to *C. bipartitus*, this species was abundant in a dwarf form on the south shore of West Pond. CJR 299; 300, T. Sword.

Cyperus erythrorhizos Muhlenb.
Red-rooted Cyperus (S3)
Found on the edge of a large vegetated mudflat at the west end of Cootes Paradise, close to where it was collected by Justus Benckhuysen in 1992 (HAM 10633). It has also been found near the Hamilton Beach Strip by Michael Oldham in 1995 (HAM 10675). CJR 357.

EUPHORBIACEAE

**Euphorbia helioscopia* L.
Sun Spurge
New for City of Hamilton. It was overlooked on Goodban's checklist; the first Hamilton record in HAM is from 1889.

FABACEAE

**Anthyllis vulneraria* L.
Lady's Fingers
New for City of Hamilton. Fairly common, but local, in disturbed ground (a pipeline right-of-way) in the Beverly Swamp ESA. Later discovered independently by D. Gugler. CJR 143.

Desmodium cuspidatum (Muhl. ex Willd.) DC. ex Louden var. *cuspidatum*
Large-bracted Tick-trefoil (S3)
At least fifteen plants in one patch near the Spottiswood Lakes, Brant County. CJR 388.

**Trifolium arvense* L.
Rabbit-foot Clover
New for City of Hamilton. An uncommon weed, it was found at the top end of Dundas Valley around a cornfield. D. Gugler. HAM 16134.

GENTIANACEAE

**Centaurium erythraea* Rafn.
Common Centaury (SE2)
Common on the west side of the Strathroy sewage lagoons and rare in a gravel pit near Lieury. Both sites in Middlesex County. CJR 201;333.

GERANIACEAE

**Erodium cicutarium* (L.) L'Her. ssp. *cicutarium*
Stork's-bill
Second to seventh City of Hamilton records. This close relative of the geraniums has pinnately divided leaves. It often grows as a weed in large lawns where it forms a pink fuzz when in bloom. Overlooked. CJR 13;18;23;134;141.

HIPPOCASTANACEAE

**Aesculus glabra* Willd. var *glabra*.
Ohio Buckeye
New for Halton Region. We made one collection from the Halton portion of RBG properties of a small sapling growing in our nature sanctuaries, far from any cultivated areas. It is also planted in the Hickory Valley area of our Hamilton properties, and appears to be spreading at that location. Finally, Megan Ogilvie and Albert Garofalo found a naturalized individual in Hamilton's Red Hill Valley. CJR 16; 643; HAM 16222.

**Aesculus hippocastanum* L.
Horse Chestnut (SE2)
We made four collections of this species this year. It appears to spread relatively easily into ravines and other forested areas adjacent to residential areas, where it is frequently planted. Presumably the seeds are spread by squirrels. CJR 17;27;124;155.

**Aesculus pavia* L.
Red Buckeye
New for City of Hamilton, and Ontario. Over ten young trees were found naturalized in the Red Hill Creek Escarpment Valley. M. Ogilvie, A. Garofalo. *et al*. HAM 16221.

LAMIACEAE

Lycopus asper Greene
Western Bugleweed
New for City of Hamilton and Halton Region. This species was overlooked by Goodban; the first Hamilton records date from 1957. In 2002 we found it in Halton, as well – on the Christmas tree barrier in Pond One, and alongside Grindstone

Creek under the Plains Road bridge. CJR 314; 415; 416, I.Vaithilingam.

**Melissa officinalis* L. ssp. *officinalis*
Lemon-balm
New for City of Hamilton. One clump in the south shore area of Cootes Paradise. It was growing alongside a small path in a wooded ravine-top, with other weeds. CJR 292.

LILIACEAE

**Allium sativum* L.
Garden Garlic
New for City of Hamilton. Fairly common, local, in a dry beach community on the west side of Carroll's Bay. CJR 315, I.Vaithilingam.

**Allium vineale* L. ssp. *vineale*
Field Garlic
New for City of Hamilton. Abundant, local, on weedy slopes at Kay Drage Park. CJR 236.

MALVACEAE

**Hibiscus moscheutos* L. ssp. *moscheutos*
Swamp Rose-mallow
New for City of Hamilton. This species is a rare native wetland species, but is also commonly planted as an ornamental. This record is almost certainly of non-native origin as the plants were growing at the base of the highway embankment in a weedy, dry site. CJR 313.

NAJADACEAE

**Najas minor* All.
Brittle-leaf Naiad (SE2)
First found by Melinda Thompson in 1999, this species is now abundant in several of the sheltered areas of Cootes Paradise. Definitely an invasive to keep an eye on.

PAPAVERACEAE

**Macleaya cordata* (Willd.) R. Br.
Plume-poppy
New for RBG and City of Hamilton. Determined by J.S.Pringle. This is a large plant occasionally planted as an ornamental. Its occurrence on the east shore of Cootes Paradise is mysterious – it could be a persistent population (but from what?) or it could be spontaneous. CJR 318.

POACEAE

Ammophila breviligulata Fern.
Beach Grass (S3)
A "good-sized" colony was found by A. Garafolo and M. Ogilvie in the Stoney Creek Ravine at its outlet into Lake Ontario. HAM 15548.

**Poa bulbosa* L.
Bulbous Blue Grass
New for City of Hamilton. The City of Hamilton record is from 2000 (CJR 281) and we found this taxon again in 2002 by the Laking Garden parking lot. This *Poa* is a strange one with most of its spikelets having been converted into bulblets that germinate while they're still on the plant. CJR 273, J.L. Reader.

Bulbous Blue Grass (*Poa bulbosa* L.) inflorescence. Photo by Carl Rothfels.

**Poa nemoralis* L.
Woodland Blue Grass
The abundant *Poa* in areas of the south shore trail (especially the Sassafras Point area) was identified as this non-native species, a surprising and alarming determination. *Poa*s are difficult, and this determination should be verified. CJR 294.

**Sorghum bicolor* (L.) Moench ssp. *bicolor*
Sorghum
New for City of Hamilton. This tall corn-like grass was growing with other weeds on freshly disturbed ground at the RBG compost facility. CJR 317.

**Triticum aestivum* L.
Summer Wheat
New for City of Hamilton. Overlooked in Goodban's checklist; there are two records from Cootes Paradise in the 1950s in HAM. I found it along the railway tracks in the Devil's Punch Bowl ESA. It is probably widespread around fields and railway tracks (it falls off the wheat cars). CJR 151.

POLEMONIACEAE

**Phlox paniculata* L.
Garden Phlox (SE2)
This species was common in a meadow community near the Copetown Bog, Hamilton. CJR, I. Vaithilingam 308.

POLYGONACEAE

Polygonum arifolium L.

Halberd-leaved Tearthumb (S3)

Common on the north side of the Lynn Valley Road, Haldimand-Norfolk County. CJR 210.

RANUNCULACEAE

Actaea x *ludovici* B.Boivin

Hybrid Baneberry

One clump found in the Devil's Punchbowl ESA, with both parental species in close proximity. Note that "*ludovici*" is the proper epithet, not "*ludovicii*" (Pringle 2003). CJR 305.

Hydrastis canadensis L.

Goldenseal (S2)

As this is a threatened species, the location has not been published. Lambton County. CJR 272.

SCROPHULARIACEAE

Mimulus alatus Aiton

Winged Monkeyflower (S2)

Rare in vicinity of Frenchman's Creek, Fort Erie. This site was (is?) under threat of destruction for suburban development. There was also a large population of Green Dragon (*Arisaema dracontium* (L.) Schott) nearby. CJR, N.R. Harper, P. Foebel 261.

**Veronica filiformis* Sm.

Hair-like Speedwell

Second Hamilton record. First found by D. Gugler at McMaster, and I later found a small patch in Cootes Paradise by Cootes Drive and Spencer Creek. One of the rarer weedy *Veronica* spp. here. D. Gugler, CJR. CJR 48. HAM 15075.

**Veronica persica* Poir.

Persian Speedwell

New for City of Hamilton. Overlooked on Goodban's checklist; the first Hamilton record in HAM is from the nineteenth century. We collected this species twice, but it is widespread. CJR 15; 123, A. Garofalo, M. Ogilvie *et al*.

**Veronica polita* Fr.

Wayside Speedwell

New for City of Hamilton, and Halton Region. This species has been overlooked, perhaps because of its similarity to *Veronica persica* Poir. We collected it five times from City of Hamilton and twice from Halton Region. CJR 28; 29; 30; 45; 46; 49; 111, T.W. Smith, D. Gugler.

SMILACACEAE

Smilax rotundifolia L.

Catbrier (S2)

Just west of Niagara Falls, on Garner Road south of Hwy 20, Niagara Region. P.G. O'Hara, G. Meyers; HAM 16237.

SOLANACEAE

**Physalis alkekengi* L.

Chinese Lantern (SE2)

Around seven kilometres east of Dashwood, Huron County. Common as a large robust patch along the gravel roadside. CJR 347.

**Datura stramonium* L.

Jimsonweed

New for City of Hamilton. This species, responsible for the poisonings (none fatal, that I know of) of several young people in the Hamilton and Kitchener/Waterloo areas this year, is locally common in highly disturbed sites. CJR 260; 293, J.S. Pringle, N.R. Harper.

VERBENACEAE

**Verbena bonariensis* L.

Purpletop Vervain

New for RBG, Halton Region, and Ontario. One plant of this striking species was found on the Osprey Marsh Christmas tree barrier. The rows of old Christmas trees were placed in the mud to prevent carp from travelling from Grindstone Creek into Osprey Marsh. It might have arrived in the treads of the machinery used to place the trees in the winter. This species in not in the RBG cultivated plants database, and thus has theoretically never been planted on RBG property. I did find one plant of this species at the Childrens' Garden in Westdale (not operated by RBG). CJR 435, I.Vaithilingam.

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Publication Notice:

Riley, J.L. 2003. Flora of the Hudson Bay Lowland and its Postglacial Origins Description. National Research Council of Canada No. 44464, Ottawa. 237 pp.

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Silverweed (*Potentilla anserina* L.) following fissures in limestone bedrock. Photo by Ed Morris, Misery Bay Provincial Nature Reserve, Manitoulin Island, May 2003.