

Significant Vascular Plant Records from the Hamilton Area, Ontario

CARL ROTHFELS

Royal Botanical Gardens, 680 Plains Road W., Burlington, Ontario L7T 4H4 Canada

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Four additions to the known vascular flora of Ontario (*Aesculus pavia*, *Ambrosia* × *helena*, *Anthriscus caucalis*, *Verbena bonariensis*) and ten other provincially significant records are discussed. Of the 14 taxa listed, two (*Actaea* × *ludovici* and *Ambrosia* × *helena*) are native.

Key Words: adventive species, flora, rare species, distribution, Hamilton, Halton, Ontario.

Field and herbarium work centred around Royal Botanical Gardens on the border between Hamilton and Burlington, Ontario (43°29.00'N, 79°88.00'W), has resulted in the following 16 provincially significant vascular plant records in 2002. For locally significant records, see Rothfels (2003). All records are supported by specimens in the Royal Botanical Gardens herbarium (HAM).

Taxa preceded by an asterisk (*) are not native to the Hamilton Region. Taxon names are followed by their subnational rank (Srank) as of 1998, where applicable (see Newmaster et al. 1998). An Srank of S1 indicates a very rare native taxon, with generally five or fewer occurrences in Ontario; a rank of SE1 is similar, but refers to a non-native taxon; and a rank of SEH (historical) indicates a non-native species that has typically not been recorded in Ontario in the past 20 years (Newmaster et al. 1998). The names used follow Kartesz and Meacham (1999*).

Actaea × *ludovici* B.Boivin. **Hybrid Baneberry** S1
RANUNCULACEAE

One clump of this hybrid was collected from the Devil's Punchbowl Environmentally Significant Area, in Hamilton (43°11.80'N, 79°38.50'W). Both parental species (*Actaea rubra* (Aiton) Willd. and *Actaea pachypoda* Ell.) were in close proximity. Despite the overlapping ranges of the parental taxa, the hybrid is rare (Voss 1985), perhaps due to differing phenology (Pringle, personal communication). In Canada, it is recorded from Ontario and Quebec (Kartesz and Meacham 1999*). (*C. J. Rothfels* 305).

* *Aesculus pavia* L. **Red Buckeye** HIPPOCASTANACEAE

This species is an addition to the flora of Ontario (Newmaster et al. 1998). Over ten young trees were found naturalized in the Red Hill Creek escarpment valley, City of Hamilton, by Megan Ogilvie and Albert Garofalo. These plants are likely spreading from trees planted in 1927 (Bruce Duncan, personal communication). A species of the southern United States, it reaches its northern limit in Kentucky, West Virginia, and southern Illinois (Kartesz and Meacham 1999*). It differs from *A. glabra* Willd. and *A. hippocastanum*

L., the other two species reported from Ontario, by its smooth fruit (Edmondson 1997), among other features. It is, due to its reddish flowers, perhaps most likely to be confused with the frequently-planted *Aesculus* × *carnea* Hayne, which differs in its size (*A. pavia* is a small tree or large shrub, *A. ×carnea* is a large tree), leaf shape (*A. pavia* has lanceolate leaves unlike the obovate leaves of *A. ×carnea*) and petal shape (*A. pavia* has dissimilar petals with two broad lateral petals and two long-stalked spoon-shaped petals; all petals of *A. ×carnea* are large and shaggy) (Kruszman 1984). (*M. Ogilvie, A. Garofalo et al. s.n.*; HAM 16221).

* *Aethusa cynapium* L. **Fool's-parsley** SE1 APIACEAE

This species was found new for both the City of Hamilton (Goodban 1995) and Lambton County (Tiedje and Tiedje 2002) in 2002. In Hamilton, it is fairly common along wooded paths along the base of the Niagara Escarpment in the Devil's Punchbowl Environmentally Significant Area (43°12.20'N, 79°40.70'W). The Hamilton specimen was determined only to the specific level. The Lambton County specimen was determined as *A. cynapium* ssp. *cynapioides* (M. Bieb.) Nyman, the larger woodland subspecies (using Tutin 1968) and it was common on the Ausable River floodplain in the Rock Glen Conservation Area (43°05.10'N, 81°06.80'W). *Aethusa cynapium* has been found in the Great Lakes States, and in Quebec, New Brunswick, and Nova Scotia (Kartesz and Meacham 1999*). The early Canadian reports describe this species as a garden weed "introduced with garden seeds from Europe" (Macoun 1883), and list it from Hastings and Northumberland Counties in Ontario, and as "occasional" in New Brunswick (Macoun 1883). (*J. Rothfels & J. Shearer* 243; *C. J. Rothfels* 274).

* *Amaranthus blitum* L. **Purplish Amaranth** SEH
AMARANTHACEAE

This species is new for Halton Region (Varga et al. 2000). A purple-leaved amaranth, it is scattered irregularly in the lawns at Royal Botanical Gardens Centre (43°17.40'N, 79°59.70'W) where it appears to be dispersed by Canada Geese. Scoggan (1978) reports this species as introduced in waste ground in Elgin County,

Huron County, and Waterloo Regional Municipality in Ontario, and from Masson, Montreal and Quebec City in Quebec. (*C. J. Rothfels & D. Gugler 303*).

Ambrosia × *helenae* Rouleau **Hybrid Ragweed**

ASTERACEAE

This taxon is an addition to the flora of Ontario (Newmaster et al. 1998). It is a hybrid between Common Ragweed (*Ambrosia artemisiifolia* L.) and Giant Ragweed (*Ambrosia trifida* L.). Although the ranges of these two species overlap frequently, the hybrid is very rare (Wagner 1958). It was collected along the north shore trails of the Cootes Paradise Nature Sanctuary in Hamilton (43°16.90'N, 79°54.10'W). The type locality is in Quebec (Wagner 1958), and it has also been found in Michigan, New York State, and Ohio (Kartesz and Meacham 1999*). (*D. Gugler s.n.: HAM 15959*).

* *Anthriscus caucalis* M. Bieb. **Bur-chervil** APIACEAE

This species is an addition to the flora of Ontario (Newmaster et al. 1998). It was abundant on disturbed ground near the Royal Botanical Gardens' Laking Garden (43°17.50'N, 79°53.30'W). Shortly after the discovery, the site was mowed by the owner. This species is known in Canada only from Nova Scotia, but is scattered widely across the United States (Kartesz and Meacham 1999*), and is easily distinguished from its more common congener (*A. sylvestris* (L.) Hoffm.) by the hooked hairs on the fruit (e.g., Gleason and Cronquist 1991). (*C. J. Rothfels & J. L. Reader 115*).

* *Anthyllis vulneraria* L. **Lady's-fingers** SE1

FABACEAE

This species is new for the City of Hamilton (Goodban 1995). It was fairly common, but local, in disturbed, weedy, poorly drained ground (a pipeline right of way) in the Beverly Swamp Environmentally Significant Area (43°21.10'N, 80°06.80'W). It has been reported from British Columbia, Ontario, Quebec, Newfoundland, and New Brunswick (Kartesz and Meacham 1999*). Scoggan (1978) notes that it is "locally introduced into clover fields and waste places," a description that concords closely with this report, and lists records from Oxford, Waterloo and Wellington Counties in Ontario, from "slaty banks of the Restigouche River near Matapedia" in Quebec, and from Newcastle in New Brunswick. (*C. J. Rothfels 143*).

* *Cardamine impatiens* L. **Narrow-leaved Bittercress**

SE1 BRASSICACEAE

This species is new for the City of Hamilton (Goodban 1995). Four plants were found along the north shore of the Cootes Paradise Nature Sanctuary, near a small boat-storage facility, along a partially disturbed forest edge (43°16.90'N, 79°54.00'W). This is an upright *Cardamine*, with distinctly auriculate pinnately-divided leaves (e.g. Voss 1985). Mulligan (2002) only saw a single Canadian specimen, collected by J. M.

Weber in 1980 for Port Credit, Ontario, and notes that this species is "sporadic and uncommon" in the United States. This species was not listed by Scoggan (1978). (*C. J. Rothfels 88*).

* *Coronopus didymus* (L.) J.E.Sm. **Lesser Wart-cress**
SE1 BRASSICACEAE

This strange little mustard is new for the City of Hamilton (Goodban 1995). It is a common weed in some of the Royal Botanical Gardens' Rock Garden flower beds (43°17.20'N, 79°53.60'W). This is the second confirmed record for Ontario (Oldham personal communication). It first established a foothold in the east — Scoggan (1978) lists five counties in Nova Scotia and two in New Brunswick containing this species — but it also occurs across the country (a single record each in British Columbia, Alberta, Quebec, and Newfoundland (Scoggan 1978). The first Canadian records are from Gaspé Basin, Quebec, and North Sidney, Nova Scotia, in 1862 and 1883, respectively (Mulligan 2002). *Coronopus didymus* can be differentiated from *Coronopus squamatus* (Forssk.) Aschers. (which is also weedy) by its wrinkled cordate fruits that are notched at the summit. The fruits of *C. squamatus* are conspicuously apiculate at the summit (e.g. Holmgren 1998). (*C. J. Rothfels 71*).

* *Euonymus fortunei* (Turcz.) Hand.-Mazz. **Wall-creeper** SE1 CELASTRACEAE

This species has been known from Royal Botanical Gardens' sanctuary lands for several years (Smith 2003), but has not been collected until this year. It is widespread but local in the Cootes Paradise Nature Sanctuary, where it occasionally forms small dense patches on the oak-hickory slopes (43°16.20'N, 79°55.10'W). It seems to be increasing in southern Ontario, and may become a problem in some natural areas (Oldham, personal communication 2003). (*C. J. Rothfels 235*).

* *Macleaya cordata* (Willd.) R. Br. **Plume-poppy**
SEH PAPAVERACEAE

This species is new for the City of Hamilton (Goodban 1995). This large plant is occasionally planted as an ornamental. Its occurrence on the east shore of the Cootes Paradise Nature Sanctuary (43°16.80'N, 79°53.50'W) is mysterious; it could be a persistent population from some unknown source or it could be "spontaneous". Voss (1985) describes it as "seldom escaping" in Michigan, and Scoggan (1978) lists it as a "garden escape" that is "scarcely established" in Norfolk County in Ontario and Missisquoi County in Quebec. (*C. J. Rothfels 318*).

* *Myrrhis odorata* (L.) Scop. **Scented Myrrhis** SE1
APIACEAE

This large umbellifer is new for Halton Region (Varga et al. 2002). It is escaping from the Royal Botanical Gardens' Scented Garden into the neighboring

ravines (43°17.50'N, 79°52.60'W). Currently, its spread is limited, and will be tracked in future years. It is reported from two other Ontario locations: St. Thomas, Elgin County, and Manitoulin Island, Manitoulin District (Pringle 1994); as well as from British Columbia, Nova Scotia, Michigan, Pennsylvania, and Oregon (Kartesz and Meacham 1999*). The smooth fruit and large size help differentiate this species from the native *Osmorhiza* species (Pringle 1994). (*C. J. Rothfels* 190).

* *Sorghum bicolor* (L.) Moench ssp. *bicolor*. **Sorghum** SE1 POACEAE

This species is new for the City of Hamilton (Goodban 1995). It was common with other weeds on freshly disturbed ground at the Royal Botanical Gardens' outdoor compost facility (43°17.10'N, 79°53.70'W). It has been found in Quebec and most U.S. states, and is a noxious weed in three states (Kartesz and Meacham 1999). (*C. J. Rothfels* 317).

* *Verbena bonariensis* L. **Purpletop Vervain** VERBENACEAE

This species is an addition to the flora of Ontario (Newmaster et al. 1998). One plant was found on the Osprey Marsh Christmas tree carp barrier (a row of old Christmas trees erected in the mud to prevent carp from travelling from Grindstone Creek into Osprey Marsh), in the Hendrie Valley Nature Sanctuary, Halton Region (43°17.40'N, 79°52.90'W). It might have arrived in the treads of the machinery used to place the trees in the winter. This species is not in the Royal Botanical Gardens' cultivated plants database, and thus has theoretically never been planted on RBG property. One individual of this species was seen at the Childrens' Garden in Westdale (not operated by RBG) in 2002, approximately 3.5 km from the Osprey Marsh population. This species is introduced to the southern States, and has also been reported from Oregon, New York State, New Jersey, and New Hampshire (Kartesz and Meacham 1999*). It has not been reported from Canada. (*C. J. Rothfels* & *I. Vaithilingam* 435). A previously-overlooked specimen was also uncovered at HAM. It is an undated specimen from a "river bank" at "Lake Erie," and was identified by J. S. Pringle in 1964 (*K. Stanley s.n.*). In light of the 2002 discovery, it seems reasonable that this record could also have been "spontaneous".

Discussion

The eight taxa found new for Hamilton add to the current published list of 1304 species (Goodban 1995), and the four new taxa for Halton bring that region's tally to 1305 (Varga et al 2000). Additionally, four of the taxa are new for Ontario. Twelve of the fourteen records discussed are non-native occurrences, several of which, especially *Aethusa cynapium*, *Euonymus fortunei*, and *Sorghum bicolor*, should be watched for invasive tendencies.

Acknowledgments

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