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Establishment of regional herbarium leads to more than 200 new flora atlas records for New York State[1]

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MARTINE, C. T. (Department of Biology, Bucknell University, Lewisburg, PA 17837) AND M. E. WARD (Department of Biological Sciences, SUNY Plattsburgh, Plattsburgh, NY 12901). Establishment of regional herbarium leads to more than 200 new flora atlas records for New York State. J. Torrey Bot. Soc. 140: 125–131. 2013.—Loss of small herbaria is an unfortunate global trend and initiation of new collections at small academic institutions is an increasingly rare occurrence. In 2006, a new herbarium was established at the State University of New York College at Plattsburgh. The PLAT herbarium has since grown to more than 7,000 specimens, many of them representative of the flora of northeastern New York (especially Clinton County). Previous to 2006, this region was without a recognized herbarium, the nearest in-state collections being more than 150 miles away. Although botanists have previously worked in the region, relatively few plant species were recorded for Clinton County by the New York Flora Atlas—a resource providing species distribution records based on specimens accessioned in herbarium collections. Given the dearth of available distribution data for Clinton County (including the eastern Adirondack Mountains and the western Lake Champlain valley), this project sought to provide records of previously unreported species by comparing NY Flora Atlas maps with current holdings. 203 species will now be added to the NY Flora Atlas for Clinton County, roughly half of those considered exotic. This exercise has amplified the importance of supporting and maintaining small regional herbaria as repositories of valuable biodiversity information. Likewise, this project also highlights the enduring value of training in floristics and taxonomy.

Key words: Adirondack Mountains, Clinton County, education, floristics, herbarium, invasive species, Lake Champlain.

The value of herbarium collections as tools for research has certainly been supported in the recent botanical literature. The last two decades have witnessed numerous studies using plant specimens to correlate shifts in phenological patterns with climate change (Primack et al. 2004, Lavoie and Lachance 2006, Gallagher et al. 2009, Wernberg et al. 2011, Panchen et al. 2012), document arrival and spread of exotic species (Stadler et al. 2002, Heubner 2003, Lavoie et al. 2007, Martine et al. 2008, Crawford and Hoagland 2009, Aikio et al. 2010), determine plant species distributions (Elith and Leathwick 2007), measure local shifts in plant biodiversity (Gimaret-Carpentier et al. 2003, Dolan et al. 2011), define conservation needs (Norton et al. 1994, MacDougall et al. 1998, Lienert et al. 2001, Willis et al. 2003, Rivers et al. 2011), and identify evolutionary processes (Mukherjee et al. 2011).

The importance of biological collections to science has not, however, been reflected in the levels of institutional support provided for many herbaria (Dalton 2003). In particular, over the last half-century numerous herbaria held by smaller institutions have been shuttered, disposed of, or transferred to larger institutions; and small collections that have held on often face challenges associated with limitations in staffing and/or a lack of dedicated funds (Snow 2005, Prather et al. 2008).

The state of New York has been especially affected by apathy related to botanical collections, in part due to a decline in botany instruction across the state (Steve Young, pers. comm.). While collections at smaller private colleges appear to be at most risk (including St. Bonaventure, Colgate, Union College and Vassar College), even large herbaria are vulnerable. The herbarium at the New York State Museum in Albany is at particular risk as the current curator, Dr. Charles Sheviak, prepares for retirement and uncertainty

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abounds regarding whether a replacement will be hired. Recent history does not inspire optimism: The NY State Botanist position has gone unfilled for a decade and the Department of Environmental Conservation discontinued funding rare plant research (through the Natural Heritage Program) in 2008. Meanwhile, as collections decline in New York and elsewhere, the establishment of new herbaria has been almost unheard-of.

In 2006, the State University of New York (SUNY) College at Plattsburgh established the SUNY Plattsburgh Herbarium (PLAT), the first formal herbarium in the history of the campus, with funding from the College of Arts and Sciences and the Department of Biological Sciences. The nearest recognized in-state herbarium collections are held at the New York State Museum (ca. 160 miles away) and SUNY College of Environmental Science and Forestry, Syracuse (ca. 230 miles away), making PLAT, as the only herbarium in the northeastern corner of New York, an immediately important regional repository for records of local plant diversity. The region is geologically and floristically diverse, particularly Clinton County - where one can begin the day in the shallows and wetlands of Lake Champlain and end it on an Adirondack Mountain peak. The county is split between two ecoregions, the St. Lawrence–Champlain Valley ecoregion and the Northern Appalachian–Boreal Forest ecoregion. Within the Clinton County sections of these ecoregions, numerous ecological communities (as per Edinger et al. 2002) persist, from sand beach and shoreline outcrop communities in the east to pitch pine-heath barrens and sandstone pavement barrens in the west.

Although botanists have previously worked in the region, relatively few plant species (even some that are widely abundant) were recorded for Clinton County by the New York Flora Atlas (Weldy and Werier 2012)—a resource providing species distribution records based on specimens accessioned in herbarium collections. Establishing atlas records for Clinton County thus became a primary focus in building and expanding the holdings of the SUNY Plattsburgh Herbarium. This effort included targeted collecting of selected groups, course-based student collection projects, preparation of vouchers linked to local botanical research projects, and the accession of local collections made by collectors before PLAT was initiated.

In January 2012, six years after PLAT was established, we began a study aimed at providing records of previously unreported species by comparing NY Flora Atlas maps with current PLAT holdings. 7,267 plant specimens (everything held by PLAT as of 26 May 2012) were checked for locality information and entered into a database if determined to be collections from Clinton County. Species representing potential new records in the Atlas were also checked against the PLANTS Database (USDA, NRCS 2012) and evaluated for current conservation status.

Based on current holdings at PLAT, 203 species have been added to the NY Flora Atlas for Clinton County. Of the 203 new species records, all but 14 were collected during two time periods: 1985–1988 and 2006–present. While the latter period corresponds with the directed building of the PLAT collection, the period from 1985–1988 primarily represents the efforts of a single student, Larry MacArthur. Mr. MacArthur took on the task of building a teaching collection for the Field Ecology course offered by SUNY Plattsburgh through the W. H. Miner Research Institute in Chazy, NY, under the direction of Dr. Kenneth Adams. Dr. Adams transferred that collection to PLAT in 2007.

While many of the new records are common species that simply lacked voucher specimens, others are notable additions. Included among the new records are two state listed endangered species [*Eleocharis ovata* (Cyperaceae) and *Blephilia ciliata* (Lamiaceae)]; three threatened species, [*Bidens beckii* (Asteraceae), *Potamogeton hillii* (Potamogetonaceae), *Rhododendron canadense* (Ericaceae)]; one rare species [*Polemonium vanbruntiae* (Polemoniaceae)]; and ten species listed as exploitably vulnerable. Of the plants we report, 91 are listed as exotic in New York; 23 of these considered to be regionally invasive by the Invasive Plant Atlas of New England (Mehrhoff et al. 2003).

Numerous additional taxa will be added to the NY Flora Atlas for Clinton County (and adjacent counties) as PLAT continues to expand its holdings, a likelihood given SUNY Plattsburgh's recent commitment to move the collection to a new and larger facility in 2013–2014. Additional habitat-wide assessments (Martine et al. 2009, Shearman 2011) are needed, just as they are over much of the Northeast, and are likely to be a most efficient

manner with which to complete a comprehensive flora list for this botanically rich New York County.

The ongoing establishment of new Atlas records has amplified the importance of supporting and maintaining small regional herbaria as repositories of valuable biodiversity information and offers further evidence that local plant collecting is still an integral element of plant biodiversity research (as per Prather et al. 2004). As affirmed by the contributions of L. MacArthur, as well as other SUNY Plattsburgh students who have contributed specimens, this project highlights the enduring value of mentoring in floristics and taxonomy and the central role that herbaria can play in inspiring meaningful student research (Schelling et al. 2011, Shearman 2011, Edelstein and Martine 2012, Martine and Quarta 2012).

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List of Native, Naturalized and Escaped Vascular Plants added to the New York Flora Atlas for Clinton County, New York

List is arranged by representative group (Lycophytes, Monilophytes, Monocots, Dicots), then alphabetically by family (reflecting those used by Weldy and Werier 2012). Thereafter, each record is listed by species name and authorities (as per Weldy and Werier 2012); PLAT accession number; collector (CTM = Chris Martine; GKG = G.K. Gruendling; G&B = G. Gruendling and D. Bogucki; KA = Kenneth Adams; LM = Larry J. MacArthur; PSM = J. Post, M. Soranno, C. Martine; TS = Timothy Shearman) and collector number (sn = without number); Nativity: N = native to New York, E = exotic, EI = exotic invasive; and New York conservation status (if on a state list).

LYCOPHYTES

Lycopodiaceae

Dendrolycopodium obscurum (L.) A. Haines, 6247, S. Walck sn, N (exploitably vulnerable)

Lycopodium lagopus (Laest. & Hartm.) Zins ex Kuzen.-Proch., 6250, LM sn, N

MONILOPHYTES

Equisetaceae

Equisetum hyemale L. ssp. *affine* (Engelm.) Calder & Taylor, 6303, K. King sn, N

Thelypteridaceae

Phegopteris hexagonoptera (Michx.) Fée, 6671, CA Caswell sn, N (exploitably vulnerable)

Woodsiaceae

Athyrium filix-femina (L.) Roth ex Mertens ssp. *angustum* (Willd.) Clausen, 6443, PSM 3, N (exploitably vulnerable)

Deparia acrostichoides (Sw.) Kato, 6444, KA sn, N (exploitably vulnerable)

MONOCOT ANGIOSPERMS

Acoraceae

Acorus americanus (Raf.) Raf., 6, CTM sn, N

Alismataceae

Alisma gramineum Lej., 62, GKG sn, N

Alisma subcordatum Raf., 7049, TS 83, N

Alisma triviale Pursh., 77, KA sn, N

Asparagaceae

Polygonatum odoratum (Mill.) Druce, 7262, CTM 1807, E (escaped)

Cyperaceae

Carex cephaloidea (Dewey) Dewey, 7158, PSM 6/5B, N

Carex grisea Wahlenb., 1821, PSM 6/12, N

Carex michauxiana Boeckl., 1963, G. Dolphin sn, N

Eleocharis ovata (Roth) Roemer & J.A. Schultes, 2172, G. Dolphin sn, N (endangered)

Eriophorum vaginatum L., 2197, LM sn, N

Eriophorum virginicum L., 2204, G. Dolphin sn, N

Iridaceae

Iris pseudacorus L., 7267, CTM 1811, EI

Juncaceae

Juncus effusus L., 3086, KA sn, N

Liliaceae

Erythronium americanum Ker.-Gawl. ssp. *americanum*, 3324, E. Bradshaw 7, N

Lilium canadense L. ssp. *canadense*, 3331, LM sn, N (exploitably vulnerable)

Streptopus amplexifolius (L.) DC., 6964, E. Edelstein 1, N

Streptopus lanceolatus (Ait.) Reveal, 3345, LM sn, N

Lemnaceae

Spirodela polyrrhiza (L.) Schleid., 6973, TS 7, N

Orchidaceae

Platanthera psycodes (L.) Lindl., 3702, LM sn, N (exploitably vulnerable)

Poaceae

Alopecurus myosuroides Huds., 3870, LM sn, E

Alopecurus pratensis L., 7184, KA & PSM 6/25A, E

Brachyelytrum aristosum (Michx.) Trel., 7144, PSM 6/27A, N

Dactylis glomerata L., 4000, PSM E:F 6/12, E

Hordeum murinum L. ssp. *leporinum* (Link) Arcang., 4141, LM sn, E

Panicum virgatum L., 4282, LM sn, N

Phragmites australis (Cav.) Trin. ex Steud., 4286, LM sn, EI
Phleum pratense L. ssp. *pratense*, 4293, LM sn, E
Poa alsodes A. Gray, 4306, PSM 17, N
Setaria faberi Herrm., 4351, LM sn, E
Zizania aquatica L. var. *aquatica*, 4420, CTM 1515, N

Pontederiaceae

Pontederia cordata L., 4571, G&B sn, N

Potamogetonaceae

Potamogeton richardsonii (Benn.) Rydb., 4632, G&B sn, N
*Potamogeton hill*ii Morong, 6995, TS 29, N (threatened)

Typhaceae

Typha latifolia L., 5802, LM sn, N

Xanthorrhoeaceae

Hemerocallis fulva (L.) L., 3329, LM sn, E

DICOT ANGIOSPERMS

Aceraceae

Acer ginnala Maxim., 5450, CTM 1507, EI
Acer negundo L. var. negundo, 5473, J, Rushford sn, N
Acer platanoides L., 5490, CTM 1517, EI
Acer saccharum Marsh. var. *saccharum*, 5518, SL Sternbergh sn, N

Amaranthaceae

Amaranthus retroflexus L., 140, CTM sn, N

Anacardiaceae

Toxicodendron rydbergii (Small ex Rydb.) Greene, 7258, CTM 1504, N

Apiacae

Angelica atropurpurea L., 7265, CTM 1810, N
Anthriscus sylvestris (L.) Hoffmann, 7266, CTM 1812, EI

Araliaceae

Aralia nudicaulis L., 7257, CTM 1505, N

Asteraceae

Ageratina altissima (L.) King & H.E. Robins. var. *altissima*, 456, PSM sn, N
Anthemis cotula L., 459, M. Clark sn, E
Arctium minus (Hill) Bernh., 465, LM sn, E
Bidens beckii Torrey ex Spreng. (syn. Megalodonta beckii), 770, G&K sn, N (threatened)
Bidens frondosa L., 556, LM sn, N
Carthamus tinctorius L., 6931, CTM 1527, E
Centaurea stoebe L. ssp. *micranthos* (S.G. Gmelin ex Gugler) Hayek (syn. Centaurea maculosa), 617, LM sn, E
Cichorium intybus L., 600, W. Campbell sn, E
Cirsium arvense (L.) Scop., 637, LM sn, EI
Crepis biennis L., 645, LM sn, E
Doellingeria umbellata (P. Mill.) Nees var. *umbellata* (syn. Aster umbellatus), 556, LM sn, N
Erigeron annuus (L.) Pers., 656, PSM sn, N
Erigeron philadelphicus L. var. *philadelphicus*, 662, PSM 6/13H, N
Erigeron pulchellus Michx. var. *pulchellus*, 670, J. Williams sn, N
Eurybia macrophylla (L.) Cass. (syn. Aster macrophyllus), 520, RP Stryker sn, N
Helianthus annuus L., 715, CTM sn, E
Helianthus decapetalus L., 7102, TS 136, N
Hieracium paniculatum L., 733, LM sn, N
Matricaria chamomilla L., 763, J. Williams sn, E
Mycelis muralis (L.) Dumort., 760, CTM 1537, E (invasive potential)
Oclemena acuminata (Michx.) Greene (syn. Aster acuminatus), 485, M. Clark sn, N
Pilosella caespitosa (Dumort.) P.D. Sell. & C. West (syn. Hieracium caespitosum), 734, LM sn, E
Prenanthes alba L., 782, LM sn, N
Rudbeckia hirta L. var. *pulcherrima* Farw., 788, LM sn, E
Solidago altissima L. ssp. *altissima*, 794, M. Clark sn, N
Solidago caesia L. var. *caesia*, 805, PSM sn, N
Solidago rugosa Mill. var. *rugosa*, 842, PSM 44, N
Symphyotrichum cordifolium (L.) Nesom (syn. Aster cordifolius), 490, LM sn, N
Symphyotrichum pilosum (Willd.) Nesom (syn. Aster ericoides), 498, M. Clark sn, N
Symphyotrichum laeve (L.) A.& D. Löve (syn. Aster laevis), 499, J. Williams sn, N
Symphyotrichum novae-angliae (L.) Nesom (syn. Aster novae-angliae), 526, M. Clark sn, N
Symphyotrichum racemosum (Ell.) Nesom (syn. Aster racemosus), 7110, TS 144, N
Tanacetum vulgare L., 899, Perhsyn & Flynn 1, E
Tragopogon dubius Scop., 914, PSM 7-2-9, E
Tragopogon pratensis L., 919, LM sn, E
Tussilago farfara L., 922, E. Bradshaw 2, EI

Balsaminaceae

Impatiens pallida Nutt., 7101, TS 135, N

Berberidaceae

Caulophyllum thalictroides (L.) Michx., 998, PSM 6/5H, N

Betulaceae

Alnus viridis (Chaix ex Vill.) Lam. & DC. ssp. *crispa* (Dryand. ex Ait.) Turrill, 957, PSM PE-C, E
Corylus americana Walter, 980, PSM 12, N

Boraginaceae

Hydrophyllum virginianum L., 1029, LM sn, N
Myosotis laxa Lehm., 7076, TS 110, N
Myosotis scorpioides L., 1047, LM sn, E

Brassicaceae

Alliaria petiolata (Bieb.) Cavara & Grande, 1087, CTM 1510, EI
Barbarea vulgaris R. Br. ex Ait., 1088, LM sn, E
Brassica juncea (L.) Czern., 1106, PSM E-B, E
Brassica rapa L., 1097, PSM PW-B, E
Capsella bursa-pastoris (L.) Medik., 1113, T. Flynn 5, E
Cardamine diphylla (Michx.) Wood, 1128, PSM 49, N
Cardamine pensylvanica Muhl. ex Willd., 1137, LM sn, N
Hesperis matronalis L., 1177, PSM 6/13-F, EI
Lepidium campestre (L.) R. Br., 1190, LM sn, E
Lepidium virginicum L. var. *virginicum*, 1198, KA sn, N
Sinapis arvensis L., 1096, KA sn, E

Campanulaceae

Campanula rapunculoides L., 1272, LM sn, E
Lobelia cardinalis L., 1277, PSM sn, N (exploitably vulnerable)

Cannabaceae

Humulus lupulus L., 1310, CTM sn, E

Caprifoliaceae

Lonicera morrowii A. Gray, 1346, CTM sn, EI
Lonicera tatarica L., 1357, E. Rizzie & CTM 4, EI
Lonicera xylosteum L., 1359, J. Post & M. Soranno 7/2-A, EI
Viburnum lantanoides Michx., 1372, S. Walck sn, N
Viburnum opulus L. var. *opulus*, 7264, CTM 1809, E

Caryophyllaceae

Dianthus armeria L. ssp. *armeria*, 1410, LM sn, E
Moehringia lateriflora (L.) Fenzl, 1445, PSM sn, N
Silene latifolia Poiret, 1423, LM sn, E
Saponaria officinalis L., 1438, W. Campbell sn, E

Celastraceae

Celastrus scandens L., 1523, E. Rizzie and CTM 1533, N (exploitably vulnerable)
Euonymus alatus (Thunb.) Sieb., 1525, CTM 1511, EI
Euonymus europaeus L., 7263, CTM 1808, E

Ceratophyllaceae

Ceratophyllum demersum L., 7027, TS 61, N

Clusiaceae

Triadenum virginicum (L.) Raf., 2996, LN sn, N

Cornaceae

Cornus amomum Mill. ssp. *obliqua* (Raf.) Wilson, 1613, PSM W-1, N
Cornus racemosa Lam., 1615, CTM sn, N

Crassulaceae

Sedum acre L., 7259, CTM 1503, E

Cuscutaceae

Cuscuta gronovii Willd. ex Schultz var. *gronovii*, 7100, TS 134, N

Droseraceae

Drosera rotundifolia L. var. *rotundifolia*, 2366, LM sn, N (exploitably vulnerable)

Elaeagnaceae

Elaeagnus angustifolia L., 2375, CTM 1516, EI

Ericaceae

Monotropa hypopithys L., 2473, LM sn, N
Monotropa uniflora L., 2472, LM sn, N
Rhododendron canadense (L.) Torrey, 7260, KA & J. Straub sn, N (threatened)
Rhododendron groenlandicum (Oeder) Kron & Judd, 2499, D. Pulvermiller sn, N
Vaccinium corymbosum L., 2526, LM sn, N

Fabaceae

Coronilla varia L., 2654, E.J. Teter 12, E
Hylodesmum glutinosum (Muhl. ex Willd.) H. Ohashi & R.R. Mill (syn. Desmodium glutinosum), 2666, CTM 1525, N
Lotus corniculatus L., 2692, LM sn, E
Medicago sativa L. ssp. *sativa*, 2708, M. Clark sn, E
Melilotus officinalis (L.) Lam., 2761, LM sn, E
Robinia viscosa Vent. ex Vauq., 6955, CTM 1561, E
Trifolium medium L., 2779, M. Clark sn, E
Trifolium pratense L., 2772, LM sn, E
Trifolium repens L., 2782, LM sn, E

Fagaceae

Fagus grandifolia Ehrh., 2855, LM sn, N

Grossulariaceae

Ribes rubrum L., 2893, PSM WE, E

Lamiaceae

Blephilia ciliata (L.) Raf., 3170, LM sn, N (endangered)
Elsholtzia ciliata (Thunb.) Hyl., 7248, CTM & TS 09-01, EI
Galeopsis tetrahit L. var. *tetrahit*, 3177, PSM sn, E
Leonurus cardiaca L., 3201, PSM E-C, E
Lycopus virginicus L., 3191, LM sn, N
Melissa officinalis L., 3212, PSM sn, E
Mentha arvensis L., 3199, PSM sn, E
Origanum vulgare L., 6934, CTM 1523, E

Lentibulariaceae

Utricularia macrorhiza LeConte, 3302, GKG sn, N

Lythraceae

Decodon verticillatus (L.) Ell., 7252, CTM 1803 & R. Schultz, N

Malvaceae

Abutilon theophrasti Medik., 3387, E.J. Teter 26, E
Malva alcea L., 3402, CTM 1500, E
Malva moschata L., 3399, E.J. Teter 17, E
Malva neglecta Wallr., 3407, T. Flynn 6, E

Menyanthaceae

Nymphoides cordata (Ell.) Fernald, 3539, G&B sn, E

Moraceae

Morus rubra L., 3408, T. Colios sn, N

Nymphaeaceae

Nuphar advena (Aiton) W.T. Aiton ssp. *advena*, 3511, G&B sn, N
Nymphaea odorata Dryand. ex Ait. ssp. *tuberosa* (Paine) Wiersma & Hellquist, 3523, G&B sn, N

Oleaceae

Fraxinus nigra Marsh., 3577, PSM PE-A, N

Orobanchaceae

Orobanche uniflora L., 3738, LM sn, N

Oxalidaceae

Oxalis montana Raf., 3748, LM sn, N
Oxalis stricta L., 3745, LM sn, N

Papaveraceae

Sanguinaria canadensis L., 3794, E. Bradshaw 6, N (exploitably vulnerable)

Phrymaceae

Mimulus ringens L., 7106, TS 140, N

Plantaginaceae

Veronica americana Schwein. ex Benth., 5656, PSM PE-D, N
Veronica longifolia L., 3831, CTM 1512, E

Polemoniaceae

Polemonium vanbruntiae Britt., 7265, R. Schultz sn, N (rare)

Polygalaceae

Polygala paucifolia Willd., 4440, LM sn, N

Polygonaceae

Fallopia japonica (Hout.) Dcne. var. *japonica*, 7261, CTM 1806, EI
Fallopia scandens (L.) Holub var. *scandens*, 4532, PSM 4, N
Persicaria maculosa S.F. Gray, 4514, LM sn, E

Primulaceae

Lysimachia nummularia L., 4710, LM sn, EI
Lysimachia punctata L., 7253, CTM 07-12, E
Lysimachia quadrifolia L., 7125, TS 159, N

Ranunculaceae

Ranunculus abortivus L., 4849, PSM 6/5-F, N
Thalictrum pubescens Pursh, 4889, PSM E-J, N

Rhamnaceae

Frangula alnus P. Mill., 4934, E. Rizzie & CTM 1, EI

Rosaceae

Agrimonia pubescens Wallr., 4968, CTM 1504, N
Amelanchier laevis Wieg., 4977, PSM 27, N
Comarum palustre L., 6948, CTM 1528, N
Filipendula vulgaris Moench, 6947, CTM 1534, E
Potentilla norvegica L. ssp. *monspeliensis* (L.) Aschers. & Graebn., 5013, PSM 36, E
Potentilla recta L., 5023, PSM & KA 6/25K, E
Potentilla simplex Michx., 5039, EJ Teter 11, N
Prunus avium (L.) L., 5054, PSM 6/20D, E
Prunus virginiana L., 5075, CTM sn, N
Rosa multiflora Thunb. ex Murr., 5089, E. Rizzie & CTM sn, EI
Rosa rugosa Thunb., 5098, LM sn, EI

Salicaceae

Populus alba L., 5337, PSM + KA W-A, EI

Saxifragaceae

Astilbe japonica (Morren & Dcne.) A. Gray, 5539, KA sn, E

Scrophulariaceae

Verbascum thapsus L., 5654, LM sn, E

Solanaceae

Lycium barbarum L., 6945, CTM 1513, E

Solanum carolinense L. var. *carolinense*, 5718, KA sn, N

Solanum nigrum L., 6942, CTM 1535, E

Tiliaceae

Tilia americana L. var. *americana*, 6955, CTM 1538, N

Urticaceae

Urtica dioica L. ssp. *dioica*, 5841, PSM E-A, E

Urtica dioica L. ssp. *gracilis* (Ait.) Selander, 5844, C. Hansen sn, N

Valerianaceae

Valeriana officinalis L., 5847, CTM sn, EI

Violaceae

Viola canadensis L. var. *canadensis*, 5892, LM sn, N

Viola cucullata Ait., 5900, PSM 6, N