

The historic and extant spontaneous vascular flora of The New York Botanical Garden

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Abstract. The New York Botanical Garden occupies 100 hectares (250 acres) in the north central portion of Bronx County, New York. The property is a public garden with the majority of the grounds under cultivation. The Thain Family Forest, margins of the Bronx River, rock outcrops and areas of undeveloped landscape are important refugia for spontaneous plants, both native and non-native. We compiled data from historic lists of spontaneously occurring species, conducted original field work and searched the William and Lynda Steere Herbarium to determine the historic and extant spontaneous vascular plant flora of the Garden from 1899 to 2015. This is the first published inventory of the wild flora since 1899. The historic and extant flora comprises 695 species and infraspecies in 363 genera and 121 families. The extant flora comprises 429 species and infraspecies in 263 genera and 108 families. A total of 264 (62%) of the extant species and infraspecies are native and 165 (38%) are not native. All species are vouchered by herbarium specimens collected between 1881 and 2015. All herbarium vouchers are databased, imaged and available online. Forty-six species and infraspecies are new Bronx County records. Among the rare extant species and infraspecies on the New York State Department of Environmental Conservation Active Inventory List are three critically imperiled (S1) and two imperiled (S2) taxa, and *Carex aggregata* that was thought to be historical (SH, no existing sites known) in New York State, but was found in 2009 on the grounds. The number of extant rare species and infraspecies, the total number of extant taxa and the percentage of native versus non-native species strongly supports the conclusion that The New York Botanical Garden is an important and significant refugium or hotspot for local biodiversity.

Key Words: Herbarium, Conservation, Invasive species, New York City, Old-growth forest, Urban flora.

The New York Botanical Garden was established in 1891 by an act of the State Legislature of New York to pursue a mission of botanical research, education, and horticulture. In 1895, founding director Nathaniel Lord Britton selected a 100-hectare site in the Bronx, New York's northernmost borough, as the Garden's location. Britton chose the site because it included a 20-hectare (50-acre) old-growth forest surrounded by fields with soils suitable for growing a diversity of plants to serve the Garden's research and educational activities. Even as they were assembling living collections of plants from around the world, the Garden's founders were documenting the

spontaneous flora of the landscape. Early inventories of the Garden's plant collections listed wild plants as well as cultivated specimens. Botanists deposited vouchers of wild plants collected in the Garden and adjacent Bronx Park in the Garden's Herbarium. Native trees were identified and labeled for the public's benefit.

Elizabeth Gertrude Knight Britton, noted bryologist and wife of Nathaniel Britton, took a particular interest in the native plants of the Garden. In the early 1900s she noted that populations of certain native species in the Garden were declining precipitously due to a variety of factors. Her concern about the fate of native plants at the

Garden and beyond inspired her to become a founding member of the Wildflower Preservation Society.

The spontaneous flora of The New York Botanical Garden has changed significantly since the Britton's time. As the Bronx went from a rural or suburban environment to a completely urban one, and as areas of the Garden were devoted to ornamental plantings, the proportion of native and non-native species changed in largely predictable patterns that have been observed throughout the region and indeed throughout the world. Introduced pathogens decimated once robust populations of American chestnut (*Castanea dentata*) and American elm (*Ulmus americana*) in the early 1900s, eastern hemlock (*Tsuga canadensis*) in the 1980s, and currently threaten our native ashes (*Fraxinus* species).

Determining the spontaneous flora of the grounds of a botanical garden presents a number of unique challenges. It is not always clear if a given plant is cultivated or spontaneous, particularly if it occurs in areas that were once actively cultivated but may be fallow. Some cultivated plants, particularly annuals, reoccur from year to year but only in or around locations where they are regularly planted. Some plants persist and spread vegetatively but do not appear to form spontaneous new populations. Some plants appear to be spontaneous but are present in such low numbers that their long-term viability as naturalized populations is uncertain.

In spite of these challenges, documenting the spontaneous flora of the Garden's dynamic landscape serves many purposes. It provides invaluable information for horticulturists at the Garden and throughout the region, who can use these data to identify potential new invasive species. This information will improve regional efforts to prevent future invasions. These data also document biodiversity for ecological studies, regional floras and conservation efforts.

In 1916, Nathaniel Lord Britton and Elizabeth Gertrude Knight Britton argued that The New York Botanical Garden and other green spaces should serve as refuges for native plants in the City (E. K. Britton, 1916; N. L. Britton, 1916). In spite of significant stresses inherent in its urban location and substantial anthropogenic change to its spontaneous flora, the Garden remains a refugium for native species and perhaps because of these stresses, is a compelling location for botanical and ecological research.

The percentage of native (62%) versus non-native spontaneous species and infraspecies (38%) extant in the Garden today compares favorably with other natural areas in the region, including New York's Central Park with sixty percent non-native (DeCandido et al., 2007), Pelham Bay Park with sixty-one percent native (DeCandido, 2004) and Concord, Massachusetts with sixty-one percent native (Primack et al., 2009). Of course there are many factors complicating a comparison such as the total area covered by the flora, site history, location, and study methods. However, the data presented here are a first approximation and guide for research and conservation efforts.

Site description

The New York Botanical Garden (40.862N, 73.877W) is set on 100 hectares (250 acres) in Bronx County, New York. Designated a National Historic Landmark in 1967, the Garden features 50 curated gardens, displays, and plant collections and extensive natural areas including the 20-ha (50-acre) old-growth Thain Family Forest, the Bronx River and its floodplain, Twin Lakes, and the Mitsubishi Wild Wetland (Rachlin et al., 2007). Approximately 70 hectares (175 acres) of the landscape is intensively cultivated, paved, or otherwise developed. In addition to the spontaneous flora documented here, the Garden's living collections include more than one million plants representing more than 14,000 taxa growing out of doors or under glass.

The Garden is located in the southwestern corner of the New England Physiographic Province, near the confluence of New England, Atlantic Coastal Plain, and Piedmont Provinces, and is characterized by warm humid summers and cold winters with periodic drought and regular severe storms (N. L. Britton, 1913; Anonymous, 1938, 1944). The mean average annual temperature measured at Central Park 12 km (10 mi) southwest of the Garden is 12.72° C (54.90°F) with a January average of 0.33° C (32.59°F) and a July average of 24.72° C (76.50°F) (NWS, 2014). The annual precipitation is 126.85 cm (49.94in), evenly distributed throughout the year (NWS, 2014).

The geology of the Garden includes all of the primary bedrock formations of New York City: Fordham Gneiss, Inwood Marble and

Walloomsac Schist west of the Bronx River; Manhattan Schist in the center of the Garden; and the Hartland Formation in the eastern portion of the landscape (Merguerian, 2013). Bedrock throughout the Garden exhibits evidence of glaciation, including glacial striations, glacial erratics, and glacial potholes. The highest point is 43 m (141 ft) at the top of a rock outcrop in the center of the Forest and the lowest point is 10 m (32 ft) where the Bronx River passes beneath the Linnaean Bridge at Fordham Road (LaFave et al., 2003). The soils of upland areas consist largely of Charlton, Chatfield, and Hollis acidic sandy loams with varying depths to bedrock (Shaw et al., 2007). In wetlands and along the Bronx River floodplain, soils consist of Canandaigua (*fine-silty*), Tonawanda (*coarse-silty*), and Natchaug (*loamy*) silt loams or organic soils (Shaw, 2010). Recent studies have revealed that the Garden soils have a pH range of 3.9–8.0; have high concentrations of heavy metals including zinc, lead, and copper; are compacted due to excessive trampling; and exhibit hydrophobic properties due to long-term deposition of hydrocarbons from the burning of fossil fuels (White & McDonnell, 1988; Schuler, 2006, 2011; Gabel, 2014;).

Nathaniel Lord Britton and the Garden's founding Board of Managers chose the Garden's location in 1895 because the site included many features considered ideal for the establishment of an institution devoted to the study and display of plants: accessibility, rich and varied soil, beautiful scenery, and the largest remnant of natural forest in New York City (Britton et al., 1895). From the beginning, Britton and his scientific colleagues recognized that the wild plants growing in the Garden's landscape could serve the institution's mission. The 1896 "General Plan of The New York Botanical Garden" developed by Britton and landscape architect John Brinley with input from Calvert Vaux and Samuel Parsons, preserved the Forest, known then as the "Hemlock Grove," in its entirety (Britton, 1904). Britton also decreed that the many mature native trees that shaded the old fields around the Hemlock Grove should be protected during the construction of roads and buildings. The Forest today is a 20 hectare (50 acre) uneven aged, mixed hardwood, remnant urban old-growth forest that has never been significantly cleared and effectively remains a natural ecosystem (McDonnell, 1988; Shaw et al., 2007; Loeb, 2011).

There have been many changes to the spontaneous flora of the Garden since the late 1800s. As early as 1902, Garden scientists documented that the over-collection of native wildflowers (e.g., *Arisaema triphyllum* and *Epigaea repens*) was leading to their decline (Britton, 1902; Copp, 1904; Britton, 1912a, 1912b; E. K. Britton, 1913). Chestnut blight (*Cryphonectria parasitica* [Murrill] Barr) led to the demise of 1500 Garden individuals of American chestnut in the early 20th century (Anonymous, 1911). Eastern hemlock, which represented 36% of the canopy trees in the Forest in 1937, has been nearly eliminated by two invasive insects: elongate hemlock scale (*Fiorinia externa* Ferris) and hemlock wooly adelgid (*Adelges tsugae* Annand) (Rudnický & McDonnell, 1989; Schuler & Forrest, 2016). The trampling of soil by crowds of visitors early in the Garden's history was observed and mitigated by fencing the paths in the Hemlock Grove (Britton, 1904).

Although extensive research indicates that the Forest has never been cleared and remains an effectively natural ecosystem in the middle of one of the world's most developed urban areas, its spontaneous flora has changed significantly since 1895 (McDonnell, 1988; Shaw et al., 2007; Loeb, 2011). In 1937 the most abundant canopy species based on density were *Tsuga canadensis*, *Quercus* spp., and *Betula lenta* (Rudnický & McDonnell, 1989). In 2011 the most abundant canopy species based on density were *Quercus* spp., *Prunus serotina*, and *Acer rubrum* (Schuler & Forrest, 2016).

As the Garden's native plant populations have changed, the number of naturalized species in the flora has increased. Some, such as *Ficaria verna* and *Reynoutria* spp., have become invasive and pose a serious threat to remaining populations of native plants. Recent efforts to control the spread of invasive species and re-establish populations of extirpated species in the Thain Family Forest indicate that some of the changes to the Garden's spontaneous flora may be reversible (Schuler & Forrest, 2016).

The boundaries of the Garden have shifted since 1895 (Fig. 1). In 1915, land east of the Bronx River including the former Lorillard Mansion and 56 hectares (140 acres) south of the Stone Mill were acquired (Britton et al., 1915). In 1937, approximately 48 hectares (120 acres) of land in the northeastern part of the Garden, including the historic shrub and willow collections

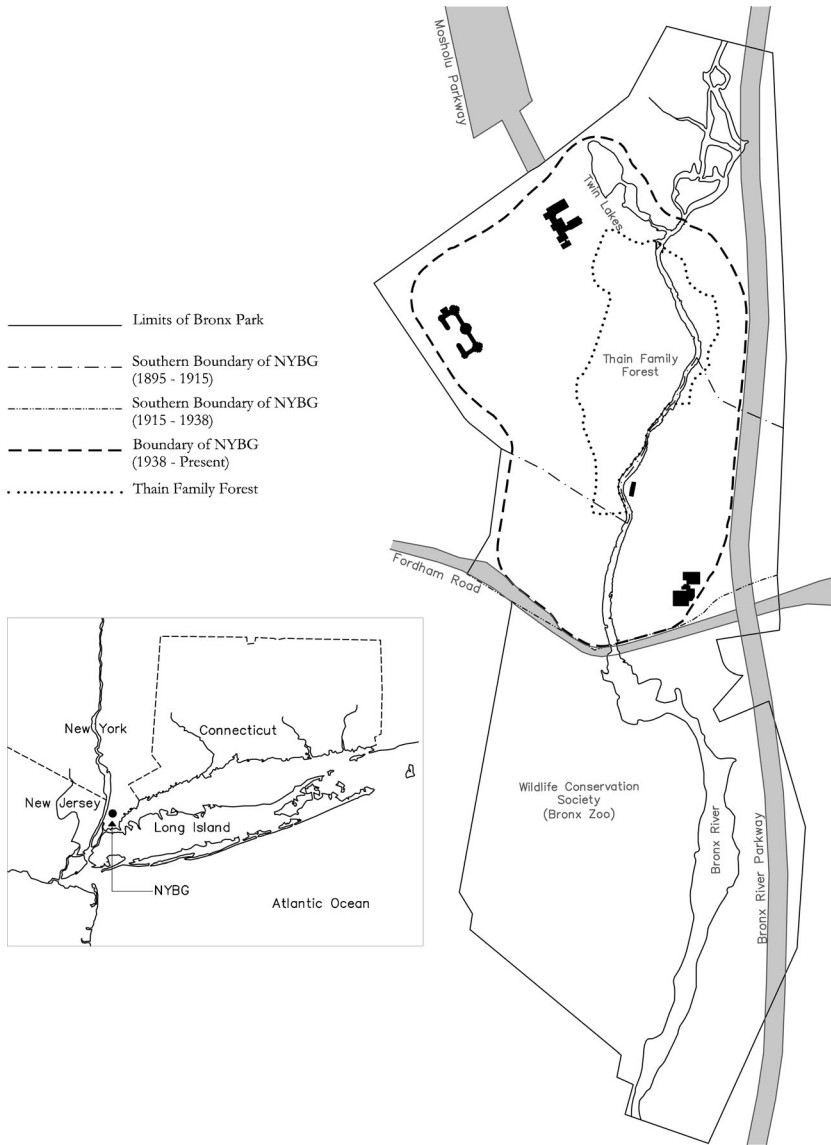


FIG. 1. Map of New York Botanical Garden. Prepared by Wayne Cahilly, Lionel Goldfrank III Manager, NYBG Institutional Mapping Department.

and a portion of the Bronx River and its flood-plain, were relinquished for the expansion of the Bronx River Parkway (Robbins, 1939; Robbins, 1941).

Materials and methods

Names of flowering plants, ferns, and mosses growing wild at the time the Garden was incorporated were published in a series of appendices to the Annual Reports in the Bulletin of The New

York Botanical Garden in 1898, 1899, and 1900. The publications are unsigned and there are no introductions or explanation as to how the surveys were conducted, nor, more importantly, whether specimens were collected and preserved. Only in the case of the mosses is there any explicit mention of collections (Nash, 1900).

The first list (Britton, 1898) is an inventory of all plants "in the Grounds" of the Garden, including cultivated plants in nurseries, greenhouses, herbaceous grounds, borders, bog gardens, etc.

The wild plants are marked with a "W", nursery plants with "N", greenhouse plants with "G" and so on. The list consists of binomials and trinomials alphabetical by genus and species with no families, authors, nor specimens cited. In the second list (Britton, 1899), those marked as "W" from the 1898 list were extracted and published under the heading "Wild Flora" apart from sections detailing the plants under cultivation. The list is nearly the same as the first list of binomials and trinomials but with the names grouped by family and arranged systematically by kingdom, subkingdom and family. Again, the names do not have authors and no specimens are cited. Some species were added to the list (e.g., *Acer saccharinum*, *Cuscuta gronovii*, *Geranium maculatum*, *Ilex verticillata*, *Linum virginianum*, *Vaccinium corymbosum*). In 1900, George V. Nash, the head gardener, published a list of additions to the 1899 list. This third list comprises mosses and 22 ferns and flowering plants (Nash, 1900).

After publication of the early Garden flora, only occasional accounts of various groups of wild plants (ferns, shrubs, and trees) were produced, some published and some not. From 1917 to 1920, Nash produced a series of works on the "Hardy Woody Plants in The New York Botanical Garden (Nash, 1917–1920). John Kunkel Small and Edward Johnston Alexander later published separate lists of native ferns (Small & Alexander, 1933a; Small, 1934), shrubs (Small & Alexander, 1933b), and trees (Small & Alexander, 1933c). The list of shrubs includes fifty species of native shrubs they report as "self-maintained" as well as thirty-five "Old World shrubs naturalized in the Garden". For the most part, however, their lists do not indicate which are naturalized and which are planted and they do not cite specimens.

Between 1950 and 1986, collecting on the grounds of the Garden was very sporadic. Not until after Michael Nee arrived at the Garden in 1986, was there an effort to systematically document the spontaneous flora. Nee collected numerous specimens on the grounds always indicating whether a species was likely spontaneous or cultivated. Nee kept a working manuscript of the Garden flora, adding species and observations as they were encountered.

From 1986 to 2015 and throughout all seasons, we explored the Garden grounds identifying and collecting those species not yet documented or exhibiting unusual morphological or

phenological traits (such as unusual flowering times, invasiveness, etc.). We combined all names from the historic lists (Britton, 1898, 1899; Nash, 1900) and updated the nomenclature to modern equivalents. We then searched the herbarium for all these names as well as all names reported for Bronx County by the New York Flora Association (Weldy et al., 2015) and Taylor (1915). Specimens labeled "Bronx Park", "New York Botanical Garden", or variations of "Hemlock Grove" in the Bronx were identified, databased, imaged and cited here. Specimens marked as "cultivated" are not cited here. All specimens cited are housed at NY, unless otherwise noted. Species that persist from cultivation and spread vegetatively, but do not form new populations, such as *Hosta lancifolia* Engl., *Hyacinthoides hispanica* (Mill.) Rothm., *Narcissus pseudonarcissus* L., *Pachysandra terminalis* Siebold & Zucc., and *Toona sinensis* (A. Juss.) M. Roem. are not treated here. Rare escapes from cultivation found in and immediately around greenhouses or propagation areas are not reported here.

The historic and extant spontaneous flora (Appendix I) is arranged by major groups (ferns, gymnosperms, basal angiosperms [magnoliids], monocots and dicots) with families, genera and species arranged alphabetically. Fern taxonomy follows Smith et al. (2006). Flowering plant family taxonomy follows the classification of the Angiosperm Phylogeny Group (APG III, 2009). Author abbreviations follow Brummitt and Powell (1992). Misapplied names and synonyms from Britton (1898, 1899) and Nash (1900) are cited in braces with the species where the material applies.

New taxa named from spontaneous Garden plants (Appendix II) were found by searching the Garden's type database as well as literature searches. New Records (Appendix III) were found by searching the New York Flora Atlas for taxa not reported for Bronx County and comparing the list to the historic and extant flora (Appendix I). Rare plants (Appendix IV) were found by searching the New York State Department of Environmental Conservation's Active Inventory List (NYS DEC, 2016). Only extant species are reported as rare. Waifs as defined here are plants of anthropogenic origin that appear to be spontaneous but occur only as solitary individuals or only very localized populations. Some species collected on the grounds of the Garden were added to the New York State flora (Weldy et al., 2015), but were collected only once and

apparently never spread further (e.g., *Cynosurus echinatus* and *Rorippa indica*). These are treated here as waifs. Some may be persistent from cultivation and are spreading vegetatively or they may be spontaneous but there is no definitive evidence indicating their status (e.g., *Convallaria majalis* and *Hemerocallis fulva*). Our approach is conservative. Some species treated here as waifs are local escapes from plants cultivated on the grounds (e.g., *Cephalotaxus harringtonia* and *Ilex opaca*). Others are escaped from plants cultivated elsewhere in the region (e.g., *Cleome hassleriana* Chod.). Sight records (Appendix V) are those species for which we found no voucher specimen. These taxa are not used in counts or analyses.

Vernacular names are from Gleason and Cronquist (1991), The New York Flora Atlas (Weldy et al., 2015) and USDA NRCS Plants Database (USDA NRCS, 2016). They are provided for convenience. As is the case with the majority of Cyperaceae and Poaceae, these names are contrived and may not be used by any living person familiar with the plants. Frequency values are site-specific for the Garden generally for the period between 1986 and 2015, but principally for the latter years. Frequency values are not meant as regional assessments. The categories used here are as follows: Historic—once present, but not found between 1986 and 2015; Rare—scarce, less than 2 colonies; Infrequent—uncommon, occasional, 2 to 5 colonies; Frequent—common, more than 5 colonies. A species may be reported as "Historic" even though the species is cultivated today. The species *Campsis radicans* (L.) Seem. ex Bureau. was reported as wild (without voucher) in the early flora (Britton, 1899), but today is known only from cultivation.

All analyses (counts of taxa, new records, lost and gained taxa, etc.) are based on current classification.

Results

The largest extant families are Asteraceae (40 species or infraspecies), Cyperaceae (35), Poaceae (32), Rosaceae (19) and Polygonaceae (18). The largest extant genus is *Carex* with 27 species or infraspecies, followed by *Persicaria* with ten, *Viburnum* and *Cyperus* each with seven, and *Quercus* with six (Table I).

Among the rare extant species and infraspecies (Appendix IV) on the New York State

Department of Environmental Conservation Active Inventory List (NYS DEC, 2016), three are critically imperiled (S1) and two are imperiled (S2). The extant species *Carex aggregata* is currently listed as historic (not seen in 20–30 years) in New York State (NYS DEC, 2016), though we discovered it at the Garden in 2009. Some species, not rare in New York State, are nonetheless uncommon in New York City such as *Maianthemum canadense* (Canada Mayflower). This species still forms dense patches in the Thain Family Forest. Of the extant native species and infraspecies, 124 are currently rare on the grounds (47%). The families with the greatest number of locally rare extant taxa are Cyperaceae (15 rare species and infraspecies), Poaceae (12) and Ericaceae (8). Many groups have experienced significant losses (e.g., native Orchidaceae, native Scrophulariaceae, and native Fabaceae). All tree species remain extant with the exceptions of *Castanea dentata* and *Quercus coccinea*. The Yellow Birch, *Betula alleghaniensis* Britton was not reported on any historic list, but apparently appeared spontaneously.

Seventeen families were gained since 1900 (Athyriaceae, Cystopteridaceae, Salviniaceae, Woodsiaceae, Ceratophyllaceae, Berberidaceae, Bignoniaceae, Boraginaceae, Caprifoliaceae, Elaeagnaceae, Grossulariaceae, Lythraceae, Malvaceae, Mazaceae, Menispermaceae, Nyctaginaceae, Paulowniaceae). Among those species and infraspecies gained since 1900 (283), native and non-native, the largest families are Asteraceae (38), Poaceae (22), Rosaceae (21), Brassicaceae (16) and Cyperaceae (14).

Among the 412 species and infraspecies reported in 1900, the largest families are Poaceae (64) species and infraspecies, Asteraceae (41), Cyperaceae (36), Rosaceae (13), and Fabaceae (11). The largest genus in 1900 was *Carex* with 28 species and infraspecies, followed by *Dichanthelium* with 13 and *Ranunculus* and *Solidago* with eight each. Eleven families reported in 1900 are no longer extant (Acoraceae, Aquifoliaceae, Aristolochiaceae, Cistaceae, Melanthiaceae, Myricaceae, Ophioglossaceae, Phrymaceae, Polygalaceae, Santalaceae, and Saxifragaceae). The largest groups of native species and infraspecies lost since 1900 (181) are Poaceae (29), Asteraceae (19), Cyperaceae (15), Ranunculaceae (10), and Rosaceae (7). Some common weeds present in 1900 are no longer extant (e.g., *Achillea millefolium*, *Elymus repens*, *Phleum*

TABLE I

THE HISTORIC AND EXTANT SPONTANEOUS FLORA AS REPORTED IN [APPENDIX I](#). NUMBERS ARE TOTAL SPECIES AND INFRASPECIES. NUMBERS IN PARENTHESES ARE PERCENTAGES, ROUNDED TO THE NEAREST WHOLE NUMBER. **A.** TOTAL SPONTANEOUS FLORA AS REPORTED BY BRITTON (1899) AND NASH (1900). **B.** NUMBER OF TAXA FROM A NOT FOUND AMONG THE EXTANT SPONTANEOUS FLORA (F). **C.** NUMBER OF SPECIES AND INFRASPECIES PERSISTENT FROM A TO F. **D.** NUMBER OF TAXA FROM F NOT PRESENT IN A. **E.** TAXA NOT PRESENT IN A AND NOT PRESENT IN F. **F.** SPECIES AND INFRASPECIES EXTANT IN 2015. **G.** TOTAL NUMBER OF SPECIES AND INFRASPECIES FROM 1899 TO 2015 (A+D = G).

	A 1899	B 1899–2015 (lost)	C 1899–2015 (continuous)	D 1899–2015 (gained)	E 1899–2015 (gained/lost)	F 2015	G 1899–2015 (total)
Native	336 (82)	155 (85)	181 (79)	130 (46)	47 (56)	264 (62)	466 (67)
Not Native	76 (18)	27 (15)	49 (21)	153 (54)	37 (44)	165 (38)	229 (33)
Total	412	182	230	283	84	429	695

pratense, and *Saponaria officinalis*). In 1900 there were 12 pteridophyte species reported for the Garden (Britton, 1899; Nash, 1900). Today there are 12 extant pteridophytes. Five were lost (*Dryopteris cristata*, *Dryopteris intermedia*, *Equisetum fluviatile*, *Equisetum hyemale*, and *Sceptridium dissectum*) and five were gained (*Athyrium angustum*, *Azolla caroliniana*, *Cystopteris tenuis*, *Dryopteris carthusiana*, and *Woodsia obtusa*). Some species were spontaneous in 1900, but are now only known from cultivation (e.g., *Geranium maculatum*, *Juglans nigra*, and *Lobelia cardinalis*) and are reported as Historic. In some cases we found no historical material collected from the grounds, but often found specimens from nearby areas. In the case of *Osmunda regalis* which is reported on the 1898 and 1899 lists, we found material from McLeans Woods (*Holtzoff s.n.*), Riverdale (*Bicknell 11426a*) and Pelham Ave (*Burnham 701*), but nothing from "The New York Botanical Garden" or "Bronx Park".

The *nomen nudum* "Lobelia Canadensis" was reported by Nash (1900). In the Nash document, the name is listed with *Lobelia cardinalis*. These two were added to two other *Lobelia* from the grounds of the Garden (*Lobelia inflata* and *Lobelia siphilitica*), previously reported by Britton (1899). We searched the NY herbarium thoroughly and unsuccessfully for any specimen bearing the name "Lobelia Canadensis."

Discussion

All floras are inherently dynamic, subject to biotic and abiotic influences. In natural systems,

floristic change usually occurs slowly (over thousands or millions of years) or episodically as a result of cataclysmic events like floods, landslides, droughts, etc. In contrast, recent studies show that modern, urban floras have undergone rapid and dramatic floristic change since the industrial revolution, particularly during the 20th century (Robinson et al., 1994; Pysek et al., 1995; Bertin, 2002; Standley, 2003; DeCandido, 2004; McKinney, 2006, 2008; DeCandido et al., 2007; Primack et al., 2009). Urban floras face unprecedented pressures including climate change, the heat-island effect, acid rain, air and water pollution, deposition of heavy metals, habitat destruction, construction, competition from introduced species, vandalism, soil compaction, etc.

Studies show a marked increase in non-native species and a decline in natives for urban ecosystems of our region. Staten Island as a whole lost almost 41% of its native species from the period 1879–1991 (Robinson et al., 1994). Concord, Massachusetts, an area with a long tradition of conservation has lost 27% of its native species since 1837 (Primack et al., 2009). Central Park has lost 70% of its native species since 1857 (DeCandido et al., 2007). Small populations like those that occur on islands or in isolated patches in urban areas have been shown to be more susceptible to extirpation than larger ones (Robinson et al., 1994). Williams et al. (2009) identified three sources of species in urban environments (native species extant in the environment; native species occurring regionally; non-native species introduced naturally or through human agency). Restoration efforts using native plants

add a fourth category of species that may introduce or re-introduce viable species to an urban flora.

Factors contributing to changes in species composition within the Garden include the above regional factors as well as the following factors. Loss of territory of course meant a smaller area for plants. The Garden lost the northern floodplain forest in 1938, eliminating a large area suitable for silver maple (*Acer saccharinum*) and other species. Change in land use from farmland, pasture, homesites and industrial operations eliminates disturbance regimes particular to these activities, such as mowing for hay versus mowing for lawn. Some were probably brought in from more rural areas with livestock and machinery. The alteration of habitat such as grading and construction eliminated areas where plants could grow. Predation from rabbits, rats and other animals impact the vegetation. Gathering of plants by the public; trampling and soil compaction and ground fires impacted the vegetation in the past.

In 1900, much of the Bronx was rural with farms and scattered homesites. There was a Bedford Park bog with *Dichanthelium*, *Pogonia ophioglossioides*, *Rhexia*, and other bog plants. In her book, *Bog Trotting for Orchids*, Grace Greylock Niles (1904) described the area with abundant wildflowers: "Along the higher ridges, the brilliant Rock Pinks (*Phlox subulata* L.) bloom abundantly. Their mossy-mats creep over the hills from Bronx Park to Yonkers." The abundance of Poaceae and Asteraceae in the historic flora suggests that open meadows were a prominent feature of the landscape. Indeed, hay was being cut and sold for revenue within the grounds until at least 1897 (Britton, 1899). Land west of the Bronx River and adjacent to the Metro North railroad tracks (formerly the Harlem division of the New York Central and Hudson River Railroad) at the time of incorporation was described as "mainly open fields which had been under cultivation up to the time that the Bronx Park was established..." (Eustis, 1902: 105). Into the 1920s there was a meadow behind the Museum building with typical meadow species such as *Achillea millefolium*, *Coreopsis lanceolata*, *Silphium perfoliatum*, and *Tragopogon pretensis*. Other meadow species collected on the grounds early in the Garden's history include *Asclepias incarnata* and *Gentiana andrewsii*.

Some species were not recorded from the grounds during the 1898–1900 surveys, but were

almost certainly present (e.g., non-natives: *Morus alba*, *Verbascum thapsus*; natives: *Populus deltoides*, *Persicaria punctata*, *Persicaria pensylvanica*, *Persicaria lapathifolia*, *Rubus allegheniensis*, and *Podophyllum peltatum*). On the other hand *Allium tricoccum* Aiton was collected from the "vicinity" (e.g., McLeans Woods, Williams Bridge, Bedford Park and Riverdale) and was cultivated, but apparently never wild collected on the grounds of the Garden. Similarly, it is surprising that *Lysimachia borealis* (Raf.) U. Manns & A. Anderb. (Primulaceae) has never been found on the grounds when it has been collected on Long Island, Staten Island, and Westchester County. The orchid flora of The New York Botanical Garden originally consisted of just five vouchered species: *Calopogon tuberosus*, *Corallorhiza maculata*, *Platanthera hookeri*, *Spiranthes cernua*, and *Spiranthes lacera*. This is surprising because the greater New York City metro area historically contained 45 species. A couple of possible hypotheses may explain the relative paucity of orchids. First, most native orchids are edge or open growing plants that do not compete well in wooded or shrubby habitats. However, regionally common woodland species such as *Cypripedium acaule* Aiton or *Goodyera pubescens* (Willd.) R. Br. have never been collected from what eventually became the Thain Family Forest. Second, as noted above, much of the land surrounding and comprising the grounds of the Garden were meadows, where many orchids regionally common to such habitats, e.g., *Platanthera lacera* (Michx.) G. Don or *Platanthera psycodes* (L.) Lindl., were collected. Thus, this paucity of orchids may be due not to a deficiency of suitable habitat, but may instead be due to overcollection by the local population prior to the establishment of the Garden, although it is impossible to verify this hypothesis. Today, the only spontaneous orchid to occur within the Garden is *Epipactis helleborine*, a common and regionally expanding Eurasian orchid typically found in disturbed garden beds, sidewalk cracks, and wooded edges. Why this non-native species continues to maintain healthy populations, vs. the extirpation of all five native species, is an intriguing question with wider implications for the native flora of urban refuges.

Some species were collected before 1898 but not reported on the early lists: *Actaea pachypoda* was collected in "Woods, Bronx Park" in May 1891 (*S. Clarke s.n.*) and again by Charles

Gilly (444) in 1940 from "New York Botanical Garden, Bronx Park"); *Agrimonia rostellata* was collected by W. Clute & P. Wilson (s.n.) on 1 September 1899; *Amsonia tabernaemontana* was collected in a "field near greenhouses" in 1893 (S. Clarke s.n.), but not reported on the early list, and collected again in 1940 from "Bronx Park" by Charles Gilly (311) and again "in waste grassy clearing, not cultivated" by Harold Moldenke (20593) in 1950; *Cardamine parviflora* was collected from "Fordham Hemlock woods" by Eugene Bicknell (4454) in 1881; *Rosa palustris* was collected by George Nash (s.n.) in Bronx Park in 1896; *Lespedeza repens* was collected by E. Bicknell (5170 and s.n.) in September 1891; *Vicia sativa* was collected in "Bronx Park" May 1891 by S. Clarke (s.n.).

Most curiously, perhaps, is the addition of *Picea mariana* to the wild flora of the Garden by Nash in the supplement to the larger list (Nash, 1900). This is a boreal species at the southern end of its range, occurring in bogs and frigid swamps. We found several specimens gathered from cultivated trees dating from the period, but none from wild or spontaneous individuals. The species is not formally excluded here from the Garden flora. If accepted generally, the native occurrence of this species in the Bronx is a county record (albeit based on historic occurrence).

The changed garden boundaries complicate comparison between the historic flora and the extant flora, especially when attempting to compare species per unit area for the historic and modern periods. Because species were not collected continuously throughout the Garden's history and the early collectors often only reported the locality as "Bronx Park" it is impossible to know what species occurred in exactly what area at what time. However, for the modern period (1986 to 2015), we did attempt to document every species with precise localities and day of collection. So for the modern period and for the current boundaries, it is possible to calculate species per unit area.

The Garden was established during a dynamic period in botanical science, especially in the area of nomenclature. The "American Code of Botanical Nomenclature" was being debated and Nathaniel Britton was a leading proponent. Eventually, the American Code became the basis for the code used today, but the process was dynamic and contentious. The early Garden flora was published during this period of flux in plant

nomenclature and employed novel nomenclatural concepts such as tautonyms (e.g., *Benzon benzon*, *Malus malus*, *Opuntia opuntia*, *Sassafras sassafras*) that were dropped from the adopted code. Britton and colleagues were meticulous classifiers of taxonomic groups, often recognizing segregate genera long lumped under the Linnean system. Later workers such as Gleason and Cronquist (1991) again lumped some of these species into larger genera (e.g., *Corydalis sempervirens* for *Capnoides sempervirens*, and *Prenanthes trifoliolata* for *Nabalus trifoliolatus*), which are once again being recognized in a narrower sense, largely on the basis of molecular evidence in addition to the morphological data available in 1900.

Historic names not in use today were traced through the successive editions of the "Britton and Brown" floras and correlated with contemporaneous specimens from the area whenever possible. In most cases the synonymy was straightforward and unambiguous (e.g., *Ailanthus glandulosa* became *Ailanthus altissima*). In some cases, however the disposition of a name has not been straightforward. Contemporaneous specimens from "Bronx Park" (G. Nash 319) and "Bronx Meadow" (E. Bicknell 10312) labeled as *Panicularia fluitans* and *Glyceria fluitans*, respectively, are in fact specimens of *Glyceria septentrionalis*. We put "*Panicularia fluitans*" in braces with *Panicularia septentrionalis*, although the name is actually a synonym of *Glyceria fluitans* (Soreng, 2003), which is also reported here with the synonym *Panicularia brachyphylla* Nash in braces. Another example is *Malva rotundifolia* which was reported as wild at by Britton in 1898. In the 1913 edition of the Britton and Brown flora the species is reported as "common nearly throughout our territory" and depicted with smooth mericarps (Britton & Brown, 1913). In the 1952 edition (Gleason, 1952), the name as we know it today, *Malva neglecta*, is said to be "included in *Malva rotundifolia* of Gray, B & B., Small, Rydb." The name is actually misapplied to both *Malva neglecta* and *Malva pusilla*, but more commonly to the former. The latter is more common westward and is not currently known from New York (Weldy et al., 2015). The species *Malva rotundifolia* does occur in the region, but is uncommon and has rugose mericarps. We found no historic specimens of wild material from the grounds of the Garden annotated with the name *Malva rotundifolia*, however, there are

specimens of *Malva neglecta* collected by Britton and others from the New York region annotated as *Malva rotundifolia* (e.g., Bicknell 5769 from Van Cortlandt Park). We applied the name to *Malva neglecta*.

Some species were listed twice under two different names in the Britton (1899) list. For example, both *Poa flava* and *Tricuspis seslerioides* are listed under Poaceae. Both names are synonyms of *Tridens flavus* and are listed as such in the Britton and Brown flora of 1913. *Botrychium dissectum* was reported by Britton (1899) and later Nash (1900) reported *Botrychium obliquum*. Today these are considered synonyms of *Sceptridium dissectum* and are so treated here. *Carex lurida* and *Carex tentaculata* are both listed in the 1899 list. The latter is a synonym of the former and is listed as such in the Britton and Brown flora of 1913. The same is true for *Carex costellata* and *Carex virescens*, both of which are reported on the 1899 list and were later listed under *Carex virescens* in the 1913 Britton and Brown flora. *Sisyrinchium angustifolium* and *Sisyrinchium graminoides* E. P. Bicknell are both recognized by Britton (1899). Today we view the species as a single, if somewhat variable entity (*Sisyrinchium angustifolium*). However, these examples are few and the vast majority of names on the historic list correspond to valid species today (though sometimes with different names).

Some of the names from the historic list are based on misidentifications or alternate application of a name. *Hylodesmum nudiflorum* (L.) H. Ohashi & R. R. Mill., reported as *Meibomia nudiflora* (Britton, 1898), is based on a misidentified specimen. The Bicknell specimen (s.n.) from "Bronx Park", collected on 20 September 1896, is *Desmodium perplexum*. The name *Eragrostis purshii* was applied to a specimen collected on 1 September 1899 by W. Clute and P. Wilson (s.n.). The specimen is *Eragrostis pectinacea*, a species persisting in one locality on the grounds today. *Lespedeza frutescens* reported by Britton (1898) is based on misidentified specimens of *Lespedeza violacea*.

Nineteenth Century specimens labeled "Bronx Park" could include plants actually collected from what is now the Wildlife Conservation Society (Bronx Zoo) or areas of Bronx Park now north of the Garden (see Fig. 1), although most were collected after 1896 when the Garden was established. No taxa were added to the spontaneous flora (Appendix I) solely on the basis of a

specimen labeled "Bronx Park". All historic taxa are either reported by Britton (1898, 1899), Nash (1900) or explicitly cited as "New York Botanical Garden" on preserved specimens.

We cite all voucher specimens seen for a particular taxon from the flora area, rather than just one "representative specimen" as is sometimes done. If only one specimen per taxon is cited and that specimen is later determined to be misidentified, it is not possible to exclude the name because there is always the possibility other, correctly identified specimens could exist. If we have similarly erred in the application of a name, future workers will be able to confidently exclude that taxon from the flora because we have cited all specimens seen by us that are the basis for that report. The same holds true for application of synonyms and misidentifications.

Species reported by Britton (1899) and Nash (1900) that are not known to form spontaneous new populations but may spread vegetatively in a very localized area are treated here as waifs: *Hemerocallis fulva*, *Nepeta cataria*, and *Ornithogalum umbellatum*. These names are not counted in the historic flora. The report by Britton (1898) of *Syringa vulgaris* L. as wild is certainly an error. The species is only known to be persistent from cultivation. We are not aware of any credible reports of spontaneous lilacs anywhere in the region and indeed, none was collected. The species is excluded here. *Populus alba*, also long-persistent from cultivation, but never spontaneous was listed by Britton (1899). No spontaneous voucher was found and it is excluded here. *Hibiscus syriacus* is also a long-lived shrub or small tree and may appear spontaneous, but we have seen no truly spontaneous populations. Like the preceding, no spontaneous vouchers were found, and the species is excluded here.

The relative abundance of a species often fluctuates from year to year, depending on many factors including climactic variation, disturbance, etc. For example, in some years, in some areas, *Persicaria extremiorientalis* may be abundant in a location and scarce or absent in others (Atha et al., 2010). In a very few cases (e.g., *Achillea millefolium* or *Poa pratensis*), a species is reported from the historic list and has undoubtedly been here ever since, but we have seen no modern voucher specimen from the grounds of the Garden. These species are cited here as historic, though they are likely extant today. *Rorippa indica* persisted as a weed on the grounds of the

Garden at least from 1947 to 1949, but has since vanished from New York State (Weldy et al., 2015). The species is treated here as a waif.

Plants from the Garden's living collection have sometimes escaped cultivation and become established in the spontaneous flora of the landscape. *Viburnum plicatum* forma *tomentosum* was documented as naturalizing in the Forest in 1935 (McLean, 1935). Today, *Ficaria verna*, *Phellodendron amurense*, and *Reynoutria* spp. have become invasive and pose a serious threat to remaining populations of native plants. Recent efforts to control the spread of invasive species and re-establish populations of extirpated species in the Thain Family Forest indicate that some of the changes to the Garden's spontaneous flora may be reversible (Schuler & Forrest, 2016).

Since 2008, the Garden has conducted ecological restoration—or the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed—in the 50 acre, remnant old-growth forest (SER, 2004). The main goal has been to improve forest health through active management informed by research. In this context, a healthy forest is defined as an ecosystem that is dominated by naturally regenerating populations of native plants that respond to and recover from disturbances of all scales with minimal human intervention, provides suitable habitat to a diversity of organisms in a structurally diverse, mixed-aged woodland, and sustains natural processes that support biodiversity (Schuler & Forrest, 2016). Forest inventories conducted in 1985, 2002, 2006, and 2011 have quantitatively revealed the expansion of non-native plant species in the forest (Rudnicki & McDonnell, 1989; Schuler & Forrest, 2016). Out of the 75 invasive plant species that are listed on the New York State Prohibited and Regulated List (NYS DEC, 2014), there are 34 extant species: *Acer platanoides*, *Acer pseudoplatanus*, *Alliaria petiolata*, *Ampelopsis brevipedunculata*, *Anthriscus sylvestris*, *Aralia elata*, *Artemisia vulgaris*, *Celastrus orbiculatus*, *Cirsium arvense*, *Clematis terniflora*, *Euonymus alatus*, *Euonymus fortunei*, *Ficaria verna*, *Frangula alnus*, *Humulus japonicus*, *Lonicera japonica*, *Lonicera maackii*, *Lonicera morrowii*, *Lythrum salicaria*, *Microstegium vimineum*, *Miscanthus sinensis*, *Persicaria perfoliata*, *Phellodendron amurense*, *Potamogeton crispus*, *Reynoutria* × *bohemica*, *Reynoutria japonica*, *Reynoutria sachalinensis*, *Rhamnus cathartica*, *Robinia pseudoacacia*,

Rosa multiflora, *Rubus phoenicolasius*, *Silphium perfoliatum*, *Vincetoxicum nigrum*, and *Vincetoxicum rossicum*. It should be clarified that some of these plants are native to North America, just not to this region, e.g., *Robinia pseudoacacia* and *Silphium perfoliatum*. In addition, *Berberis thunbergii* and *Phragmites australis* are known to grow on the grounds of the Garden but, have not been vouchered, and *Arthraxon hispidus*, *Euphorbia cyparissias*, and *Lespedeza cuneata* are reported as historic but have not been collected recently. Interestingly, species of concern statewide and regionally, like *Berberis thunbergii*, *Euonymus alatus*, and *Rhamnus cathartica* are present only in limited numbers. Only half of the statewide list are currently extant or known to have been part of the Garden's flora, leaving speculation for the potential of additional invasion in the future or possibly the habitat requirements for the remaining listed species do not exist in the Garden's current 250 acres.

Invasive species of concern actively managed in 2008–2015 were *Acer platanoides*, *Ailanthus altissima*, *Alliaria petiolata*, *Ampelopsis brevipedunculata*, *Aralia elata*, *Celastrus orbiculatus*, *Corydalis incisa*, *Ficaria verna*, *Hedera helix*, *Lonicera japonica*, *Lonicera maackii*, *Microstegium vimineum*, *Phellodendron amurense*, *Persicaria perfoliata*, *Reynoutria* × *bohemica*, *Reynoutria japonica*, *Reynoutria sachalinensis*, *Rosa multiflora*, and *Viburnum dilatatum*. Extant non-native species that are present in inventory data but are not actively managed include *Acer pseudoplatanus*, *Humulus japonicus*, *Paulownia tomentosa*, *Prunus avium*, *Prunus incisa*, *Prunus sargentii*, *Prunus subhirtella*, *Prunus* × *yedoensis*, *Rhamnus frangula*, and *Rubus phoenicolasius*. Forest inventory data identify priority species and target locations for management. Literature is consulted for the best management practices for individual species with special focus on techniques that are proven effective at controlling a given species without causing unintended negative impacts on forest ecosystem processes (Schuler & Forrest, 2016). Published best management practices do not always result in the best control. Frequent monitoring and repeating the forest inventory sampling every five years reveals efficacy of control treatments (Schuler & Forrest, 2016). In addition, there is the constant threat of introduction of new invasive species as in the case in recent years of *Corydalis incisa* and *Persicaria*

perfoliata. In both cases, the infestations were discovered early and mechanical management has been effective. *Microstegium vimineum* is abundant regionally, is observed periodically (despite treatment) along the Forest trails, and requires constant monitoring and management to prevent its spread. The monitoring for new invasive species and new infestation of extant species is constant.

When invasive plants are removed, it is necessary to plant desirable plants in management areas to prevent the reestablishment of the species removed or the establishment of another invasive species. From 2008 through 2015, Garden staff and volunteers spent a total of 21,500 hours in invasive plant management and restoration planting. Collectively, they have planted 25,220 individual plants plus seed mix including 11,700 herbaceous plants, 1720 shrubs, and 11,800 trees. Over 100 different species have been planted.

Restoring the historic flora and expanding the populations of rare extant species in the Forest has been an objective for ongoing restoration work. This flora has provided a list of historic or rare extant species of concern to be considered in future restoration projects. To date, the following historic or regionally rare species have been planted from regionally sourced seed: *Anemone canadensis*, *Anemone nobilis*, *Anemone virginica*, *Anemone quinquefolia*, *Athyrium filix-femina*, *Caltha palustris*, *Carex grayii*, *Carex plantaginea*, *Carex platyphylla*, *Corylus americana*, *Dryopteris marginalis*, *Elymus hystrix*, *Geranium maculatum*, *Geum canadensis*, *Iris versicolor*, *Lilium superbum*, *Lobelia siphilitica*, *Monarda fistulosa*, *Osmunda regalis*, *Osmundastrum cinnamomeum*, *Polystichum acrostichoides*, *Salix discolor*, and *Thelypteris palustris*. *Carex aggregata*, *Carex amphibola*, *Carex cephalophora*, and *Carex debilis* were vegetatively propagated from populations on the grounds of The New York Botanical Garden.

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Author contributions

Conceived project: MN; conducted field work: DA, JS, MN, MP, RN; identified specimens: DA, MN for all except RN for Cyperaceae and Poaceae and Robbin Moran for ferns; wrote manuscript: DA, JS, MP, MR, TF; compiled data: DA, MR; analyzed data DA, MR.

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Appendix I. The Historic and Extant Spontaneous Vascular Plant Flora of The New York Botanical Garden

FERNS

- Aspleniaceae — *Asplenium platyneuron* (L.) Britton, Sterns & Poggenb., Ebony Spleenwort. *D. Atha* 8557; *T. Edmondson* 1422; *D. McClelland* 353. Frequent.
- Athyriaceae — *Athyrium angustum* (Willd.) C. Presl, {*Asplenium felix-foemina*}, Ladyfern. *E. Roy* 110. Rare.
- Cystopteridaceae — *Cystopteris tenuis* (Michx.) Desv., Upland Brittle Bladderfern. *D. Atha* 14744. Rare.
- Dennstaedtiaceae — *Dennstaedtia punctilobula* (Michx.) T. Moore, {*Dicksonia punctilobula*}, Hayscented Fern. *D. McClelland* 348, 373; *C. Morenberg* 93; *G. Nash* s.n.; *E. Roy* 98. Infrequent.
- Dryopteridaceae — *Dryopteris carthusiana* (Vill.) H. P. Fuchs, Spinulose Woodfern. *D. Atha* 14745; *D. McClelland* 349; *E. Roy* 85. Rare.
- Dryopteridaceae — *Dryopteris cristata* (L.) A. Gray, Crested Woodfern. *W. Clute* s.n. Historic.
- Dryopteridaceae — *Dryopteris intermedia* (Muhl. ex Willd.) A. Gray, {*Dryopteris spinulosa intermedia*}, Fancy Woodfern. *E. Bicknell* 11489. Historic.
- Dryopteridaceae — *Polystichum acrostichoides* (Michx.) Schott, {*Dryopteris acrostichoides*}, Christmas Fern. *G. Nash* s.n.; *E. Roy* 84. Rare.
- Equisetaceae — *Equisetum arvense* L., Field Horsetail. *D. Atha* & *M. Nee* 8027; *J. Knowles* 9; *G. Nash* s.n. Rare.
- Equisetaceae — *Equisetum fluviatile* L., Water Horsetail. *E. Bicknell* 11584B; *W. Clute* s.n. Historic.
- Equisetaceae — *Equisetum hyemale* L., Scouringrush Horsetail. *W. Clute* & *P. Wilson* s.n.; *G. Nash* s.n. Historic.
- Onocleaceae — *Onoclea sensibilis* L., Sensitive Fern. *D. Atha* 7581; *E. Britton* s.n.; *M. Nee* & *K. Cameron* 54354. Infrequent.
- Ophioglossaceae — *Sceptridium dissectum* (Spreng.) Lyon, {*Botrychium obliquum*}, Lacefrond Grape Fern. *H. House* s.n.; *L. Underwood* s.n. Historic.
- Osmundaceae — *Osmundastrum cinnamomeum* (L.) C. Presl, {*Osmunda cinnamomea*}, Cinnamon Fern. *D. McClelland* 329; *G. Nash* s.n. Rare.
- Salviniaceae — *Azolla caroliniana* Willd., Carolina Mosquito Fern. *D. Atha* 1912. Rare.
- Thelypteridaceae — *Thelypteris noveboracensis* (L.) Nieuwl., {*Dryopteris noveboracensis*}, New York Fern. *D. Atha* 7580, 7659, 14715; *E. Roy* 91. Rare.
- Woodsiaceae — *Woodsia obtusa* (Spreng.) Torr., Cliff Fern. *D. McClelland* 356. Infrequent.

GYMNOSPERMS

- Cupressaceae — *Juniperus virginiana* L. var. *virginiana*, {*Juniperus virginiana*}, Eastern Red Cedar. *D. Atha* 6911; *G. Nash* s.n.; *P. Wilson* 10809, s.n. Infrequent.
- Ginkgoaceae — *Ginkgo biloba* L., Ginkgo. *J. Schuler* 17. Not Native. Waif. Rare.
- Pinaceae — *Pinus strobus* L., Eastern White Pine. *D. Atha* 15045. Rare.

Pinaceae — *Tsuga canadensis* (L.) Carrière, Eastern Hemlock. *H. Moldenke* 4572; *G. Nash* s.n.; *M. Nee* 37822, 54277, 54283; *E. Roy* 39; *J. Small* s.n.; *P. Wilson* 10811, s.n. Infrequent.

Taxaceae — *Cephalotaxus harringtonia* (Knight ex J. Forbes) K. Koch, Harrington's Cephalotaxus. *D. Atha* 6914; *M. Nee* 59042. Not Native. Waif. Frequent.

MAGNOLIIDS

Aristolochiaceae — *Asarum canadense* L., {*Asarum reflexum*}, Canadian Wild Ginger. *A. Vail* s.n.; *C. Gilly* 292; *G. Nash* 170. Historic.

Ceratophyllaceae — *Ceratophyllum demersum* L., Hornwort. *M. Nee* & *D. McClelland* 54421. Rare.

Lauraceae — *Lindera benzoin* (L.) Blume, {*Benzoi n benzoin*}, Spicebush. *D. Atha* 6947, 9038; *H. Beck* 1333; *A. Carvalho* & *W. Thomas* 6889; *J. Knowles* s.n.; *M. Nee* & *J. Beitel* 35907; *M. Nee* & *K. Cameron* 54248; *W. Nieder* 8, 9; *E. Roy* 5, 24; *P. Wilson* 167, 10819. Frequent.

Lauraceae — *Sassafras albidum* (Nutt.) Nees, {*Sassafras sassafras*}, Sassafras. *D. Atha* 6973, 6990, 8593; *W. Cahilly* 27; *C. Gilly* 281; *E. Humphreys* s.n.; *G. Nash* 77, 78; *M. Nee* 43495; *M. Nee* & *K. Cameron* 54342; *E. Roy* 41; *P. Wilson* 10859. Frequent.

Magnoliaceae — *Liriodendron tulipifera* L., Tuliptree. *R. Dragonetti* 7; *C. Gilly* 2; *D. McClelland* 331; *G. Nash* 147; *M. Nee* 31284; *E. Roy* 37, 44; *P. Wilson* s.n. Frequent.

Magnoliaceae — *Magnolia kobus* DC., Kobushi Magnolia. *D. Atha* 13349; *W. Nieder* 2, 7; *E. Roy* 14. Not Native. Waif. Infrequent.

Magnoliaceae — *Magnolia × soulangeana* Soul.-Bod., Saucer Magnolia. *M. Nee* & *K. Cameron* 54247. Not Native. Waif. Rare.

Magnoliaceae — *Magnolia tripetala* (L.) L., Umbrella Magnolia. *D. Atha* 9034; *D. McClelland* 316. Not Native. Waif. Rare.

Saururaceae — *Houttuynia cordata* Thunb., Chameleon Plant. *D. Atha* 13718. Not Native. Waif. Rare.

Saururaceae — *Saururus cernuus* L., Lizard's Tail. *D. Atha* 8591; *A. Gibson* 1090; *C. Gilly* 81; *M. Nee* & *K. Cameron* 54494; *P. Wilson* 137. Infrequent.

MONOCOTS

Acoraceae — *Acorus calamus* L., Sweet Flag. *G. Nash* s.n. Not Native. Historic.

Alismataceae — *Alisma subcordatum* Raf., {*Alisma plantago-aquatica*}, Southern Waterplantain. *C. Gilly* 153; *J. Monachino* 449, 450. Historic.

Alismataceae — *Sagittaria latifolia* Willd., Common Arrowhead. *D. Atha* & *M. Nee* 8020. Rare.

Alliaceae — *Allium vineale* L., Field Garlic. *D. Atha* 6926; *J. Gowdy* s.n.; *D. McClelland* 333. Not Native. Frequent.

Amariyllidaceae — *Galanthus nivalis* L., Snowdrop. *D. Atha* & *L. Collins* 14229; *M. Nee* & *K. Cameron* 54240; *E. Roy* 121. Not Native. Waif. Frequent.

Araceae — *Arisaema triphyllum* (L.) Schott subsp. *triphyllum*, Jack-in-the-Pulpit. *C. Gilly* s.n., 282; *N. Holmgren* 656 (UTC); *D. McClelland* 338; *G. Nash* 32; *M. Nee* & *K. Cameron* 54357; *W. Nieder* 26; *A. Vail* s.n.; *E. Wolfson* 7. Rare.

Araceae — *Lemna minor* L., Common Duckweed. *G. Nash* 511; *M. Nee* & *K. Cameron* 54331; *P. Wilson* s.n. Infrequent.

Araceae — *Peltandra virginica* (L.) Schott, Arrow Arum. *D. Atha* 2222, 8991; *C. Gilly* 43; *J. Gunderson* 8; *M. Nee* 43605; *M. Nee* & *K. Cameron* 54453; *E. Roy* 101. Infrequent.

Araceae — *Symplocarpus foetidus* (L.) Nutt., {*Spathyema foetida*}, Skunk Cabbage. *N. Holmgren* 630; *C. Morenberg* 90; *M. Nee* & *K. Cameron* 54265; *W. Nieder* 6; *R. Rennert* s.n.; *E. Roy* 53. Infrequent.

Araceae — *Wolffia brasiliensis* Wedd., Brazilian Watermeal. *H. Beck* 1373; *M. Nee* 43607; *M. Nee* & *K. Cameron* 54332. Rare.

Asparagaceae — *Asparagus officinalis* L., Asparagus. *G. Nash* 166. Not Native. Historic.

Asparagaceae — *Convallaria majalis* L., Lily of the Valley. *D. Atha* 7049; *N. Holmgren* 699 (UTC); *D. duMouchel* s.n.; *M. Nee* & *K. Cameron* 54300. Not Native. Waif. Rare.

Asparagaceae — *Maianthemum canadense* Desf., {*Unifolium canadense*}, Canada Mayflower. *C. Gilly* 313; *N. Holmgren* 702 (UTC); *D. McClelland* 327; *C. Morenberg* 91; *M. Nee* & *K. Cameron* 54356; *W. Nieder* 47; *E. Wolfson* 2. Frequent.

Asparagaceae — *Maianthemum racemosum* (L.) Link, {*Vagnera racemosa*}, False Solomon Seal. *D. Atha* 7371; *W. Cahilly* 38, 97008; *S. Clarke* s.n.; *C. Gilly* 172; *D. McClelland* 325; *M. Nee* & *K. Cameron* 54344; *W. Nieder* 55; *E. Wolfson* 3. Frequent.

Asparagaceae — *Ornithogalum umbellatum* L., Star of Bethlehem. *J. Fargione* 2; *M. Nee* & *K. Cameron* 54350. Not Native. Waif. Infrequent. Reported by Britton (1898).

Asparagaceae — *Othocallis siberica* (Haw. ex Andr.) Speta, Siberian Squill. *D. Atha* 11554; *M. Nee* & *K. Cameron* 54254. Not Native. Waif. Rare.

Asparagaceae — *Polygonatum biflorum* (Walter) Elliott var. *biflorum*, {*Polygonatum biflorum*}, Smooth Solomon Seal. *N. Holmgren* 697 (UTC); *E. Roy* 63; *M. Wolf* & *R. Dragonetti* 11. Infrequent.

Asparagaceae — *Polygonatum biflorum* (Walter) Elliott var. *commutatum* (Schult. & Schult. f.) Morong, {*Polygonatum commutatum*}, Smooth Solomon Seal. *D. Atha* 7370, 7638; *G. Nash* 140. Rare.

Asparagaceae — *Polygonatum pubescens* (Willd.) Pursh, Hairy Solomon Seal. *D. McClelland* 328; *G. Nash* 86; *M. Nee* & *K. Cameron* 54320; *W. Nieder* 42; *E. Wolfson* 6. Infrequent.

Colchicaceae — *Uvularia perfoliata* L., Perfoliate Bellwort. *C. Gilly* 297. Historic.

Colchicaceae — *Uvularia sessilifolia* L., Sessileleaf Bellwort. *D. Atha* 8131; *M. Eaton* s.n.; *T. Edmondson* 1074; *C. Gilly* 265; *J. Gunderson* 7; *R. Naczi* 12496; *G. Nash* 47; *W. Nieder* 17; *E. Wolfson* 5. Rare.

Commelinaceae — *Commelina communis* L., Asiatic Dayflower. *D. Atha* 6795, 7760, 10601, 13728; *R. Dragonetti* 10; *C. Gilly* 53; *W. Nieder* 65 (3 sheets); *D. McClelland* 339; *J. Monachino* 11748; *R. Naczi* & *D. Atha* 12686; *F. Pennell* 6714; *M. Petrino* 4; *C. Ruiz* 9; *P. Wilson* 83. Not Native. Frequent.

Commelinaceae — *Murdannia nudiflora* (L.) Brenan., Nakedstem Dewflower. *R. Naczi* & *D. Atha* 12673. Not Native. Waif. Rare.

Commelinaceae — *Tradescantia virginiana* L., Virginia Spiderwort. *D. Atha* 8049; *C. Gilly* 12. Not Native. Rare.

Cyperaceae — *Carex aggregata* Mack., Glomerate Sedge. *R. Naczi* 12535. SH but discovered at the Garden in 2009. Rare.

- Cyperaceae — *Carex albicans* Willd. ex Spreng. var. *albicans*, {*Carex varia*}, Whitetinge Sedge. *R. Naczi* 12384. Infrequent.
- Cyperaceae — *Carex albicans* Willd. ex Spreng. var. *emmonsii* (Torr.) Rettig, Emmons Sedge. *M. Nee & K. Cameron* 54296; *R. Naczi* 13682; *W. Nieder* 4, 12. Infrequent.
- Cyperaceae — *Carex amphibola* Steud., Eastern Narrowleaf Sedge. *R. Naczi* 12501, 12538; *G. Nash* 149. Rare.
- Cyperaceae — *Carex annectens* (E. P. Bicknell) E. P. Bicknell, {*Carex xanthocarpa*}, Yellowfruit Sedge. *R. Naczi* 12497. Rare.
- Cyperaceae — *Carex blanda* Dewey, {*Carex laxiflora blanda*}, Eastern Woodland Sedge. *R. Naczi* 12498. Infrequent.
- Cyperaceae — *Carex cephalophora* Muhl. ex Willd., Ovalleaf Sedge. *R. Naczi* 12480. Frequent.
- Cyperaceae — *Carex communis* Bailey var. *communis*, {*Carex pedicellata*}, Fibrousroot Sedge. *G. Nash* 157. Historic.
- Cyperaceae — *Carex crinita* Lam. var. *crinita* {*Carex crinita*}, Fringed Sedge. *R. Naczi* 12488. Rare.
- Cyperaceae — *Carex debilis* Michx. var. *debilis*, {*Carex flexilis*}, Whiteedge Sedge. *R. Naczi* 12534. Rare.
- Cyperaceae — *Carex digitalis* Willd. var. *digitalis*, {*Carex digitalis*}, Slender Woodland Sedge. *R. Naczi* 12482. Rare.
- Cyperaceae — *Carex gracillima* Schwein., Graceful Sedge. *G. Nash* 151. Historic.
- Cyperaceae — *Carex granularis* Muhl., Limestone Meadow Sedge. *R. Naczi* 12537. Rare.
- Cyperaceae — *Carex grayi* Carey, {*Carex asa-grayi*}, Gray's sedge. *J. Monachino* 76; *G. Nash* 272, 311; *F. Pennell s.n.* Historic.
- Cyperaceae — *Carex grisea* Wahlenb., Inflated Narrowleaf Sedge. *R. Naczi* 12539; *M. Nee & K. Cameron* 54339. Rare.
- Cyperaceae — *Carex hirtifolia* Mack., {*Carex pubescens*}, Pubescent Sedge. *G. Nash* 201. Historic.
- Cyperaceae — *Carex hystericina* Muhl. ex Willd., {*Carex hystricina*}, Bottlebrush Sedge. *E. Bicknell* 1751. Historic.
- Cyperaceae — *Carex laxiculmis* Schwein. var. *laxiculmis*, {*Carex laxiculmis*}, Spreading Sedge. *R. Naczi* 12536. Rare.
- Cyperaceae — *Carex lupulina* Muhl., Hop Sedge. *E. Bicknell s.n., s.n.*; *G. Nash* 261, 428. Historic.
- Cyperaceae — *Carex lurida* Wahlenb., {*Carex tentaculata*}, Shallow Sedge. *R. Naczi* 12487; *M. Nee* 43635; *M. Nee & D. McClelland* 54444. Frequent.
- Cyperaceae — *Carex muhlenbergii* Schkuhr ex Willd. var. *enervis* Bott, {*Carex muhlenbergii*}, Muhlenberg's Sedge. *R. Naczi* 12481. Frequent.
- Cyperaceae — *Carex pallescens* L., {*Carex triceps*}, Pale Sedge. *G. Nash* 196. Historic.
- Cyperaceae — *Carex pellita* Muhl. ex Willd., {*Carex lanuginosa*}, Woolly Sedge. *G. Nash* 145. Historic.
- Cyperaceae — *Carex pennsylvanica* Lam., Pennsylvania Sedge. *D. Atha* 7433; *R. Naczi* 12390, 13683; *W. Nieder* 3. Frequent.
- Cyperaceae — *Carex radiata* (Wahlenb.) Small, {*Carex rosea*}, Eastern Star Sedge. *D. Atha* 2612, 7379; *J. Monachino* 2; *M. Nee* 54338; *M. Nee & D. McClelland* 54447; *R. Naczi* 12476, 12478. Frequent.
- Cyperaceae — *Carex reznicekii* Werier, Reznicek's Sedge. *R. Naczi* 13687. Rare.
- Cyperaceae — *Carex rugosperma* Mack., Parachute Sedge. *R. Naczi* 12388. Rare.
- Cyperaceae — *Carex scoparia* Schkuhr ex Willd., Broom Sedge. *G. Nash* 250. Historic.
- Cyperaceae — *Carex sparganioides* Muhl. ex Willd., Bur-reed Sedge. *G. Nash* 150; *R. Naczi* 12500. Rare.
- Cyperaceae — *Carex sprengelii* Dewey ex Spreng., Sprengel's Sedge. *R. Naczi* 12489. Rare.
- Cyperaceae — *Carex squarrosa* L., Squarrose Sedge. *G. Nash* 424. Historic.
- Cyperaceae — *Carex stipata* Muhl. ex Willd., Awlfruit Sedge. *G. Nash* 195. Historic.
- Cyperaceae — *Carex stricta* Lam., Upright Sedge. *G. Nash* 198. Historic.
- Cyperaceae — *Carex swanii* (Fernald) Mack., Swan's Sedge. *D. Atha* 7436; *R. Naczi* 12477, 12483; *G. Nash* 324; *J. Schuler & C. Zhou* 3. Frequent.
- Cyperaceae — *Carex tenera* Dewey, Quill Sedge. *R. Naczi* 12484. Infrequent.
- Cyperaceae — *Carex tonsa* (Fernald) E. P. Bicknell, Shaved Sedge. *R. Naczi* 12389. Infrequent.
- Cyperaceae — *Carex umbellata* Schkuhr ex Willd., Parasol Sedge. *R. Naczi* 12385, 12387, 13686. Infrequent.
- Cyperaceae — *Carex virescens* Muhl., {*Carex costellata*}, Ribbed Sedge. *J. Monachino s.n.*; *R. Naczi* 12499; *G. Nash* 159. Infrequent.
- Cyperaceae — *Carex vulpinoidea* Michx., Fox Sedge. *R. Naczi* 12495. Rare.
- Cyperaceae — *Cyperus bipartitus* Torr., {*Cyperus diandrus*}, Slender Flatsedge. *D. Atha* 8144; *R. Naczi*, *M. Nee & D. Atha* 13382. Infrequent.
- Cyperaceae — *Cyperus esculentus* L., Yellow Nutsedge. *D. Atha* 7927; *R. Naczi*, *A. Litt*, *M. Pace*, *T. Lane & D. Kaiser* 12572; *R. Naczi*, *M. Falk*, *J. Schuler & D. Atha* 12602, 12606; *M. Nee* 43579. Not Native. Frequent.
- Cyperaceae — *Cyperus iria* L., Ricefield Flatsedge. *D. Atha & M. Nee* 8006; *R. Naczi & D. Atha* 12675; *R. Naczi*, *A. Litt*, *M. Pace*, *T. Lane & D. Kaiser* 12575; *R. Naczi*, *M. Falk*, *J. Schuler & D. Atha* 12603. Not Native. Infrequent.
- Cyperaceae — *Cyperus lupulinus* (Spreng.) Marcks, {*Cyperus filiculmis*}, Great Plains Flatsedge. *D. Atha* 7916, 8047. Rare.
- Cyperaceae — *Cyperus microiria* Steudel., Asian Flatsedge. *R. Naczi & D. Atha* 12681. Not Native. Rare.
- Cyperaceae — *Cyperus squarrosus* L., Bearded Flatsedge. *R. Naczi & D. Atha* 12677; *R. Naczi*, *M. Falk*, *J. Schuler & D. Atha* 12601. Infrequent.
- Cyperaceae — *Cyperus strigosus* L., False Nutsedge. *D. Atha* 7845; *R. Naczi*, *M. Falk*, *J. Schuler & D. Atha* 12604; *M. Nee* 54532. Infrequent.
- Cyperaceae — *Eleocharis obtusa* (Willd.) Schult., {*Eleocharis ovata*}, Blunt Spikerush. *W. Clute & P. Wilson s.n.* Historic.
- Cyperaceae — *Schoenoplectus tabernaemontani* (C. C. Gmel.) Palla, {*Scirpus lacustris*}, Softstem Bulrush. *G. Nash* 427. Historic.
- Cyperaceae — *Scirpus hattorianus* Makino, {*Scirpus atrovirens*}, Mosquito Bulrush. *R. Naczi* 12502; *M. Nee* 54450. Infrequent.
- Cyperaceae — *Trichophorum planifolium* (Spreng.) Palla, {*Scirpus planifolius*}, Bashful Bulrush. *G. Nash* 146. Historic.
- Dioscoreaceae — *Dioscorea villosa* L., Colicroot. *D. Atha* 6841, 7583. Rare.
- Hydrocharitaceae — *Elodea canadensis* Michx., Common Waterweed. *D. Atha* 8103. Rare.
- Hypoxidaceae — *Hypoxis hirsuta* (L.) Coville, Common Goldstar. *D. Atha* 8130; *R. Naczi* 12532; *G. Nash s.n.* Rare.
- Iridaceae — *Iris pseudacorus* L., Pale Yellow Iris. *D. Atha* 7378, 10597; *C. Gilly* 5; *M. Kearns* 27; *D. McClelland* 330; *E. Roy* 123. Not Native. Rare.
- Iridaceae — *Iris versicolor* L., Blueflag. *C. Gilly* 4; *G. Nash* 142. Historic.

- Iridaceae — *Sisyrinchium angustifolium* Mill., {*Sisyrinchium graminoides*}, Narrowleaved Blue-eyed Grass. *D. Atha* 10617; *W. Cahilly* 32; *R. Dragonetti* 5; *M. Nee & K. Cameron* 54454; *P. Wilson* s.n. Rare.
- Juncaceae — *Juncus tenuis* Willd., Poverty Rush. *D. Atha* 7565, 7844, 7945; *C. Gilly* 83; *W. Gonzalez* 1; *A. Hollick* s.n.; *R. Naczi* 12531; *M. Nee & K. Cameron* 54472. Frequent.
- Juncaceae — *Juncus torreyi* Coville, Torrey's Rush. *D. Atha & M. Nee* 8001. Rare.
- Juncaceae — *Luzula multiflora* (Ehrh.) Lej. subsp. *multiflora*, {*Juncoides campestre*}, Common Woodrush. *D. Atha* 7048, 7435; *R. Naczi* 12528; *G. Nash* s.n.; *M. Nee & K. Cameron* 54297. Rare.
- Liliaceae — *Erythronium americanum* Ker Gawl., American Troutlily. *D. Atha* 6950; *N. Holmgren* 641 (UTC); *S. Mori & C. Gracie* 18816; *M. Nee & K. Cameron* 54251; *W. Nieder* 16. Frequent.
- Liliaceae — *Lilium superbum* L., Turkscap Lily. *G. Nash* 413. Historic.
- Melanthiaceae — *Trillium cernuum* L., Nodding Trillium. *T. Edmondson* s.n. Historic.
- Melanthiaceae — *Veratrum viride* Aiton, Green False Hellebore. *G. Nash* 190. Historic.
- Orchidaceae — *Calopogon tuberosus* (L.) Britton, Stearns & Poggenb. var. *tuberosus*, Tuberous Grasspink. *G. Nash* 267. Historic.
- Orchidaceae — *Corallorhiza maculata* (Raf.) Raf. var. *maculata*, Spotted Coralroot. *M. Eaton* s.n. Historic.
- Orchidaceae — *Epipactis helleborine* (L.) Crantz, Broadleaf Helleborine. *D. Atha* 13717; *D. Atha & M. Nee* 7992; *W. Gonzalez* 9; *J. Lendemer* 37816. Not Native. Frequent.
- Orchidaceae — *Platanthera hookeri* (Torrey ex A. Gray) Lindl., Hooker's Orchid. *C. Gilly* 333. Historic.
- Poaceae — *Agrostis capillaris* L., {*Agrostis alba*}, Rhode Island Bent. *G. Nash* 317, 340, 391, s.n. Not Native. Historic.
- Poaceae — *Agrostis gigantea* Roth, {*Agrostis alba vulgaris*}, Black Bent. *P. Wilson* 1261. Not Native. Historic.
- Poaceae — *Agrostis perennans* (Walter) Tuck., {*Agrostis intermedia*}, Autumn Bent. *D. Atha* 8129, 14833; *D. Atha & M. Nee* 7990; *W. Bastedo* s.n.; *G. Nash* 466, 482, 543, s.n. Infrequent.
- Poaceae — *Alopecurus pratensis* L., Meadow Foxtail. *D. duMouchel* s.n.; *R. Stewart* s.n.; *P. Wilson* s.n. Not Native. Historic.
- Poaceae — *Andropogon virginicus* L., Broomsedge Bluestem. *D. Atha* 8086; *K. Kimball* s.n.; *D. McClelland* 354; *G. Nash* 580; *E. Roy* 118. Infrequent.
- Poaceae — *Anthoxanthum odoratum* L., Sweet Vernalgrass. *D. Atha* 2610, 6992, 7434; *W. Gonzalez* 3; *N. Holmgren* 655 (UTC); *M. Nee & D. McClelland* 54286; *P. Wilson* s.n. Not Native. Frequent.
- Poaceae — *Aristida dichotoma* Michx., Churchmouse Threawn. *D. Atha* 8119; *E. Bicknell* s.n.; *C. Gilly* 209; *G. Nash* 587; *M. Nee & D. Atha* 56506. Rare.
- Poaceae — *Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl, Tall Oatgrass. *F. Pennell* s.n.; *P. Wilson* 114. Not Native. Historic.
- Poaceae — *Arrhenatherum hispidum* (Thunb.) Makino, Small Carpetgrass. *J. Monachino* 397. Not Native. Waif. Historic.
- Poaceae — *Beckmannia syzigachne* (Steud.) Fernald, American Sloughgrass. *F. McCarthy* s.n. Not Native. Waif. Historic.
- Poaceae — *Bromus commutatus* Schrad., {*Bromus racemosus*}, Bald Brome. *J. Monachino* 23; *G. Nash* 203, 216, 263; *R. Stewart* s.n. Not Native. Historic.
- Poaceae — *Bromus hordeaceus* L. subsp. *hordeaceus*, Soft Brome. *D. Atha* 7440. Not Native. Rare.
- Poaceae — *Calamagrostis canadensis* (Michx.) P. Beauv., Bluejoint. *G. Nash* 396. Historic.
- Poaceae — *Cinna arundinacea* L., Sweet Woodreed. *D. Atha & M. Nee* 8023; *G. Nash* 468, s.n.; *J. Monachino* 170, s.n.; *D. du Mouchel* s.n. Rare.
- Poaceae — *Cynosurus echinatus* L., Bristly Dogstail Grass. *J. Monachino* 559. Not Native. Waif. Historic.
- Poaceae — *Dactylis glomerata* L., Orchardgrass. *D. Atha* 7437; *G. Nash* 257; *M. Nee & K. Cameron* 54340. Not Native. Frequent.
- Poaceae — *Danthonia compressa* Austin, Flattened Oatgrass. *D. Atha* 7428; *J. Gonzalez* 2; *R. Naczi* 12475, 12485, 12529; *G. Nash* 262, 280. Infrequent.
- Poaceae — *Danthonia spicata* (L.) P. Beauv. ex Roem. & Schult., Poverty Oatgrass. *D. Atha* 7429; *R. Naczi* 12486; *G. Nash* 228, 251, 325; *J. Schuler & C. Zhou* 2; *R. Stewart & F. Pennell* s.n. Infrequent.
- Poaceae — *Deschampsia flexuosa* (L.) Trin., Wavy Hairgrass. *R. Naczi* 12527. Rare.
- Poaceae — *Dichanthelium boreale* (Nash) Freckmann, {*Panicum bicknellii*}, Northern Panicgrass. *Bicknell* s.n.; *G. Nash* 346. Historic.
- Poaceae — *Dichanthelium boscii* (Poir.) Gould & C. A. Clark, {*Panicum porteriaum*}, Bosc's Panicgrass. *G. Nash* 279, 339. Historic.
- Poaceae — *Dichanthelium clandestinum* (L.) Gould, {*Panicum clandestinum*}, Deertongue Puberulent Panicgrass. *D. Atha* 7637; *R. Naczi* 12494; *G. Nash* 274, 314. Infrequent.
- Poaceae — *Dichanthelium columbianum* (Scribn.) Freckmann, {*Panicum tsugetorum*}, Variable Panicgrass. *E. Bicknell* 11040; *G. Nash* 287, 417, 483. Historic.
- Poaceae — *Dichanthelium commutatum* (Schult.) Gould subsp. *ashei* (Ashe) Lelong, {*Panicum ashei*}, Ashe's Variable Panicgrass. *G. Nash* 490. Historic.
- Poaceae — *Dichanthelium commutatum* (Schult.) Gould subsp. *commutatum*, {*Panicum commutatum*, *Panicum commutatum minor*}, Variable Panicgrass. *E. Bicknell* 10564, 10565, 10566; *G. Nash* 491. Historic.
- Poaceae — *Dichanthelium depauperatum* (Muhl.) Gould, {*Panicum depauperatum*}, Starved Panicgrass. *D. Atha* 7430; *E. Bicknell* 10688, 10692; *G. Nash* 286, 330, 416. Rare.
- Poaceae — *Dichanthelium dichotomum* (L.) Gould, {*Panicum dichotomum*}, Cypress Panicgrass. *E. Bicknell* 10630; *G. Nash* 229, 282, 494. Historic.
- Poaceae — *Dichanthelium lanuginosum* (Ell.) Gould, {*Panicum pubescens*}, Panicgrass. *D. Atha & M. Nee* 7980; *R. Naczi* 12479; *R. Naczi, A. Litt, M. Pace, T. Lane, D. Kaiser* 12557; *G. Nash* 217, 252, 277, 328, 360, 497, s.n.; *M. Nee & K. Cameron* 54485; *J. Schuler & C. Zhou* 4. Frequent.
- Poaceae — *Dichanthelium latifolium* L., {*Panicum macrocarpon*}, Broadleaved Panicgrass. *G. Nash* 270, 275, 284, 492. Historic.
- Poaceae — *Dichanthelium lindheimeri* (Nash) Gould., Lindheimer Panicgrass. *G. Nash* 329, 361, s.n. Historic.
- Poaceae — *Dichanthelium linearifolium* (Scribn.) Gould, {*Panicum enslini*}, Slimleaf Panicgrass. *G. Nash* 326, 327, 331. Historic.
- Poaceae — *Dichanthelium microcarpon* (Muhl. ex Elliott) Mohlenbr. {*Panicum barbulatum*}, Smallfruited Panicgrass. *J. Monachino* 27; *R. Naczi* 12533; *G. Nash* 278. Rare.

Poaceae — *Dichanthelium sphaerocarpon* (Ell.) Gould, {*Panicum sphaerocarpon*}, Roundfruited Panicgrass. *G. Bicknell* 10893; *G. Nash* 288, 332, 419, 485, 488. Historic.

Poaceae — *Dichanthelium villosissimum* (Nash) Freckmann, {*Panicum atlanticum*}, Whitehair Panicgrass. *G. Nash* s.n. Historic.

Poaceae — *Digitaria filiformis* (L.) Koeler, {*Syntherisma filiformis*}, Slender Crabgrass. *W. Bastedo* s.n.; *G. Nash* 504. Historic.

Poaceae — *Digitaria ischaemum* (Schreb.) Schreb. ex Muhl., {*Syntherisma linearis*}, Smooth Crabgrass. *G. Nash* 541. Not Native. Historic.

Poaceae — *Digitaria sanguinalis* (L.) Scop., {*Syntherisma sanguinalis*}, Hairy Crabgrass. *D. Atha* 7842; *D. Atha* & *M. Nee* 7981; *G. Nash* 501; *M. Nee* 54718. Not Native. Frequent.

Poaceae — *Echinochloa crusgalli* (L.) P. Beauv., {*Panicum crus-galli*}, Barnyardgrass. *D. Atha* 7765; *R. Naczi*, *A. Litt*, *M. Pace*, *T. Lane* & *D. Kaiser* 12576; *J. Schuler* & *M. Wolf* 5. Not Native. Infrequent.

Poaceae — *Echinochloa muricata* (P. Beauv.) Fernald. Rough Barnyardgrass. *G. Nash* 458, s.n. Historic.

Poaceae — *Echinochloa walteri* (Pursh) Heller, {*Panicum walteri*}, Walter's Barnyardgrass. *D. Atha* 9030; *N. Holmgren* 430 (UTC). Rare.

Poaceae — *Eleusine indica* (L.) Gaertn., Goose Grass. *D. Atha* & *M. Nee* 7997; *C. Gilly* 70; *R. Naczi*, *A. Litt*, *M. Pace*, *T. Lane* & *D. Kaiser* 12570. Not Native. Frequent.

Poaceae — *Elymus canadensis* L., Canada Wild Rye. *A. Hollick* s.n.; *P. Wilson* 4. Historic.

Poaceae — *Elymus hystrix* L., {*Hystrix hystrix*}, Bottlebrush Grass. *G. Nash* 467. Historic.

Poaceae — *Elymus repens* (L.) Gould, {*Agropyron repens*}, Quackgrass. *G. Nash* 246, 271, 312. Not Native. Historic.

Poaceae — *Elymus riparius* Wiegand, River Wild Rye. *E. Bicknell* 9951; *G. Nash* 456. Historic.

Poaceae — *Elymus virginicus* L., Virginia Wild Rye. *D. Atha* 14069; *J. Schuler* & *C. Zhou* 1; *P. Wilson* 5. Infrequent.

Poaceae — *Eragrostis capillaris* (L.) Nees, Lace Grass. *G. Nash* 554. Historic.

Poaceae — *Eragrostis cilianensis* (All.) Vign. ex Janchen, Stinkgrass. *D. Atha* & *M. Nee* 8007; *C. Gilly* 155. Not Native. Rare.

Poaceae — *Eragrostis hypnoides* (Lam.) Britton, Sterns & Poggenb., Teal Lovegrass. *J. Monachino* s.n. Historic.

Poaceae — *Eragrostis pectinacea* (Michx.) Nees ex Jedw., {*Eragrostis purshii*}, Carolina Lovegrass. *D. Atha* & *M. Nee* 7998; *W. Clute* & *P. Wilson* s.n.; *T. Kearney* s.n.; *H. Moldenke* 8665, 11277; *R. Naczi*, *A. Litt*, *M. Pace*, *T. Lane* & *D. Kaiser* 12566; *G. Nash* 439, 440, 441. Rare.

Poaceae — *Eragrostis spectabilis* (Pursh) Steud., Purple Lovegrass. *D. Atha* 8075; *E. Bicknell* 10029; *C. Gilly* 74; *G. Nash* 452. Rare.

Poaceae — *Festuca ovina* L., Sheep Fescue. *N. Holmgren* 657 (UTC); *P. Wilson* s.n. Historic.

Poaceae — *Festuca rubra* L., Red Fescue. *F. Pennell* s.n. Not Native. Historic.

Poaceae — *Glyceria acutiflora* Torr., {*Panicularia acutiflora*}, Creeping Mannagrass. *G. Nash* s.n. Not Native. Historic.

Poaceae — *Glyceria canadensis* (Michx.) Trin., {*Panicularia canadensis*}, Rattlesnake Mannagrass. *J. Monachino* 28; *G. Nash* 344. Historic.

Poaceae — *Glyceria septentrionalis* Hitch., {*Panicularia fluitans*}, Floating Mannagrass. *G. Nash* 319. Historic.

Poaceae — *Glyceria striata* (Lam.) Hitchc., {*Panicularia nervata*}, Fowl Mannagrass. *H. Moldenke* 5059; *G. Nash* 212; *F. Pennell* s.n.; *R. Stewart* s.n. Historic.

Poaceae — *Holcus lanatus* L., Common Velvetgrass. *E. Yarrow* s.n. Not Native. Historic.

Poaceae — *Leersia oryzoides* (L.) Sw., {*Homalocenchrus oryzoides*}, Cutgrass. *D. Atha* 8135; *G. Nash* 461. Rare.

Poaceae — *Leersia virginica* Willd., {*Homalocenchrus virginicus*}, Whitegrass. *D. Atha* & *M. Nee* 7974; *A. Hollick* s.n.; *G. Nash* 470. Rare.

Poaceae — *Lolium perenne* L. var. *aristatum* Willd., {*Lolium italicum*}, Italian Ryegrass. *J. Monachino* 557, 557a, 557b. Not Native. Historic.

Poaceae — *Lolium perenne* L. var. *perenne*, {*Lolium perenne*}, Perennial Ryegrass. *G. Nash* 214, 258; *J. Monachino* 35. Not Native. Historic.

Poaceae — *Microstegium vimineum* (Trin.) A. Camus, Japanese Stiltgrass. *M. Nee* 41826. Not Native. Infrequent.

Poaceae — *Miscanthus sinensis* Andersson, Chinese Silvergrass. *D. Atha* 6060; *A. Hollick* s.n. Not Native. Waif. Rare.

Poaceae — *Muhlenbergia mexicana* (L.) Trin., Mexican Muhly. *G. Nash* 492. Historic.

Poaceae — *Muhlenbergia schreberi* J. F. Gmel., {*Muhlenbergia diffusa*}, Schreber Muhly. *G. Nash* s.n.; *P. Wilson* s.n. Historic.

Poaceae — *Muhlenbergia sobolifera* (Muhl. ex Willd.) Trin., Rock Muhly. *G. Nash* 465. Historic.

Poaceae — *Muhlenbergia tenuiflora* (Willd.) Britton, Stearns & Poggenb., Slender Muhly. *E. Bicknell* 10260; *G. Nash* 479. Historic.

Poaceae — *Panicum capillare* L., Witch Panicgrass. *G. Nash* 453, 497. Historic.

Poaceae — *Panicum dichotomiflorum* Michx., {*Panicum proliferum*}, Fall Panicgrass. *D. Atha* 8105; *J. Monachino* s.n.; *G. Nash* 459. Infrequent.

Poaceae — *Panicum miliaceum* L., Proso Millet. *G. Nash* 473. Not Native. Historic.

Poaceae — *Panicum philadelphicum* Bernh. ex Trin., {*Panicum minus*}, Philadelphia Panicgrass. *G. Nash* 499. Historic.

Poaceae — *Panicum rigidulum* Bosc ex Nees, {*Panicum agrostoides*}, Redtop Panicgrass. *G. Nash* 538. Historic.

Poaceae — *Paspalum laeve* Michx., Smooth Paspalum. *E. Bicknell* s.n.; *J. Monachino* 359; *G. Nash* 489. Historic.

Poaceae — *Paspalum setaceum* Michx. var. *muhlenbergii* (Nash) Fernald, {*Paspalum pubescens*}, Thin Paspalum. *D. Atha* & *M. Nee* 7976; *A. Bastedo* s.n.; *G. Nash* 454, 500, 526, 528, 539, 542, 563, 564, s.n., s.n. Rare.

Poaceae — *Paspalum setaceum* Michx. var. *setaceum*, {*Paspalum setaceum*}, Thin Paspalum. *E. Bicknell* 11143; *G. Nash* 502. Historic.

Poaceae — *Phalaris arundinacea* L., Reed Canarygrass. *N. Taylor* s.n. Historic.

Poaceae — *Phleum pratense* L., Timothy. *P. Wilson* 123. Not Native. Historic.

Poaceae — *Poa annua* L., Annual Bluegrass. *D. Atha* 2611, 6965; *J. Knowles* 1; *G. Nash* 74. Not Native. Frequent.

Poaceae — *Poa compressa* L., Canada Bluegrass. *G. Nash* 307; *R. Stewart* s.n. Not Native. Historic.

Poaceae — *Poa palustris* L., Fowl Bluegrass. *G. Nash* 394. Historic.

Poaceae — *Poa pratensis* L., Kentucky Bluegrass. *D. Atha* 7439; *G. Nash* 126, s.n.; *M. Nee* & *K. Cameron* 54341. Not Native. Frequent.

- Poaceae — *Schedonorus giganteus* (L.) Holub., Giant Fescue. *J. Monachino* 555. Not Native. Historic.
- Poaceae — *Schedonorus pratensis* (Huds.) P. Beauv., {*Festuca elatior*}, Meadow Fescue. *G. Nash* 213; *F. Pennell* s.n.; *R. Stewart* s.n.; *N. Taylor* s.n. Not Native. Historic.
- Poaceae — *Secale cereale* L., Cereal Rye. *J. Monachino* 32; *P. Wilson* 121. Not Native. Waif. Historic.
- Poaceae — *Setaria faberi* R. A. W. Herm., Chinese Foxtail. *D. Atha* 7928; *J. Monachino* 582, s.n.; *M. Nee* 43621. Not Native. Frequent.
- Poaceae — *Setaria pumila* (Poir.) Roem. & Schult., {*Chaetochloa glauca*}, Yellow Foxtail. *D. Atha* 8143; *P. Wilson* 126A. Not Native. Infrequent.
- Poaceae — *Setaria viridis* (L.) P. Beauv., {*Chaetochloa viridis*}, Green Foxtail. *D. Atha* & *M. Nee* 8000; *C. Gilly* 72, 79, 205; *K. Kimball* s.n.; *J. Monachino* 588, 611A, 611B, 630; *D. duMouchel* s.n.; *P. Wilson* s.n. Not Native. Infrequent.
- Poaceae — *Sphenopholis intermedia* (Rydb.) Rydb., {*Eatonia pennsylvanica*}, Slender Wedgescale. *E. Bicknell* s.n.; *G. Nash* 152, 200. Historic.
- Poaceae — *Sphenopholis nitida* (Biehler) Scribn., {*Eatonia nitida*}, Shiny Wedgescale. *G. Nash* 132. Historic.
- Poaceae — *Tridens flavus* (L.) Hitchc., {*Poa flava*, *Tricuspid sesleroides*}, Purpletop. *D. Atha* 8122; *G. Nash* 506. Rare.
- Pontederiaceae — *Pontederia cordata* L., Pickerelweed. *D. Atha* 10732; *H. Beck* 1374; *M. Nee* & *K. Cameron* 54491. Infrequent.
- Potamogetonaceae — *Potamogeton crispus* L., Curly Pondweed. *D. Atha* 8102. Not Native. Rare.
- Potamogetonaceae — *Potamogeton pusillus* L., Small Pondweed. *D. Atha*, *D. Stevenson* & *M. Thadeo* 8108. Rare.
- Potamogetonaceae — *Zannichellia palustris* L., Horned Pondweed. *D. Atha* 8104. Rare.
- Smilacaceae — *Smilax glauca* Walter, Cat Greenbrier. *R. Naczi*, *A. Litt*, *M. Pace*, *T. Lane*, *D. Kaiser* 12561; *M. Nee* & *K. Cameron* 54538; *A. Vail* s.n. Rare.
- Smilacaceae — *Smilax herbacea* L., Smooth Carrionflower. *G. Nash* 175, s.n. Historic.
- Smilacaceae — *Smilax rotundifolia* L., Roundleaf Greenbrier. *D. Atha* 6837, 8083; *W. Cahilly* 35; *R. Naczi*, *A. Litt*, *M. Pace*, *T. Lane* & *D. Kaiser* 12562; *G. Nash* 168, 583; *M. Nee* & *K. Cameron* 54358, 54486; *E. Roy* 113. Infrequent.
- Typhaceae — *Sparganium eurycarpum* Engelm., Giant Burreed. *D. Atha* & *M. Nee* 8026; *C. Gilly* 49; *G. Nash* 308; *P. Wilson* s.n. Rare.
- Typhaceae — *Typha latifolia* L., Common Cattail. *M. Nee* & *K. Cameron* 54480. Rare.
- Xanthorrhoeaceae — *Hemerocallis fulva* (L.) L., Daylily. *W. Nieder* 67. Not Native. Waif. Rare. Reported by Britton (1898).
- Adoxaceae — *Sambucus canadensis* L., Common Elderberry. *C. Gilly* 44; *J. Luteyn* & *S. Mori* 7948; *M. Nee* & *D. McClelland* 54442; *C. Ruiz* 3; *P. Wilson* 10845. Frequent.
- Adoxaceae — *Viburnum acerifolium* L., Mapleleaved Viburnum. *D. Atha* 7657; *W. Cahilly* 23; *C. Gilly* 254, 441; *J. Gunderson* 3; *G. Nash* s.n.; *E. Roy* 64; *P. Wilson* 10823. Frequent.
- Adoxaceae — *Viburnum dilatatum* Thunb., Linden Arrowwood. *D. Atha* 7369, 7563; *D. Atha* & *M. Nee* 7982; *M. Nee* 43520, 56511. Not Native. Frequent.
- Adoxaceae — *Viburnum lentago* L., Nannyberry. *G. Nash* s.n.; *P. Wilson* 10835. Historic.
- Adoxaceae — *Viburnum plicatum* Thunb., Japanese Snowball. *D. Atha*, *D. Stevenson* & *M. Thadeo* 8113; *W. Cahilly* 14, 15; *C. Gilly* 308; *A. Hollick* s.n., s.n.; *M. Nee* & *K. Cameron* 54311, 54336; *W. Nieder* 32, 50. Not Native. Rare.
- Adoxaceae — *Viburnum prunifolium* L., Blackhaw Viburnum. *D. Atha* 2608, 14404; *W. Cahilly* 33; *S. Clarke* s.n.; *T. Edmondson* 1091; *G. Nash* 969, s.n.; *M. Nee* & *K. Cameron* 54301, 54335; *W. Nieder* 40; *E. Roy* 25; *P. Wilson* 102, 10837. Frequent.
- Adoxaceae — *Viburnum recognitum* Fernald, {*Viburnum dentatum*}, Smooth Arrowwood. *D. Atha* 7577; *A. Carvalho* & *W. Thomas* 6888; *C. Gilly* 388; *G. Nash* s.n. Frequent.
- Adoxaceae — *Viburnum setigerum* Hance, Tea Viburnum. *D. Atha* & *M. Nee* 7986; *M. Nee* & *K. Cameron* 54351. Not Native. Infrequent.
- Adoxaceae — *Viburnum sieboldii* Miq., Siebold's Arrowwood. *W. Cahilly* 12; *M. Nee* & *K. Cameron* 54337; *W. Nieder* 44. Not Native. Infrequent.
- Altingiaceae — *Liquidambar styraciflua* L., Sweet Gum. *D. Atha* 6737; *W. Cahilly* 16, 19, 37; *D. du Mouchel* s.n.; *M. Nee* 36727, 43572; *M. Nee* & *K. Cameron* 54321; *P. Wilson* 10901, s.n. Frequent.
- Amaranthaceae — *Amaranthus blitoides* S. Watson, Mat Amaranth. *C. Gilly* 158. Not Native. Historic.
- Amaranthaceae — *Amaranthus blitum* L., Livid Amaranth. *C. Gilly* 75; *H. Moldenke* 10354; *R. Naczi* & *D. Atha* 12679; *M. Nee* 30150, 43869. Not Native. Frequent.
- Amaranthaceae — *Amaranthus hybridus* L., Green Amaranth. *D. Atha* 6798, 8604; *D. Atha*, *D. Stevenson* & *M. Thadeo* 8110, 8111; *C. Gilly* 138; *R. Naczi* & *D. Atha* 12682, 12683; *R. Naczi*, *A. Litt*, *M. Pace*, *T. Lane* & *D. Kaiser* 12574; *M. Nee* 33270. Not Native. Frequent.
- Amaranthaceae — *Amaranthus retroflexus* L., Rough Amaranth. *A. Foss* s.n.; *C. Gilly* 137. Historic.
- Amaranthaceae — *Chenopodium album* L., Lambsquarters. *D. Atha* 6838, 8458; *A. Foss* s.n.; *C. Gilly* 73; *R. Naczi* & *D. Atha* 12684; *R. Naczi* 12664; *M. Nee* & *K. Cameron* 54698. Not Native. Frequent.
- Amaranthaceae — *Chenopodium simplex* (Torr.) Raf., Mapleleaved Goosefoot. *C. Gilly* 453; *J. Monachino* s.n.; *G. Nash* 570. Not Native. Historic.
- Amaranthaceae — *Chenopodium standleyanum* Aellen, Standley's Goosefoot. *R. Naczi* & *D. Atha* 12685. Rare.
- Amaranthaceae — *Dysphania ambrosioides* (L.) Mosyakin & Clemants, {*Chenopodium ambrosioides*}, Wormseed. *R. Abbott* 26827; *D. Atha* 6794; *A. Foss* s.n.; *C. Gilly* 167; *H. Moldenke* 10353; *R. Naczi* 12669; *M. Nee* & *K. Cameron* 54695. Not Native. Frequent.
- Amaranthaceae — *Dysphania pumilio* (R. Br.) Mosyakin & Clemants, Clammy Goosefoot. *D. Atha* & *M. Nee* 8030; *R. Naczi* & *D. Atha* 12676; *M. Nee* 57173. Not Native. Frequent.
- Anacardiaceae — *Rhus copallinum* L., Winged Sumac. *P. Wilson* 10804. Historic.
- Anacardiaceae — *Rhus glabra* L., Smooth Sumac. *D. Atha* 8118; *P. Wilson* 10862. Rare.
- Anacardiaceae — *Rhus typhina* L., Staghorn Sumac. *M. Nee* & *K. Cameron* 54462; *P. Wilson* 10863. Rare.
- Anacardiaceae — *Toxicodendron radicans* (L.) Kuntze, {*Rhus radicans*}, Poison Ivy. *D. Atha* & *M. Nee* 8011; *D. McClelland* 332; *E. Roy* 66; *P. Wilson* 10813. Frequent.

DICOTS

Apiaceae — *Aegopodium podagraria* L., Goutweed. *D. Atha* & *R. Naczi* 7579; *C. Gilly* 326; *M. Nee* & *K. Cameron* 54463. Not Native. Infrequent.

Apiaceae — *Anthriscus sylvestris* (L.) Hoffm., Wild Chervil. *D. Atha* 14618. Not Native. Infrequent.

Apiaceae — *Astrodaucus orientalis* (L.) Drude., *Astrodaucus*. *M. Nee* & *K. Cameron* 54459. Not Native. Waif. Rare.

Apiaceae — *Carum carvi* L., Caraway. *E. Bicknell* 6670; *G. Nash* 269. Not Native. Historic.

Apiaceae — *Cicuta maculata* L., Common Waterhemlock. *M. Nee* & *K. Cameron* 54481. Infrequent.

Apiaceae — *Cryptotaenia canadensis* (L.) DC., {*Deringa canadensis*}, Canadian Honewort. *D. Atha* 7756; *A. Foss* s.n.; *J. Gowdey* s.n.; *S. Hill* 1168; *G. Nash* 469; *M. Nee* & *K. Cameron* 54490; *E. Roy* 99. Frequent.

Apiaceae — *Daucus carota* L., Queen Anne's Lace. *D. Atha* 7758, 7940; *C. Gilly* 104; *D. MacDougal* E270. Not Native. Infrequent.

Apiaceae — *Heracleum maximum* W. Bartram, Common Cowparsnip. *J. Monachino* 22; *P. Wilson* s.n. Historic.

Apiaceae — *Osmorhiza claytonii* (Michx.) C. B. Clarke, {*Washingtonia claytonii*}, Clayton's Sweetroot. *G. Nash* 236. Historic.

Apiaceae — *Sanicula odorata* (Raf.) K. M. Pryer & L. R. Phillippe, {*Sanicula gregaria*}, Clustered Black Snakeroot. *G. V. Nash* 305. Historic.

Apocynaceae — *Ansonia tabernaemontana* Walt., Bluestar. *S. Clarke* s.n.; *C. Gilly* 311; *H. Moldenke* 20593. Not Native. Historic.

Apocynaceae — *Apocynum cannabinum* L., Hemp Dogbane. *C. Gilly* 77; *D. McClelland* 341; *M. Nee* 43569; *M. Nee* & *D. McClelland* 54433. Infrequent.

Apocynaceae — *Asclepias incarnata* L. subsp. *incarnata*, Swamp Milkweed. *M. Nee* & *K. Cameron* 54541. Rare.

Apocynaceae — *Asclepias incarnata* L. subsp. *pulchra* (Ehrh. ex Willd.) Woodson, {*Asclepias pulchra*}, Swamp Milkweed. *D. Atha* & *M. Nee* 8013; *C. Gilly* 132; *J. Monachino* 577. Rare.

Apocynaceae — *Asclepias syriaca* L., Common Milkweed. *C. Gilly* 46; *D. MacDougal* s.n. Historic.

Apocynaceae — *Asclepias tuberosa* L., {*Asclepias decumbens*}, Butterfly Milkweed. *G. Nash* s.n. Historic.

Apocynaceae — *Vinca minor* L., Common Periwinkle. *D. Atha* 6938. Not Native. Frequent.

Apocynaceae — *Vincetoxicum hirundinaria* Medik., White Swallowwort. *C. Gilly* 380; *J. Monachino* 576. Not Native. Waif. Historic.

Apocynaceae — *Vincetoxicum nigrum* (L.) Moench, Black Swallowwort. *Nee* 43576. Not Native. Rare.

Apocynaceae — *Vincetoxicum rossicum* (Kleopow) Barbar., European Swallowwort. *D. Atha* 7946; *J. Monachino* 575; *M. Nee* & *D. McClelland* 54434. Not Native. Infrequent.

Aquifoliaceae — *Ilex crenata* Thunb., Japanese Holly. *D. Atha* 6928; *M. Nee*, *D. Atha* & *A. Bardet* 56453; *P. Wilson* 10807. Not Native. Waif. Rare.

Aquifoliaceae — *Ilex opaca* Aiton, American Holly. *M. Nee*, *K. Cameron* & *D. McClelland* 54689; *P. Wilson* 10808. Waif. Infrequent.

Aquifoliaceae — *Ilex verticillata* (L.) A. Gray, Common Winterberry. *W. Cahilly* 36; *C. Gilly* 260. Historic.

Araliaceae — *Aralia elata* (Miq.) Seem., Japanese Angelica Tree. *R. Naczi* 12600; *M. Nee* 41822, 43858; *M. Nee* & *K. Cameron* 54484, 54526; *E. Roy* 29. Not Native. Frequent.

Araliaceae — *Aralia nudicaulis* L., Wild Sarsaparilla. *D. Atha* 7660; *R. Naczi*, *A. Litt*, *M. Pace*, *T. Lane* & *D. Kaiser* 12558; *E. Yarrow* s.n. Rare.

Araliaceae — *Aralia racemosa* L., Spikenard. *D. Atha* 9037; *C. Gilly* 381; *M. Nee* & *K. Cameron* 54535; *E. Roy* 70. Infrequent.

Araliaceae — *Hedera helix* L., English Ivy. *D. Atha* & *W. Cahilly* 6929. Not Native. Waif. Rare.

Araliaceae — *Panax trifolius* L., Dwarf Ginseng. *C. Gilly* 283; *J. Monachino* s.n.; *G. Nash* 66; *M. Nee* & *K. Cameron* 54319; *W. Nieder* 28. Rare.

Asteraceae — *Achillea millefolium* L., Common Yarrow. *W. Clute* s.n.; *A. Foss* s.n.; *C. Gilly* 56; *A. Hollick* s.n. Not Native. Historic.

Asteraceae — *Ageratina altissima* (L.) King & H. Rob., {*Eupatorium ageratoides*}, White Snakeroot. *D. Atha* 6796, 6826; *R. Dragonetti* 17; *A. Foss* s.n.; *J. Furlaud* 72; *C. Gilly* 439; *A. Hollick* s.n.; *J. Monachino* 662; *M. Nee* 54711; *M. Petrino* 2; *J. Pruski* 3551; *E. Roy* 7; *C. Ruiz* 16. Frequent.

Asteraceae — *Ambrosia artemisiifolia* L., Annual Ragweed. *D. Atha* 7955; *C. Gilly* 129; *E. Roy* 111. Frequent.

Asteraceae — *Ambrosia trifida* L., Giant Ragweed. *A. Foss* s.n.; *C. Gilly* 147; *M. Nee* & *K. Cameron* 54697; *E. Roy* 106; *P. Wilson* 82. Infrequent.

Asteraceae — *Antennaria neglecta* Greene, Field Pussytoes. *T. Edmondson* 1097. Historic.

Asteraceae — *Antennaria plantaginifolia* (L.) Hook., Plantainleaved Pussytoes. *T. Edmondson* 1072; *J. Knowles* 11. Historic.

Asteraceae — *Anthemis arvensis* L., Corn Chamomile. *C. Gilly* 14. Historic.

Asteraceae — *Arctium minus* (Hill) Bernh., Lesser Burdock. *D. Atha* 8565; *D. Atha* & *M. Nee* 7975; *C. Gilly* 136; *T. Kearney* s.n.; *P. Wilson* 70. Not Native. Frequent.

Asteraceae — *Artemisia vulgaris* L., Common Wormwood. *D. Atha* 6800; *C. Gilly* 204; *H. Moldenke* 10744; *M. Nee* 37817, 43856; *M. Nee*, *K. Cameron* & *D. McClelland* 54699; *E. Roy* 115. Not Native. Frequent.

Asteraceae — *Baccharis halimifolia* L., Groundsel Tree. *C. Gilly* 255. Historic.

Asteraceae — *Bellis perennis* L., English Daisy. *D. Atha* 14746. Not Native. Rare.

Asteraceae — *Bidens bipinnata* L., Spanish Needles. *T. Edmondson* 1851. Historic.

Asteraceae — *Bidens cernua* L., Nodding Beggarticks. *M. Kearns* 26. Rare.

Asteraceae — *Bidens connata* Muhl. ex Willd., Purplestem Beggarticks. *M. Petrino* 34. Historic.

Asteraceae — *Bidens frondosa* L., Devil's Beggarticks. *A. Foss* s.n.; *M. Petrino* 11, 22, 35. Historic.

Asteraceae — *Bidens vulgata* Greene, Tall Beggarticks. *D. Atha* 8053; *C. Gilly* 206. Rare.

Asteraceae — *Cichorium intybus* L., Chicory. *D. Atha* 14832; *A. Hollick* s.n. Not Native. Infrequent.

Asteraceae — *Cirsium arvense* (L.) Scop., {*Carduus arvensis*}, Canada Thistle. *D. Atha* 10608; *C. Gilly* 345; *M. Nee* & *K. Cameron* 54475. Not Native. Infrequent.

Asteraceae — *Cirsium muticum* Michx., {*Carduus muticus*}, Swamp Thistle. *W. Clute* & *P. Wilson* s.n. Historic.

Asteraceae — *Cirsium vulgare* (Savi) Ten., Bull Thistle. *D. Atha* 7561; *D. Atha* & *M. Nee* 7996; *C. Gilly* 419; *M. Petrino* 12; *E. Roy* 107. Not Native. Infrequent.

Asteraceae — *Conyza canadensis* (L.) Cronq., {*Leptilon canadense*}, Horsetweed. *D. Atha* 7938; *C. Gilly* 107. Frequent.

Asteraceae — *Coreopsis lanceolata* L., Lanceleaved Tickseed. *A. Hollick* s.n.; *P. Wilson* s.n. Not Native. Historic.

Asteraceae — *Crepis capillaris* (L.) Wallr., Smooth Hawksbeard. *W. Clute* s.n. Not Native. Historic.

- Asteraceae — *Eclipta prostrata* (L.) L., False Daisy. *D. Atha*, *R. Naczi* & *M. Nee* 9015. Infrequent.
- Asteraceae — *Erechtites hieracifolius* (L.) Raf., Fireweed. *D. Atha* 7935; *C. Gilly* 191; *M. Nee* 59446. Frequent.
- Asteraceae — *Erigeron annuus* (L.) Pers., Annual Fleabane. *D. Atha* 7443, 7651; *C. Gilly* 106; *M. Nee* & *D. McClelland* 43565; *E. Roy* 96. Frequent.
- Asteraceae — *Erigeron strigosus* Muhl. ex Willd., {*Erigeron ramosus*}, Prairie Fleabane. *G. Nash* s.n. Historic.
- Asteraceae — *Eupatorium hyssopifolium* L., Hyssopleaved Thoroughwort. *C. Gilly* 174. Historic.
- Asteraceae — *Eupatorium perfoliatum* L., Common Boneset. *D. Atha* & *M. Nee* 8012; *C. Gilly* 421; *M. Kearns* 25. Rare.
- Asteraceae — *Eupatorium serotinum* Michx., Lateflowering Thoroughwort. *M. Nee* & *D. Atha* 56504. Not Native. Rare.
- Asteraceae — *Eurybia divaricata* (L.) G. L. Nesom, {*Aster divaricatus*}, White Wood Aster. *D. Atha* 6824; *R. Dragonetti* 18; *J. Fargion* 22; *E. Roy* 1. Frequent.
- Asteraceae — *Eurybia macrophylla* (L.) Cass., {*Aster macrophyllus*}, Bigleaf Aster. *C. Gilly* 450. Historic.
- Asteraceae — *Euthamia graminifolia* (L.) Nutt., Grassleaved Goldenrod. *D. Atha* 7954, 8087; *C. Gilly* 179; *D. McClelland* 360; *M. Nee* & *K. Cameron* 54536; *E. Roy* 88. Infrequent.
- Asteraceae — *Eutrochium dubium* (Willd. ex Poir.) E. E. Lamont, Coastal Plain Joepeweed. *W. Clute* & *P. Wilson* s.n.; *C. Gilly* 144; *M. Nee* & *K. Cameron* 54539. Rare.
- Asteraceae — *Eutrochium purpureum* (L.) E. E. Lamont var. *purpureum*, {*Eupatorium purpureum*}, Sweetscented Joepeweed. *M. Petrino* s.n. Historic.
- Asteraceae — *Galinsoga parviflora* Cav., Lesser Quickweed. *C. Gilly* 201. Not Native. Historic.
- Asteraceae — *Galinsoga quadriradiata* Ruiz & Pav., Common Quickweed. *D. Atha* 6732, 10600; *E. Bicknell* 9030; *J. Furlaud* 78; *J. Gowdy* s.n.; *J. Monachino* 52; *M. Nee* 43604, 54716; *W. Nieder* 68; *E. Yarrow* s.n. Not Native. Frequent.
- Asteraceae — *Gamochaeta pensylvanica* (Willd.) Cabrera, Pennsylvania Cudweed. *C. Gilly* 385. Not Native. Historic.
- Asteraceae — *Gnaphalium uliginosum* L., Low Cudweed. *Anonymous* s.n. (BKL). Not Native. Historic.
- Asteraceae — *Helianthus decapetalus* L., Thinleaved Sunflower. *C. Gilly* 368. Historic.
- Asteraceae — *Helianthus giganteus* L., Tall Sunflower. *C. Gilly* 447; *W. Clute* & *P. Wilson* s.n. Historic.
- Asteraceae — *Helianthus tuberosus* L., Jerusalem Artichoke. *C. Gilly* 202. Not Native. Historic.
- Asteraceae — *Heliopsis helianthoides* (L.) Sweet, Oxeye. *C. Gilly* 376. Historic.
- Asteraceae — *Hieracium umbellatum* L., Canada Hawkweed. *D. Atha* 11489; *D. Atha* & *M. Nee* 7988; *J. Monachino* 366; *R. Naczi*, *A. Litt*, *M. Pace*, *T. Lane* & *D. Kaiser* 12563; *M. Wolf* & *J. Schuler* 27. Infrequent.
- Asteraceae — *Hypochaeris radicata* L., Hairy Cat's Ear. *D. Atha* 7943; *N. Britton* s.n.; *H. Moldenke* 4674. Not Native. Rare.
- Asteraceae — *Krigia virginica* (L.) Willd., {*Adopogon carolinianum*}, Virginia Dwarf Dandelion. *T. Edmondson* 3279. Historic.
- Asteraceae — *Lactuca canadensis* L., Tall Lettuce. *D. Atha* 7934. Infrequent.
- Asteraceae — *Lactuca serriola* L., Prickly Lettuce. *D. Atha* 7918; *D. Atha* & *M. Nee* 7994. Not Native. Frequent.
- Asteraceae — *Matricaria chamomilla* L., German Chamomile. *M. Nee* 43582. Not Native. Waif. Rare.
- Asteraceae — *Mikania scandens* (L.) Willd., {*Willoughbaea scandens*}, Climbing Hempvine. *W. Clute* & *P. Wilson* s.n. Historic.
- Asteraceae — *Nabalus trifoliolatus* Cass., Threeleaved Rattlesnakeroot. *C. Gilly* 452. Historic.
- Asteraceae — *Petasites japonicus* (Siebold & Zucc.) Maxim., Japanese Sweet Coltsfoot. *D. Atha* 7050. Not Native. Waif. Rare.
- Asteraceae — *Pluchea odorata* (L.) Cass., Saltmarsh Fleabane. *C. Gilly* 417. Not Native. Historic.
- Asteraceae — *Pseudognaphalium obtusifolium* (L.) Hillier & B. L. Burt, Fragrant Cudweed. *D. Atha* 8116. Rare.
- Asteraceae — *Rudbeckia hirta* L. var. *pulcherrima* Farw., {*Rudbeckia hirta*}, Blackeyed Susan. *C. Gilly* 355. Not Native. Historic.
- Asteraceae — *Rudbeckia laciniata* L., Cutleaf Coneflower. *D. Atha* 6806; *W. Clute* & *P. Wilson* s.n.; *C. Gilly* 181; *M. Nee* & *K. Cameron* 54540; *E. Roy* 77. Frequent.
- Asteraceae — *Senecio vulgaris* L., Common Groundsel. *D. Atha* 6909, 6967; *M. Nee* 43583; *M. Nee* & *K. Cameron* 54260. Not Native. Frequent.
- Asteraceae — *Silphium perfoliatum* L., Cupplant. *D. Atha* 8091; *R. Cowan* s.n.; *C. Gilly* 340; *A. Hollick* s.n.; *H. Moldenke* 20255; *M. Nee* & *K. Cameron* 54497. Not Native. Infrequent.
- Asteraceae — *Solidago altissima* L., {*Solidago canadensis*}, Tall Goldenrod. *C. Gilly* 210; *N. Taylor* 15720. Historic.
- Asteraceae — *Solidago bicolor* L., White Goldenrod. *W. Clute* & *P. Wilson* s.n. Historic.
- Asteraceae — *Solidago caesia* L., Wreath Goldenrod. *D. Atha* 6825; *J. Fargion* 20; *C. Gilly* 458; *D. McClelland* 352; *J. Monachino* 365; *M. Nee*, *K. Cameron* & *D. McClelland* 54690; *E. Roy* 89. Frequent.
- Asteraceae — *Solidago juncea* Aiton, Early Goldenrod. *W. Clute* & *P. Wilson* s.n.; *C. Gilly* 186; *G. Nash* s.n. Historic.
- Asteraceae — *Solidago nemoralis* Aiton, Grey Goldenrod. *C. Gilly* 208. Historic.
- Asteraceae — *Solidago odora* Aiton, Anisescented Goldenrod. *D. Atha* 8505; *M. Pace* 503. Infrequent.
- Asteraceae — *Solidago patula* Muhl., Roughleaved Goldenrod. *W. Clute* & *P. Wilson* s.n. Historic.
- Asteraceae — *Solidago rugosa* Mill. var. *rugosa*, {*Solidago rugosa*}, Wrinkleleaved Goldenrod. *D. Atha* 6797; *W. Clute* & *P. Wilson* s.n.; *G. Nash* s.n.; *M. Nee* 44069; *M. Petrino* 5; *M. Pace* 502; *E. Roy* 82; *N. Taylor* 15634. Frequent.
- Asteraceae — *Solidago speciosa* Nutt., Showy Goldenrod. *C. Gilly* 222; *J. Monachino* s.n. Historic.
- Asteraceae — *Sonchus asper* (L.) Hill, Prickly Sowthistle. *M. Nee* 43580; *M. Nee* & *D. McClelland* 54425. Not Native. Frequent.
- Asteraceae — *Sonchus oleraceus* L., Common Sowthistle. *D. Atha* 7373; *W. Clute* & *P. Wilson* s.n.; *C. Gilly* 60; *N. Holmgren* 460 (UTC); *M. Nee*, *K. Cameron* & *D. McClelland* 54702. Not Native. Frequent.
- Asteraceae — *Symphyotrichum cordifolium* (L.) G. L. Nesom, {*Aster cordifolius polycephalus*}, Heartleaved Aster. *C. Gilly* 450; *A. Hollick* s.n., s.n.; *R. Naczi* 13396; *G. Nash* s.n., s.n.; *M. Nee* 56512; *E. Roy* 92; *E. Yarrow* s.n. Frequent.
- Asteraceae — *Symphyotrichum dumosum* (L.) G. L. Nesom, Bushy Aster. *C. Gilly* 455; *M. Petrino* 9. Historic.
- Asteraceae — *Symphyotrichum lanceolatum* (Willd.) G. L. Nesom., While Panicle Aster. *C. Gilly* 456; *M. Nee* 44068; *M. Petrino* 23, 33. Frequent.

- Asteraceae — *Symphyotrichum lateriflorum* (L.) A. & D. Löve, {*Aster lateriflorus*, *Aster vimineus*}, Small White Aster. *C. Gilly* 451; *G. Nash* 577. Historic.
- Asteraceae — *Tanacetum parthenium* (L.) Sch. Bip., {*Chrysanthemum parthenium*}, Feverfew. *M. Nee* & *K. Cameron* 54458. Not Native. Rare.
- Asteraceae — *Tanacetum vulgare* L., Common Tansy. *C. Gilly* 420. Not Native. Historic.
- Asteraceae — *Taraxacum officinale* F. H. Wigg., {*Taraxacum taraxacum*}, Common Dandelion. *D. Atha* 13365; *W. Graham* s.n.; *J. Monachino* s.n.; *J. Small* s.n.; *M. Nee* & *K. Cameron* 54259; *W. Nieder* 18; *P. Wilson* 305. Not Native. Frequent.
- Asteraceae — *Tragopogon pratensis* L., Meadow Goat's Beard. *A. Hollick* s.n. Not Native. Historic.
- Asteraceae — *Tussilago farfara* L., Colt's Foot. *J. Knowles* 8. Not Native. Historic.
- Asteraceae — *Verbesina alternifolia* (L.) Britton ex Kearney, Wingstem. *D. Atha* 14895; *C. Gilly* 173; *W. Graham* s.n.; *M. Nee* 54727; *J. Pruski* 3082; *E. Roy* 83; *P. Wilson* 273. Not Native. Frequent.
- Asteraceae — *Vernonia noveboracensis* (L.) Michx., New York Ironweed. *D. Atha* & *M. Nee* 8015; *C. Gilly* 371; *P. Wilson* 368. Infrequent.
- Asteraceae — *Xanthium strumarium* L., Common Cocklebur. *D. Atha* 8088; *N. Britton* s.n.; *C. Gilly* 249; *M. Nee* 43855. Infrequent.
- Balsaminaceae — *Impatiens capensis* Meerb., {*Impatiens biflora*}, Jewelweed. *W. Cahilly* 28; *J. Gowdey* s.n.; *M. Nee* & *K. Cameron* 54455; *M. Petrino* 1. Frequent.
- Balsaminaceae — *Impatiens pallida* Nutt., Pale Jewelweed. *D. Atha* 7759; *E. Roy* 87. Rare.
- Berberidaceae — *Podophyllum peltatum* L., Mayapple. *M. Bennett* s.n.; *W. Cahilly* 9; *A. Foss* s.n.; *D. duMouchel* s.n.; *M. Nee* & *K. Cameron* 54310. Infrequent.
- Betulaceae — *Alnus glutinosa* (L.) Gaertn., Black Alder. *D. Atha* 4977, 4978, 6742, 6904; *J. Fargion* 26; *J. Gowdey* s.n.; *N. Holmgren* 574 (UTC); *B. Meurer-Grimes* 225, 226; *B. Meurer-Grimes* & *H. Liao* 9, 10, 11, 15; *R. Naczi* 12671; *M. Nee* 43615; *M. Nee* & *K. Cameron* 54245; *P. Wilson* 10910. Not Native. Infrequent.
- Betulaceae — *Betula alleghaniensis* Britton, Yellow Birch. *C. Gilly* 263; *P. Wilson* 10928. Historic.
- Betulaceae — *Betula lenta* L., Sweet Birch. *E. Alexander* s.n.; *W. Cahilly* 22; *C. Gilly* 269; *D. McClelland* 319; *G. Nash* 472; *M. Nee* 43859; *M. Nee* & *K. Cameron* 54284; *E. Roy* 35; *P. Wilson* 10844. Frequent.
- Betulaceae — *Betula populifolia* Marshall, Gray Birch. *C. Gilly* 266; *G. Nash* 443; *E. Roy* 45; *P. Wilson* 10941. Rare.
- Betulaceae — *Carpinus caroliniana* Walter, American Hornbeam. *D. Atha* 6832, 6991, 7386; *D. Atha* & *M. Nee* 6809; *W. Gonzalez* 5; *C. Gilly* 256, 267; *G. Nash* s.n.; *M. Nee* 43617; *M. Nee* & *K. Cameron* 54252, 54266; *E. Roy* 23. Infrequent.
- Betulaceae — *Corylus americana* Walter, American Hazelnut. *D. Atha* 8134; *P. Wilson* 10851. Rare.
- Betulaceae — *Ostrya virginiana* (Mill.) K. Koch, Hophornbeam. *W. Cahilly* 11; *C. Gilly* 268; *M. Nee*, *D. Atha*, & *A. Bardet* 56451; *W. Nieder* 33; *P. Wilson* 10953. Infrequent.
- Bignoniaceae — *Catalpa speciosa* (Warder) Warder ex Engelm., Northern Catalpa. *M. Nee* & *K. Cameron* 54457. Not Native. Rare.
- Boraginaceae — *Heliotropium europaeum* L., European Heliotrope. *C. Gilly* 362. Not Native. Historic.
- Boraginaceae — *Myosotis arvensis* (L.) Hill, Field Forget-me-not. *E. Bicknell* 7318; *G. Nash* 232. Not Native. Historic.
- Boraginaceae — *Myosotis discolor* Pers., Yellow and Blue Forget-me-not. *M. Nee* 59128. Not Native. Rare.
- Boraginaceae — *Myosotis scorpioides* L., True Forget-me-not. *D. Atha* 532, 7755, 10616; *C. Gilly* 88; *C. Morenberg*, *J. Cordero* & *M. Singer* 92; *M. Nee* & *D. McClelland* 54446. Not Native. Frequent.
- Boraginaceae — *Symphytum officinale* L., Comfrey. *D.S.* 187; *D. Atha* 2202; *M. Nee* 43528. Not Native. Waif. Rare.
- Brassicaceae — *Alliaria petiolata* (M. Bieb.) Cavara & Grande, Garlic Mustard. *M. Bennett* s.n.; *N. Holmgren* 11818; *S. Mori* & *C. Gracie* 18836; *M. Nee* & *K. Cameron* 54268; *W. Nieder* 31; *E. Wolfson* 4. Not Native. Frequent.
- Brassicaceae — *Arabidopsis thaliana* (L.) Heynh., Mouseear Cress. *D. Atha* 6943, 6957; *M. Nee* 54713, 59040; *M. Nee* & *K. Cameron* 54242; *W. Nieder* 19. Not Native. Frequent.
- Brassicaceae — *Barbarea verna* (Mill.) Asch., {*Barbarea praecox*}, Early Wintercress. *C. Curtis* s.n.; *T. Edmondson* 1070. Not Native. Historic.
- Brassicaceae — *Barbarea vulgaris* R. Br., {*Barbarea barbarea*}, Garden Yellowrocket. *D. Atha* 7025; *S. Clarke* s.n.; *C. Gilly* 299; *S. Mori* & *C. Gracie* 18835; *G. Nash* 56; *M. North* 146. Not Native. Infrequent.
- Brassicaceae — *Brassica rapa* L. var. *rapa*, Field Mustard. *M. Nee* 54263. Not Native. Rare.
- Brassicaceae — *Capsella bursa-pastoris* (L.) Medik., {*Bursa bursa-pastoris*}, Shepherd's Purse. *D. Atha* 6942; *M. Bennett* s.n.; *J. Knowles* 15; *J. Luteyn* 8081; *M. Nee* 31268; *W. Nieder* 45. Not Native. Frequent.
- Brassicaceae — *Cardamine bulbosa* (Schreb. ex Muhl.) Britton, Sterns & Poggenb., Bulbous Bittercress. *G. Nash* 100. Historic.
- Brassicaceae — *Cardamine concatenata* (Michx.) Sw., {*Dentaria laciniata*}, Fiveparted Toothwort. *D. Atha* & *M. Nee* 8524; *W. Nieder* 29. Rare.
- Brassicaceae — *Cardamine diphylla* (Michx.) Alph. Wood, Crinkleroot. *C. Gilly* 276; *M. Nee* & *K. Cameron* 54323; *W. Nieder* 39. Rare.
- Brassicaceae — *Cardamine flexuosa* With., Woodland Bittercress. *D. Atha* 6966, 11536; *D. Atha* & *A. Rafalko* 11546; *M. Nee* 58134, 59039. Not Native. Frequent.
- Brassicaceae — *Cardamine hirsuta* L., Hoary Bittercress. *D. Atha* 6968; *D. Atha* & *M. Nee* 8526. Not Native. Frequent.
- Brassicaceae — *Cardamine parviflora* L., Dryland Bittercress. *E. Bicknell* 4454. Historic.
- Brassicaceae — *Cardamine pennsylvanica* Muhl. ex Willd., Pennsylvania Bittercress. *P. Wilson* s.n. Historic.
- Brassicaceae — *Cardamine pratensis* L. var. *pratensis*, Cuckoo-flower. *D. Atha* 7018; *M. Nee* 52612. Rare.
- Brassicaceae — *Diplotaxis tenuifolia* (L.) DC., Slimleaf Wallrocket. *D. Atha* 7442, 7925; *M. Nee* 59129. Not Native. Waif. Rare.
- Brassicaceae — *Draba verna* L., Whitlow Grass. *D. Atha* 6910, 6964; *G. Nash* s.n.; *M. Nee* & *K. Cameron* 54312. Not Native. Frequent.
- Brassicaceae — *Hesperis matronalis* L., Damesrocket. *S. Clarke* s.n.; *D. duMouchel* s.n. Not Native. Historic.
- Brassicaceae — *Lepidium campestre* (L.) W. T. Aiton., Field Pepperweed. *M. Bennett* s.n. Not Native. Historic.
- Brassicaceae — *Lepidium densiflorum* Schrad., Prairie Pepperweed. *E. Bicknell* s.n.; *F. Pennell* 7008. Not Native. Historic.

- Brassicaceae — *Lepidium didymum* L., Lesser Swinecress. *D. Atha* 7634, 7741, 8588. Not Native. Frequent.
- Brassicaceae — *Lepidium virginicum* L. var. *virginicum*, {*Lepidium virginicum*}, Poorman's Pepper. *S. Clarke s.n.*; *C. Gilly* 124; *J. Gowdey s.n.*; *M. Nee* 43609; *E. Roy* 105. Infrequent.
- Brassicaceae — *Rorippa indica* (L.) Hiern., Indian Yellowcress. *H. Moldenke* 18653, 19437, 19976; *J. Monachino* 516. Not Native. Waif. Historic.
- Brassicaceae — *Rorippa palustris* (L.) Besser subsp. *palustris*, {*Rorippa palustris*}, Common Yellowcress. *D. Atha* 7748, 7922; *D. Atha & M. Nee* 8031; *C. Curtis s.n.*; *C. Gilly* 48; *J. Monachino* 65; *M. Nee* 43581. Frequent.
- Brassicaceae — *Rorippa sylvestris* (L.) Besser, Creeping Yellowcress. *C. Gilly* 41. Not Native. Historic.
- Brassicaceae — *Sisymbrium officinale* (L.) Scop., Hedge-mustard. *D. Atha* 7441; *J. Gowdey s.n.*; *M. Nee & D. McClelland* 54430. Not Native. Rare.
- Brassicaceae — *Thlaspi arvense* L., Field Pennycress. *D. Atha* 7931; *H. Moldenke* 4585. Not Native. Rare.
- Campanulaceae — *Campanula aparinoides* Pursh, Marsh Bellflower. *G. Nash* s.n. Historic.
- Campanulaceae — *Lobelia cardinalis* L., Cardinal Flower. *G. Nash* s.n. Historic.
- Campanulaceae — *Lobelia inflata* L., Indian Tobacco. *D. Atha* 7933; *D. Atha & M. Nee* 7978; *C. Gilly* 133, s.n. Infrequent.
- Campanulaceae — *Lobelia siphilitica* L., Great Blue Lobelia. *D. Atha & M. Nee* 8016; *G. Nash* s.n. Rare.
- Campanulaceae — *Triodanis perfoliata* (L.) Nieuwl., {*Specularia perfoliata*}, Venus' Looking Glass. *C. Gilly* 38. Historic.
- Cannabaceae — *Celtis occidentalis* L., Common Hackberry. *D. Atha* 6831, 6972; *D. Atha & J. Schuler* 6998, 7444; *M. Nee & K. Cameron* 54349; *R. Naczi et al.* 12565; *G. Nash* 183; *P. Wilson* 89, 10925. Rare.
- Cannabaceae — *Humulus japonicus* Siebold & Zucc., Japanese Hops. *N. Britton s.n.*; *C. Gilly* 442; *M. Nee* 43857, 43868; *M. Nee, K. Cameron & D. McClelland* 54696; *E. Roy* 71. Not Native. Frequent.
- Caprifoliaceae — *Lonicera gracilipes* Miq., Honeysuckle. *D. Atha* 6927; *M. Nee & K. Cameron* 54271. Not Native. Waif. Rare.
- Caprifoliaceae — *Lonicera japonica* Thunb. ex Murray, Japanese Honeysuckle. *M. Nee & D. McClelland* 54419; *R. Schneider* 1407. Not Native. Frequent.
- Caprifoliaceae — *Lonicera maackii* (Rupr.) Herder, Amur Honeysuckle. *M. Balick & H. Martin* 3713; *M. Nee* 43567; *M. Nee & K. Cameron* 54308. Not Native. Infrequent.
- Caprifoliaceae — *Lonicera morrowii* A. Gray, Morrow's Honeysuckle. *M. Nee & K. Cameron* 54293. Not Native. Waif. Rare.
- Caryophyllaceae — *Agrostemma githago* L., Common Corncockle. *C. Gilly* 78. Not Native. Historic.
- Caryophyllaceae — *Cerastium arvense* L., Field Mouseear Chickweed. *A. Hollick, s.n.*; *H. House* 3520. Not Native. Historic.
- Caryophyllaceae — *Cerastium fontanum* Baumg. ssp. *vulgare* (Hartm.) Greuter & Burdet, Big Chickweed. *S. Clarke s.n.*; *C. Curtis s.n.*; *A. Hollick s.n.*; *M. Nee* 59131. Not Native. Rare.
- Caryophyllaceae — *Paronychia canadensis* (L.) Alph. Wood, {*Anychia canadensis*}, Forked Chickweed. *A. Hollick s.n.*; *G. Nash* 334. Historic.
- Caryophyllaceae — *Sagina japonica* (Sw.) Ohwi., Japanese Pearlwort. *D. Atha* 7720. Not Native. Rare.
- Caryophyllaceae — *Sagina procumbens* L., Pearlwort. *D. Atha & R. Naczi* 8514; *E. Roy* 95. Not Native. Infrequent.
- Caryophyllaceae — *Saponaria officinalis* L., Bouncing Bet. *C. Gilly* 111. Not Native. Historic.
- Caryophyllaceae — *Scleranthus annuus* L., Annual Knawel. *D. Atha* 7051, 8117; *G. Nash* 438; *M. Nee* 54712; *J. Small* s.n. Not Native. Infrequent.
- Caryophyllaceae — *Silene caroliniana* Walter subsp. *pennsylvanica* (Michx.) R. T. Clausen, {*Silene caroliniana*}, Pennsylvania Catchfly. *T. Edmondson* 1071; *G. Nash* 113; *A. Vail* s.n. Historic.
- Caryophyllaceae — *Silene latifolia* Poir., White Campion. *D. Atha* 7944; *C. Gilly* 59, 322; *J. Luteyn & S. Mori* 7953; *M. Nee & D. McClelland* 54428; *W. Nieder* 41. Not Native. Infrequent.
- Caryophyllaceae — *Silene stellata* (L.) W. T. Aiton, Starry Campion. *D. Atha* 14837; *G. Nash* 399; *M. Nee & K. Cameron* 54523; *E. Roy* 79. Infrequent.
- Caryophyllaceae — *Spergularia rubra* (L.) J. Presl & C. Presl, Roadside Sandspurrey. *D. Atha & N. Smith* 8045. Not Native. Rare.
- Caryophyllaceae — *Stellaria graminea* L., {*Alsine graminea*}, Common Stitchwort. *C. Gilly* 13; *R. Schneider* s.n.; *P. Wilson* s.n. Not Native. Historic.
- Caryophyllaceae — *Stellaria longifolia* Muhl., {*Alsine longifolia*}, Longleaved Stitchwort. *G. Nash* 177. Historic.
- Caryophyllaceae — *Stellaria media* (L.) Vill., {*Alsine media*}, Common Chickweed. *D. Atha* 6908, 6923, 7645. Not Native. Frequent.
- Celastraceae — *Celastrus orbiculatus* Thunb., Oriental Bittersweet. *D. Atha* 7639; *A. Doody s.n.*; *D. McClelland* 315, 370; *S. Mori & C. Gracie* 23702; *M. Nee* 43608; *E. Roy* 65; *P. Wilson* 10817; *E. Yarrow* s.n. Not Native. Infrequent.
- Celastraceae — *Celastrus scandens* L., American Bittersweet. *D. Atha* 10599, *P. Wilson* 10903. Rare.
- Celastraceae — *Euonymus alatus* (Thunb.) Siebold, Burning Bush. *D. Atha & M. Nee* 7983; *A. Doody s.n.*; *M. Nee & K. Cameron* 54291; *W. Nieder* 48; *P. Wilson* 10830. Not Native. Rare.
- Celastraceae — *Euonymus fortunei* (Turcz.) Hand.-Maz., Climbing Euonymus. *D. Atha & M. Nee* 8523; *H. Forgione* 2; *P. Wilson* 10799. Not Native. Waif. Rare.
- Celastraceae — *Euonymus hamiltonianus* Wall. subsp. *sieboldianus* (Blume) H. Hara, Hamilton's Spindletree. *M. Nee & D. McClelland* 54438. Not Native. Waif. Rare.
- Cistaceae — *Crocianthemum canadense* (L.) Britton, {*Helianthemum canadense*}, Longbranch Frostweed. *E. Bicknell* s.n. Historic.
- Cistaceae — *Lechea intermedia* Legg., Largepod Pinweed. *E. Bicknell* 5938. Historic.
- Cistaceae — *Lechea pulchella* Raf., {*Lechea leggettii*}, Leggett's Pinweed. *E. Bicknell* 5985. Historic.
- Cleomaceae — *Cleome hassleriana* Chod., Pink Queen. *D. Atha* 15279; *M. Nee* 43611. Not Native. Waif. Infrequent.
- Clethraceae — *Clethra alnifolia* L., Coastal Sweetpepperbush. *W. Cahilly* 20; *C. Gilly* 258, 363; *J. Gunderson* 2; *G. Nash* 760; *M. Nee* 41823, 43620; *M. Nee & K. Cameron* 54275; *E. Roy* 8, 27; *P. Wilson* 10855. Infrequent.
- Convolvulaceae — *Calystegia sepium* (L.) R. Br., {*Convolvulus sepium*}, Hedge Bindweed. *D. Atha* 7919; *C. Gilly* 54, 96; *M. Nee & K. Cameron* 54524; *E. Roy* 102; *P. Wilson* 135. Not Native. Infrequent.

Convolvulaceae — *Convolvulus arvensis* L., Field Bindweed. *T. White* s.n. Not Native. Historic.

Convolvulaceae — *Cuscuta gronovii* Willd., Common Dodder. *D. Atha* & *M. Nee* 8017, 8021; *D. Atha*, *D. Stevenson* and *M. Thadeo* 8114; *N. Britton* s.n.; *R. Dragonetti* 14; *C. Gilly* 154. Infrequent.

Convolvulaceae — *Cuscuta pentagona* Engelm., Field Dodder. *R. Naczi* 13397; *R. Naczi*, *A. Litt*, *M. Pace*, *T. Lane* & *D. Kaiser* 12568. Infrequent.

Convolvulaceae — *Ipomoea hederacea* Jacq., Ivyleaf Morning-glory. *D. Atha* 14192. Rare.

Convolvulaceae — *Ipomoea purpurea* (L.) R. Br., Tall Morning-glory. *D. Atha* 7929; *D. Atha* & *L. Vargues* 11488; *M. Nee*, *K. Cameron* & *D. McClelland* 54701. Not Native. Infrequent.

Cornaceae — *Cornus alternifolia* L. f., Pagoda Dogwood. *D. Atha* & *M. Nee* 7984; *G. Nash* 123, 442. Rare.

Cornaceae — *Cornus amomum* Mill., Silky Dogwood. *D. Atha* 7585; *D. Atha* & *M. Nee* 8018, 8019; *N. Britton* s.n.; *G. Nash* 365, 509; *M. Nee* & *D. McClelland* 54443. Infrequent.

Cornaceae — *Cornus florida* L., Flowering Dogwood. *D. Atha* 8608; *W. Cahilly* 24; *G. Nash* 106, 591; *M. Nee* 37825; *W. Nieder* 23; *E. Roy* 22; *P. Wilson* 86. Rare.

Cornaceae — *Cornus racemosa* Lam., {*Cornus candidissima*}, Gray Dogwood. *G. Nash* 204. Historic.

Cucurbitaceae — *Citrullus lanatus* (Thunb.) Matsum., Watermelon. *D. Atha* 14193. Not Native. Waif. Rare.

Cucurbitaceae — *Cucurbita pepo* L., Summer Squash. *J. Schuler* 19. Not Native. Waif. Rare.

Cucurbitaceae — *Echinocystis lobata* (Michx.) Torr. & A. Gray, Wild Cucumber. *D. Atha* 8595; *C. Curtis* s.n.; *A. Foss* s.n.; *C. Gilly* 145; *R. Hill* 1606; *D. McClelland* 361, 371; *D. du Mouchel* s.n.; *G. Nash* s.n. Infrequent.

Cucurbitaceae — *Sicyos angulatus* L., Bur Cucumber. *D. Atha* 8471, 8596; *H. Cross* & *T. Motley* 43; *C. Gilly* 182; *R. Hill* 1607; *D. du Mouchel* s.n.; *G. Nash* s.n.; *M. Nee* 55705, 54710; *E. Roy* 72, 86. Infrequent.

Elaeagnaceae — *Elaeagnus umbellata* Thunb., Autumn Olive. *M. Nee* & *D. McClelland* 54440. Not Native. Rare.

Ericaceae — *Chimaphila maculata* (L.) Pursh, Spotted Wintergreen. *S. Clarke* s.n.; *J. Schuler* 6. Rare.

Ericaceae — *Epigaea repens* L., Trailing Arbutus. *G. Nash* 21. Historic.

Ericaceae — *Gaultheria procumbens* L., Wintergreen. *D. Atha* & *B. Torke* 15360. Rare.

Ericaceae — *Gaylussacia baccata* (Wangenh.) K. Koch, Black Huckleberry. *D. Atha* & *M. Nee* 7989. Rare.

Ericaceae — *Kalmia latifolia* L., Mountain Laurel. *D. Atha* 7656; *J. Gunderson* 1; *P. Wilson* 10800. Rare.

Ericaceae — *Monotropa uniflora* L., Indian Pipe. *D. Atha* & *M. Nee* 7985; *J. Gunderson* 6; *G. Nash* 434; *M. Pace* 459; *E. Roy* 67. Infrequent.

Ericaceae — *Pyrola americana* Sweet, American Wintergreen. *J. Schuler* 18. Rare.

Ericaceae — *Rhododendron periclymenoides* (Michx.) Shinnery, {*Azalea nudiflora*}, Pink Azalea. *D. Atha* 6840; *T. Edmondson* 1094; *A. Vail* s.n. Rare.

Ericaceae — *Rhododendron schlippenbachii* Maxim., Rhododendron. *D. Atha* 7658. Not Native. Waif. Rare.

Ericaceae — *Vaccinium angustifolium* Aiton, Common Lowbush Blueberry. *R. Naczi* 13684. Rare.

Ericaceae — *Vaccinium corymbosum* L., Highbush Blueberry. *W. Nieder* 37. Rare.

Ericaceae — *Vaccinium pallidum* Aiton, {*Vaccinium vacillans*}, Hillside Blueberry. *M. Nee* & *K. Cameron* 54287; *R. Naczi* 12994; *W. Nieder* 38. Rare.

Eucommiaceae — *Eucommia ulmoides* Oliv., Eucommia. *D. Atha* & *M. Nee* 8010; *M. Nee* 54706, 58200. Not Native. Waif. Rare.

Euphorbiaceae — *Acalypha australis* L., Asian Copperleaf. *D. Atha* & *M. Nee* 7977; *D. Atha* 8080, 8081; *R. Naczi* & *D. Atha* 12674, 12680. Not Native. Frequent.

Euphorbiaceae — *Acalypha gracilens* A. Gray, Slender Copperleaf. *D. Atha* 7937; *D. Atha* & *M. Nee* 8008; *W. Clute* & *P. Wilson* s.n.; *C. Gilly* 170; *J. Monachino* 343, s.n. Rare.

Euphorbiaceae — *Acalypha rhomboidea* Raf., Common Copperleaf. *D. Atha* 6792, 7743, 9020; *D. Atha* & *M. Nee* 7999, 8002, 8005; *C. Gilly* 103; *M. Nee* & *K. Cameron* 54530; *R. Naczi* 12670; *A. Neill* 3303; *E. Yarrow* s.n. Frequent.

Euphorbiaceae — *Euphorbia cyparissias* L., Cypress Spurge. *C. Gilly* 312. Not Native. Historic.

Euphorbiaceae — *Euphorbia maculata* L., Spotted Sandmat. *D. Atha* 7642, 8603; *D. Atha* & *M. Nee* 8213; *C. Gilly* 71; *R. Naczi*, *A. Litt*, *M. Pace*, *T. Lane* & *D. Kaiser* 12569; *R. Naczi* & *D. Atha* 12678; *M. Nee* 43864, 59407, 59408; *M. Nee* & *K. Cameron* 54519. Frequent.

Euphorbiaceae — *Euphorbia nutans* Lag., Eyebane. *W. Clute* & *P. Wilson* s.n. Historic.

Euphorbiaceae — *Euphorbia oblongata* Griseb., Eggleaf Spurge. *E. Roy* 104. Not Native. Waif. Rare.

Euphorbiaceae — *Euphorbia peplus* L., Petty Spurge. *M. Nee* 54715. Not Native. Waif. Rare.

Euphorbiaceae — *Phyllanthus urinaria* L., Chamber Bitter. *D. Atha* 8479; *R. Naczi* & *D. Atha* 12762. Not Native. Waif. Rare.

Fabaceae — *Chamaecrista nictitans* (L.) Moench, {*Cassia nictitans*}, Wild Sensitiveplant. *Bicknell* s.n. Historic.

Fabaceae — *Desmodium canadense* (L.) DC., {*Meibomia canadensis*}, Canadian Ticktrefoil. *P. Wilson* 138. Historic.

Fabaceae — *Desmodium perplexum* B. G. Schub. {*Meibomia dillenii*, *Meibomia nudiflora*}, Perplexed Ticktrefoil. *E. Bicknell* s.n, s.n, s.n. Historic.

Fabaceae — *Gleditsia triacanthos* L., Honeylocust. *P. Wilson* 10889. Not Native. Historic.

Fabaceae — *Gymnocladus dioica* (L.) K. Koch, Kentucky Coffeetree. *D. Atha* 6507; *M. Nee* & *D. McClelland* 54423. Waif. Infrequent.

Fabaceae — *Lespedeza cuneata* (Dum. Cours.) G. Don, Chinese Lespedeza. *A. Foss* s.n. Not Native. Historic.

Fabaceae — *Lespedeza procumbens* Michx., Downy Trailing Lespedeza. *W. Clute* s.n. Historic.

Fabaceae — *Lespedeza repens* (L.) Barton, Creeping Bushclover. *E. Bicknell* 5170, s.n. Historic.

Fabaceae — *Lespedeza violacea* (L.) Pers., {*Lespedeza frutescens*}, Wand Bushclover. *E. Bicknell* 5132, 5180, s.n.; *W. Clute* & *P. Wilson* s.n. Historic.

Fabaceae — *Medicago lupulina* L., Black Medick. *C. Gilly* 47; *M. Nee* & *D. McClelland* 54429. Not Native. Infrequent.

Fabaceae — *Melilotus albus* Medik., White Sweetclover. *D. Atha* 14873; *E. Roy* 68; *E. Yarrow* s.n. Not Native. Rare.

Fabaceae — *Robinia pseudoacacia* L., Blacklocust. *M. Nee* 43600; *E. Roy* 120. Not Native. Rare.

Fabaceae — *Strophostyles helvola* (L.) Ell., Trailing Fuzzybean. *C. Gilly* 415; *W. Clute* & *P. Wilson* s.n.; *H. Moldenke* 11281. Historic.

- Fabaceae — *Trifolium arvense* L., Rabbitfoot Clover. *M. Nee* 54483. Not Native. Rare.
- Fabaceae — *Trifolium hybridum* L., Alsike Clover. *D. Atha* & *M. Nee* 7995. Not Native. Rare.
- Fabaceae — *Trifolium pratense* L., Red Clover. *H. Ahles s.n.*; *D. Atha* & *M. Nee* 8003; *D. Ellington* 1; *C. Gilly* 58; *J. Luteyn* & *S. Mori* 7955. Not Native. Infrequent.
- Fabaceae — *Trifolium repens* L., White Clover. *C. Gilly* 34; *M. Nee* & *D. McClelland* 54418. Not Native. Infrequent.
- Fabaceae — *Vicia cracca* L., Bird Vetch. *C. Gilly* 339. Not Native. Historic.
- Fabaceae — *Vicia sativa* L., Narrowleaved Vetch. *S. Clarke s.n.* Not Native. Historic.
- Fagaceae — *Castanea dentata* (Marshall) Borkh., American Chestnut. *W. Cahilly* 19; *C. Curtis s.n.*; *G. Nash* 321, *s.n.*; *P. Wilson* 10907. Historic.
- Fagaceae — *Fagus grandifolia* Ehrh., {*Fagus americana*}, Beech. *D. Atha* 6980, 7019, 8121, 9039; *W. Cahilly* 40; *A. Carvalho* & *W. Thomas* 6890; *C. Gilly* 270; *G. Nash* 71; *M. Nee* 54674; *M. Nee* & *K. Cameron* 54270; *E. Roy* 13, 60; *P. Wilson* 10913. Frequent.
- Fagaceae — *Quercus alba* L., White Oak. *D. Atha* 9017; *W. Cahilly* 17; *D. McClelland* 359; *G. Nash* 69, 585; *M. Nee* 37824, 56463; *P. Wilson s.n.*, 10926. Frequent.
- Fagaceae — *Quercus bicolor* Willd., {*Quercus platanoides*}, Swamp White Oak. *C. Gilly* 303; *B. Meurer-Grimes* 216; *G. Nash* 83, 546; *M. Nee* 54318; *P. Wilson* 10934. Rare.
- Fagaceae — *Quercus coccinea* Münchh., Scarlet Oak. *P. Wilson* 10909. Historic.
- Fagaceae — *Quercus macrocarpa* Michx., Bur Oak. *E. Roy* 114. Rare.
- Fagaceae — *Quercus palustris* Münchh., Pin Oak. *D. Atha* 6791, 8085, 8600; *N. Britton s.n.*; *W. Cahilly* 32; *B. Meurer-Grimes* & *H. Liao* 42; *G. Nash* 57, 84, 547; *M. Nee* 43616; *P. Wilson* 185, 10946. Frequent.
- Fagaceae — *Quercus rubra* L., Red Oak. *D. Atha* 6987, 7020, 7027, 8084, 8606; *B. Benedict s.n.*; *W. Cahilly* 12; *B. Meurer-Grimes* 211; *B. Meurer-Grimes* & *H. Liao* 32; *M. Nee* 36726, 43860; *M. Nee* & *K. Cameron* 54285; *E. Roy* 61; *P. Wilson* 903, 10824, *s.n.* Frequent.
- Fagaceae — *Quercus velutina* Lam., Black Oak. *C. Gilly* 301, 302; *B. Meurer-Grimes* & *H. Liao* 43; *G. Nash* 85, 584; *M. Nee* 33268, 59510; *M. Nee* & *K. Cameron* 54313; *E. Roy* 21; *P. Wilson* 10908. Frequent.
- Geraniaceae — *Erodium cicutarium* (L.) L'Hér. ex Aiton, Redstem Filaree. *D. Atha* 6978; *M. Nee* & *K. Cameron* 54258; *P. Wilson s.n.* Not Native. Infrequent.
- Geraniaceae — *Geranium carolinianum* L., Carolina Cranesbill. *H. Moldenke* 18739. Historic.
- Geraniaceae — *Geranium maculatum* L., Spotted Geranium. *C. Gilly* 307; *G. Nash* 182, 183. Historic.
- Geraniaceae — *Geranium robertianum* L., Herb Robert. *J. Schuler*, *M. Martello* & *E. Deluca* 14. Rare.
- Geraniaceae — *Geranium thunbergii* Siebold & Zucc. ex Lindl. & Paxton, Thunberg's Geranium. *D. Atha* 7841, 8052; *D. Atha* & *M. Nee* 8025; *M. Eaton s.n.*; *C. Gilly* 343; *A. Hollick s.n.*; *J. Monachino s.n.*; *E. Roy* 78. Not Native. Infrequent.
- Grossulariaceae — *Ribes rubrum* L., Garden Currant. *Atha* 6952; *M. Nee* & *K. Cameron* 54276; *E. Roy* 58. Not Native. Rare.
- Hamamelidaceae — *Hamamelis virginiana* L., American Witchhazel. *E. Roy* 3, 9; *G. Nash* 70, 594; *M. Nee* & *K. Cameron* 54294; *A. Vail s.n.*; *P. Wilson* 10812. Infrequent.
- Hydrangeaceae — *Hydrangea heteromalla* D. Don. Himalayan Hydrangea. *M. Nee* & *A. Bardet* 56454. Not Native. Waif. Rare.
- Hydrangeaceae — *Hydrangea paniculata* Sieb., Panicle Hydrangea. *D. Atha* 7578; *W. Cahilly* 29, 39; *H. Forgione* 1; *A. Foss s.n.* Not Native. Waif. Rare.
- Hydrangeaceae — *Philadelphus coronarius* L., European Mockorange. *W. Cahilly* 25; *M. Nee* & *D. McClelland* 54420; *W. Nieder* 56. Not Native. Waif. Rare.
- Hydrophyllaceae — *Hydrophyllum canadense* L., Bluntleaf Waterleaf. *M. Nee* & *D. McClelland* 54441. Not Native. Waif. Rare.
- Hypericaceae — *Hypericum gentianoides* (L.) Britton, Stems & Poggenb., {*Sarothra gentianoides*}, Orangegrass. *D. Atha* 8082. Rare.
- Hypericaceae — *Hypericum mutilum* L., Dwarf St. Johnswort. *D. Atha* 7752, 8561, 8985; *C. Gilly* 148. Infrequent.
- Hypericaceae — *Hypericum perforatum* L., Common St. Johnswort. *D. Atha* 8556. Not Native. Infrequent.
- Hypericaceae — *Hypericum stragulum* P. Adams & N. Robson, St. Andrew's Cross. *D. Atha* 7843. Rare.
- Juglandaceae — *Carya cordiformis* (Wangenh.) K. Koch, {*Hicoria minima*}, Bitternut Hickory. *D. Atha* 6738; *D. Atha* & *M. Nee* 6834; *A. Doody s.n.*; *G. Nash* 202, *s.n.*; *M. Nee* & *K. Cameron* 54348; *E. Roy* 36; *P. Wilson* 169, 10939. Frequent.
- Juglandaceae — *Carya glabra* (Mill.) Sweet, {*Hicoria microcarpa*, *Hicoria glabra*}, Pignut Hickory. *D. Atha* 6736; *M. Nee* & *H. Bardet* 56444, 56447, 56448, 56456; *M. Nee*, *D. Atha* & *A. Bardet* 56450; *E. Roy* 16; *P. Wilson* 10942. Frequent.
- Juglandaceae — *Carya ovata* (Mill.) K. Koch, {*Hicoria ovata*}, Shagbark Hickory. *J. Schuler* 20; *P. Wilson* 10930. Rare.
- Juglandaceae — *Carya tomentosa* (Poir.) Nutt., {*Hicoria alba*}, Mockernut Hickory. *D. Atha* 8076, 10596; *M. Nee* & *K. Cameron* 54322; *E. Roy* 31; *P. Wilson* 10927. Frequent.
- Juglandaceae — *Juglans cinerea* L., Butternut. *P. Wilson* 5, 10860, *s.n.* Historic.
- Juglandaceae — *Juglans nigra* L., Black Walnut. *P. Wilson* 10935. Historic.
- Lamiaceae — *Ajuga reptans* L., Carpet Bugle. *D. Atha* 2607; *G. Nash* 139, *s.n.* Not Native. Rare.
- Lamiaceae — *Collinsonia canadensis* L., Canada Horsebalm. *C. Gilly* 438. Historic.
- Lamiaceae — *Glechoma hederacea* L., Gill-over-the-ground. *D. Atha* 6944; *T. Edmondson* 1064; *A. Foss s.n.*; *C. Gilly* 279; *J. Knowles* 6; *M. Nee* & *K. Cameron* 54298; *J. Walker* 680; *P. Wilson s.n.*; *E. Yarrow s.n.* Not Native. Frequent.
- Lamiaceae — *Hedeoma pulegioides* (L.) Pers., American Pennyroyal. *G. Nash* 478. Historic.
- Lamiaceae — *Lamium amplexicaule* L., Henbit. *D. Atha* 6936. Not Native. Frequent.
- Lamiaceae — *Lamium hybridum* Vill., Hybrid Deadnettle. *M. Nee* & *K. Cameron* 54243. Not Native. Rare.
- Lamiaceae — *Lamium purpureum* L., Red Deadnettle. *D. Atha* 6937; *S. Mori* & *C. Gracie* 18833A; *J. Walker* 679. Not Native. Frequent.
- Lamiaceae — *Leonurus cardiaca* L., Motherwort. *J. Monachino* 34. Not Native. Historic.
- Lamiaceae — *Lycopus americanus* L., American Bugleweed. *C. Gilly s.n.*; *G. Nash s.n.*, *s.n.* Historic.
- Lamiaceae — *Lycopus uniflorus* Michx., Northern Bugleweed. *C. Gilly* 150. Historic.
- Lamiaceae — *Lycopus virginicus* L., Virginia Bugleweed. *D. Atha* 8562, 8605, 9021, 9028; *C. Gilly* 127; *G. Nash s.n.*; *M. Nee* 59450; *E. Roy* 90. Frequent.

- Lamiaceae — *Monarda fistulosa* L., Wild Bergamot. *C. Gilly* 109. Historic.
- Lamiaceae — *Nepeta cataria* L., Catmint. *D. Atha* 7921. Not Native. Waif. Rare.
- Lamiaceae — *Origanum vulgare* L., Wild Marjoram. *G. Nash* 421. Not Native. Historic.
- Lamiaceae — *Prunella vulgaris* L., Common Selfheal. *R. Abbott* 26869; *C. Gilly* 386. Not Native. Infrequent.
- Lamiaceae — *Pycnanthemum muticum* (Michx.) Pers., {*Koellia mutica*}, Clustered Mountainmint. *G. Nash* 431; *P. Wilson* 136. Historic.
- Lamiaceae — *Scutellaria lateriflora* L., Blue Skullcap. *G. Nash* s.n.; *D. Atha* 8566. Rare.
- Lamiaceae — *Trichostema dichotomum* L., Forked Bluecurls. *G. Nash* 505. Historic.
- Linaceae — *Linum usitatissimum* L., Common Flax. *E. Schoefield* s.n.; *G. Nash* s.n. Not Native. Historic.
- Lythraceae — *Decodon verticillatus* (L.) Elliott, Waterwillow. *D. Atha* & *M. Nee* 8024. Rare.
- Lythraceae — *Lythrum salicaria* L., Purple Loosestrife. *D. Atha* 8602; *D. Atha* & *M. Nee* 8024; *D. Atha* & *R. Naczi* 7679; *C. Gilly* 44; *J. Gowdey* s.n.; *M. Nee* 43561; *M. Nee* & *K. Cameron* 54474; *E. Roy* 73. Not Native. Infrequent.
- Malvaceae — *Abutilon theophrasti* Medik., Velvetleaf. *D. Atha* 15179. Not Native. Rare.
- Malvaceae — *Hibiscus moscheutos* L., Rosemallow. *D. Atha* & *L. Vargues* 11467; *G. Nash* s.n.; *M. Nee* & *K. Cameron* 54527; *M. Petrino* 19. Frequent.
- Malvaceae — *Tilia americana* L., American Basswood. *D. Atha* 7654; *N. Holmgren* 802 (UTC); *H. Moldenke* 9793; *M. Nee* 31285; *E. Roy* 48; *P. Wilson* 10899. Rare.
- Mazaceae — *Mazus pumilus* (Burm. f.) Steenis, Japanese Mazus. *D. Atha* 8046; *M. Nee* 59406. Not Native. Frequent.
- Menispermaceae — *Menispermum canadense* L., Moonseed. *D. Atha* 6356; *D. McClelland* 337. Rare.
- Molluginaceae — *Mollugo verticillata* L., Carpetweed. *D. Atha* 7643; *C. Gilly* 102; *M. Nee* & *K. Cameron* 54525. Not Native. Frequent.
- Montiaceae — *Claytonia virginica* L., Springbeauty. *D. Atha* 6912; *T. Edmondson* 1066; *N. Holmgren* 635 (UTC); *G. Nash* 17; *M. Nee* 55582; *M. Nee* & *K. Cameron* 54279; *W. Nieder* 25. Frequent.
- Moraceae — *Broussonetia papyrifera* (L.) Vent., Paper Mulberry. *D. Atha* 9035. Not Native. Rare.
- Moraceae — *Morus alba* L., White Mulberry. *D. Atha* 7368, 7375, 7384, 7446; *C. Gilly* 318; *M. Nee* 36722-a, 43532; *M. Nee* & *K. Cameron* 54317; *E. Roy* 42. Not Native. Frequent.
- Moraceae — *Morus rubra* L., Red Mulberry. *E. Roy* 46; *G. Nash* 98, 335; *M. Nee* & *K. Cameron* 54473. Rare.
- Myricaceae — *Morella carolinensis* (Mill.) Small, {*Myrica carolinensis*}, Southern Bayberry. *G. Nash* 79, 95. Historic.
- Nyctaginaceae — *Mirabilis nyctaginea* (Michx.) MacMillan, Heartleaved Umbrellawort. *D. Atha* 7449; *C. Gilly* 329; *M. Nee* 43870. Not Native. Rare.
- Nyssaceae — *Nyssa sylvatica* Marshall, Black Gum. *D. Atha* 6735; *M. Nee* 43636; *M. Nee* & *K. Cameron* 54333; *E. Roy* 15. Infrequent.
- Oleaceae — *Chionanthus virginicus* L., Fringe Tree. *D. Atha* 7655; *M. Nee* & *D. McClelland* 54435. Not Native. Waif. Infrequent.
- Oleaceae — *Fraxinus americana* L., White Ash. *D. Atha* 7026, 7572; *C. Gilly* 274; *G. Nash* s.n.; *M. Nee* 38598, 38615, 38616, 55895; *M. Nee* & *K. Cameron* 54353; *P. Wilson* 10891, s.n. Frequent.
- Oleaceae — *Fraxinus ornus* L., Flowering Ash. *D. Atha* 14191. Not Native. Waif. Rare.
- Oleaceae — *Fraxinus pennsylvanica* Marshall var. *pennsylvanica*, Red Ash. *D. Atha* 6787; 6811, 6829, 6830, 8599; *D. Atha* & *M. Nee* 6812; *N. Britton* s.n., s.n.; *G. Nash* s.n.; *M. Nee* 38597, 58128; *M. Nee* & *K. Cameron* 54334; *P. Wilson* 10890. Frequent.
- Oleaceae — *Fraxinus profunda* (Bush) Bush, Pumpkin Ash. *D. Atha* 8599; *D. Atha* & *M. Nee* 6810; *N. Britton* s.n.; *C. Curtis* 67. Rare.
- Onagraceae — *Circaea canadensis* (L.) Hill, {*Circaea luteiana*}, Enchanter's Nightshade. *D. Atha* 7574, 7661; *W. Gonzalez* 6; *D. McClelland* 336; *G. Nash* 315; *W. Nieder* 70. Frequent.
- Onagraceae — *Epilobium coloratum* Biehler, Eastern Willowherb. Infrequent. *M. Nee* 59447; *M. Nee* & *K. Cameron* 54534. Infrequent.
- Onagraceae — *Ludwigia palustris* (L.) Elliott, Common Waterpurslane. *D. Atha* & *M. Nee* 8029; *C. Gilly* 156; *M. Nee* & *K. Cameron* 54528. Infrequent.
- Onagraceae — *Oenothera biennis* L., {*Onagra biennis*}, Common Evening-primrose. *D. Atha* 7950, 8585; *G. Nash* 457; *E. Roy* 108. Infrequent.
- Onagraceae — *Oenothera fruticosa* L., {*Kneiffia fruticosa*}, Narrowleaved Evening-primrose. *G. Nash* 301, 302. Historic.
- Onagraceae — *Oenothera laciniata* Hill., Cutleaf Evening-primrose. *C. Gilly* 324. Historic.
- Onagraceae — *Oenothera parviflora* L., Smallflowered Evening-primrose. *D. Atha* 533. Rare.
- Onagraceae — *Oenothera perennis* L., {*Kneiffia pumila*}, Little Sundrops. *G. Nash* 316. Historic.
- Orobanchaceae — *Agalinis tenuifolia* (Vahl) Raf., {*Garardia tenuifolia*}, Slenderleaf False Foxglove. *W. Clute* & *P. Wilson* s.n. Historic.
- Orobanchaceae — *Conopholis americana* (L.) Wallr., Squawroot. *W. Nieder* 54; *M. Pace* 553. Infrequent.
- Orobanchaceae — *Epifagus virginiana* (L.) W. Bartram, {*Leptamnium virginianum*}, Beechdrops. *D. Atha* 8128; *R. Brand*, *S. Canham* & *M. Choi* 1a; *C. Gilly* 454; *D. McClelland* 351; *G. Nash* s.n.; *M. Nee* 56500; *E. Roy* 81. Frequent.
- Orobanchaceae — *Melampyrum lineare* Desr. var. *latifolium* Farw., Narrowleaf Cowwheat. *G. Nash* s.n. Historic.
- Orobanchaceae — *Orobancha uniflora* L., {*Thalesia uniflora*}, Cancerroot. *W. Nieder* 52; *M. Pace* 532. Rare.
- Orobanchaceae — *Pedicularis canadensis* L., Canadian Lousewort. *C. Gilly* 298; *G. Nash* s.n. Historic.
- Oxalidaceae — *Oxalis corniculata* L., Creeping Yellow Woodsorrel. *D. Atha* 7747; *G. Eiten* 546, 547, 548, 549, 648, 649, 650, 652, 917, 918, 919a; *N. Holmgren* 700 (UTC); *M. Nee* 59448. Not Native. Frequent.
- Oxalidaceae — *Oxalis dillenii* Jacq., Southern Yellow Woodsorrel. *D. Atha* 7636, 7742; *G. Eiten* 321, 529, 624, 625, 919b. Infrequent.
- Oxalidaceae — *Oxalis stricta* L., {*Oxalis cymosa*}, Common Yellow Woodsorrel. *D. Atha* 7744, 10598; *G. Eiten* 530, 626, 651; *C. Gilly* 378; *A. Hollick* s.n.; *D. McClelland* 334; *J. Monachino* s.n.; *W. Nieder* 66; *C. Ruiz* 6; *J. Small* s.n. Frequent.
- Papaveraceae — *Capnoides sempervirens* (L.) Borkh., Rock Harlequin. *C. Gilly* 327; *G. Nash* 289. Historic.
- Papaveraceae — *Chelidonium majus* L., Celandine. *D. Atha* 2162, 6985, 13389; *M. Nee* & *K. Cameron* 54352. Not Native. Frequent.

- Papaveraceae — *Corydalis incisa* (Thunb.) Pers., Incised Fumewort. *D. Atha* 6925, 7021, 14402, 14403, 14406, 14407. Not Native. Waif. Infrequent.
- Papaveraceae — *Dicentra cucullaria* (L.) Bernh., {*Bicuculla cucullaria*}, Dutchman's breeches. *G. Nash* 16; *T. Edmondson* 1068. Historic.
- Papaveraceae — *Sanguinaria canadensis* L., Bloodroot. *D. Atha* 11550. Rare.
- Papaveraceae — *Stylophorum diphyllum* (Michx.) Nutt., Wood Poppy. *D. Atha* 11552. Not Native. Waif. Rare.
- Paulowniaceae — *Paulownia tomentosa* (Thunb.) Siebold & Zucc. ex Steud., Empress Tree. *E. Alexander* 303; *M. Nee* 38599, 43570, 58199; *M. Nee*, *K. Cameron* & *D. McClelland* 54691; *Wilson* 10843, 10861. Not Native. Infrequent.
- Penthoraceae — *Penthorum sedoides* L., Ditch Stonecrop. *D. Atha* 7753; *C. Gilly* 342; *G. Nash* 496. Infrequent.
- Phrymaceae — *Mimulus ringens* L., Allegheny Monkeyflower. *C. Gilly* 361. Historic.
- Phrymaceae — *Phryma leptostachya* L., Lopseed. *G. Nash s.n.* Historic.
- Phytolaccaceae — *Phytolacca americana* L., {*Phytolacca decandra*}, Pokeweed. *D. Atha* 1911; *D. Atha* & *L. Vargues* 11485; *C. Gilly* 65; *D. McClelland* 367; *M. Nee* 37818, 43614, 43876; *M. Nee* & *K. Cameron* 54476, 54522; *E. Roy* 6; *C. Ruiz* 8; *P. Wilson s.n.* Frequent.
- Plantaginaceae — *Callitriche stagnalis* Scop., Pond Waterstarwort. *D. Atha* & *M. Nee* 8022. Not Native. Rare.
- Plantaginaceae — *Chelone glabra* L., White Turtlehead. *F. Pennell* 6745. Historic.
- Plantaginaceae — *Gratiola neglecta* Torrey, {*Gratiola virginiana*}, Clammy Hedgehyssop. *G. Nash s.n.* Historic.
- Plantaginaceae — *Linaria vulgaris* Hill, {*Linaria linaria*}, Butter and Eggs. *D. Atha* 7939; *C. Gilly* 130. Not Native. Infrequent.
- Plantaginaceae — *Penstemon calycosus* Small., Longsepal Beardtongue. *C. Gilly* 330. Not Native. Historic.
- Plantaginaceae — *Penstemon digitalis* Nutt ex Sims, Foxglove Beardtongue. *C. Gilly* 332; *P. Wilson s.n.* Historic.
- Plantaginaceae — *Plantago lanceolata* L., Narrowleaved Plantain. *D. Atha* 7652; *P. Wilson* 118. Not Native. Frequent.
- Plantaginaceae — *Plantago major* L., Common Plantain. *D. Atha* 7745, 8555; *P. Wilson* 20. Not Native. Frequent.
- Plantaginaceae — *Plantago rugelii* Decne., Blackseed Plantain. *D. Atha* 7567, 7649, 7746, 7768; *P. Wilson* 71. Frequent.
- Plantaginaceae — *Veronica arvensis* L., Corn Speedwell. *M. Nee* & *D. McClelland* 54432. Not Native. Frequent.
- Plantaginaceae — *Veronica chamaedrys* L., Germander Speedwell. *F. Pennell* 6768. Not Native. Historic.
- Plantaginaceae — *Veronica hederifolia* L., Ivy-leaved Speedwell. *D. Atha* 6982. Not Native. Infrequent.
- Plantaginaceae — *Veronica officinalis* L., Common Speedwell. *G. Nash s.n.* Not Native. Historic.
- Plantaginaceae — *Veronica peregrina* L., Purslane Speedwell. *D. Atha* 2609, 15003. Frequent.
- Plantaginaceae — *Veronica persica* Poir., Birdseye Speedwell. *D. Atha* 6988; *M. Nee* 59130. Not Native. Frequent.
- Plantaginaceae — *Veronica serpyllifolia* L., Thyme-leaved Speedwell. *R. Abbott* 26868. Not Native. Infrequent.
- Platanaceae — *Platanus occidentalis* L., Sycamore. *T. Edmondson* 1098; *C. Gilly* 315; *D. McClelland* 322; *M. Nee* & *K. Cameron* 54316; *P. Wilson* 10900. Infrequent.
- Polygalaceae — *Polygala verticillata* L., {*Polygala ambigua*}, Whorled Milkwort. *C. Gilly* 112. Historic.
- Polygonaceae — *Persicaria careyi* (Olney) Greene, Carey's Smartweed. *C. Gilly* 403. Historic.
- Polygonaceae — *Persicaria extremiorientalis* (Vorosch.) Tzelev., Far-eastern Smartweed. *D. Atha* 6839, 7647, 7763, 7764, 8089, 8092, 8093, 8094, 8095, 8098, 8459, 8480, 8511, 8515, 8516, 8568, 8594; *D. Atha* & *R. Naczi* 8510; *R. Naczi* 12667; *M. Nee* 54709; *M. Nee* & *D. Atha* 55985. Not Native. Frequent.
- Polygonaceae — *Persicaria hydropiper* (L.) Opiz, Waterpepper Smartweed. *D. Atha* 8127, 8460, 8507; *D. Atha* & *M. Nee* 8028; *W. Cahilly* 26; *J. Furlaud* 71, 76; *C. Gilly* 166; *R. Naczi* 12666; *M. Nee* 59449; *M. Wolf* 30. Not Native. Infrequent.
- Polygonaceae — *Persicaria lapathifolia* L., Pale Smartweed. *D. Atha* 8054, 8096, 8097, 8107; *E. Bicknell* 3843; *A. Foss s.n.*; *C. Gilly* 66; *R. Naczi et al.* 12571; *P. Wilson s.n.* Infrequent.
- Polygonaceae — *Persicaria longiseta* (Brujin) Kitagawa, Bristly Smartweed. *R. Abbott* 26828; *D. Atha* 7566, 7575, 7576, 7646, 8050, 8057, 8077, 8079, 8100, 8101, 8136, 8138, 8139, 8457, 8461, 8462, 8500, 8501, 8502, 8513, 9443, 10603, 10604, 10605; *A. Foss s.n.*; *J. Furlaud* 70, 77, 81; *C. Gilly* 57, 57b; *D. McClelland* 335, 368; *J. Monachino* 190, 11747, 11811, 11812, 11813, 11892; *R. Naczi* 12668; *M. Nee* & *K. Cameron* 54694; *W. Nieder* 69; *E. Roy* 10, 116; *C. Ruiz* 5. Not Native. Frequent.
- Polygonaceae — *Persicaria maculosa* Gray, {*Polygonum persicaria*}, Spotted Smartweed. *D. Atha* 7644, 7757, 8051, 8078, 8512, 8517, 8559; *D. Atha* & 2010 *Class of Summer Intensive* 8554; *R. Naczi et al.* 12573. Not Native. Frequent.
- Polygonaceae — *Persicaria pensylvanica* (L.) M. Gómez, Pennsylvania Smartweed. *D. Atha* 8055, 8056, 8099, 8992, 14835; *R. Dragonetti* 13; *C. Gilly* 199; *R. Naczi* 12665; *M. Petrino* 10; *E. Roy* 76; *M. Wolf* 29. Infrequent.
- Polygonaceae — *Persicaria perfoliata* (L.) H. Gross, Mile-a-minute Vine. *D. Atha* & *J. Schuler* 8560. Not Native. Rare.
- Polygonaceae — *Persicaria punctata* (Elliott) Small, Dotted Smartweed. *D. Atha et al.* 8115; *C. Gilly* 194; *J. Monachino* 189; *M. Nee* & *K. Cameron* 54533; *R. Naczi* 13395. Frequent.
- Polygonaceae — *Persicaria sagittata* (L.) H. Gross, {*Polygonum sagittatum*}, Arrowleaf Tearthumb. *D. Atha* & *M. Nee* 8014; *C. Gilly* 180; *G. Nash* 535; *M. Petrino* 20. Infrequent.
- Polygonaceae — *Persicaria virginiana* (L.) Gaertn., {*Polygonum virginianum*}, Virginia Smartweed. *C. Gilly* 123; *D. duMouchel s.n.*; *M. Nee* & *K. Cameron* 54521; *E. Roy* 80. Frequent.
- Polygonaceae — *Polygonum aviculare* L., Prostrate Knotweed. *D. Atha* 8140, 8141, 8456. Not Native. Frequent.
- Polygonaceae — *Reynoutria × bohemica* Chrték & Chrtková, Bohemian Knotweed. *D. Atha* 8124, 8126; *D. McClelland* 364; *M. Nee* & *K. Cameron* 54489. Not Native. Frequent.
- Polygonaceae — *Reynoutria japonica* Houtt., {*Polygonum cuspidatum*}, Japanese Knotweed. *D. Atha* 8125, 14836; *H. Moldenke* 18447; *E. Roy* 74. Not Native. Infrequent.
- Polygonaceae — *Reynoutria sachalinensis* (F. Schmidt) Nakai, Giant Knotweed. *D. Atha* 6799. Not Native. Rare.
- Polygonaceae — *Rumex acetosella* L., Red Sorrel. *D. Atha* 7052, 7648; *G. Nash* 169. Not Native. Frequent.
- Polygonaceae — *Rumex crispus* L., Curly Dock. *D. Atha* 7377; *N. Holmgren* 781; *M. Nee* 32535. Not Native. Frequent.
- Polygonaceae — *Rumex obtusifolius* L., Bitter Dock. *D. Atha* 7374, 7438, 10744, 10745; *M. Nee* 43556; *M. Nee* & *K. Cameron* 54477; *M. Nee* & *D. McClelland* 54431; *P. Wilson s.n.* Not Native. Frequent.

- Polygonaceae — *Rumex patientia* L., Patience Dock. *D. Atha* 7380; *J. Monachino* 64. Not Native. Rare.
- Portulacaceae — *Portulaca oleracea* L., Purslane. *D. Atha* 7926. Not Native. Frequent.
- Primulaceae — *Lysimachia arvensis* (L.) U. Manns & Anderb., Pimpernel. *R. Naczi, A. Litt, M. Pace, T. Lane & D. Kaiser* 12567. Not Native. Rare.
- Primulaceae — *Lysimachia ciliata* L., {*Steironema ciliatum*}, Fringed Loosestrife. *C. Gilly* 82; *G. Nash s.n., s.n.*; *M. Nee & K. Cameron* 54493. Rare.
- Primulaceae — *Lysimachia quadrifolia* L., Whorled Loosestrife. *D. Atha & M. Nee* 7979; *G. Nash s.n.*; *W. Nieder* 30, 60. Rare.
- Primulaceae — *Lysimachia terrestris* (L.) Britton, Sterns & Poggenb., Bulbil Loosestrife. *M. Kearns* 2; *G. Nash s.n., s.n.* Historic.
- Ranunculaceae — *Actaea pachypoda* Ell., White Baneberry. *S. Clarke s.n.*; *C. Gilly* 444. Historic.
- Ranunculaceae — *Anemone americana* (DC.) H. Hara, {*Hepatica hepatica*}, Roundleaved Liverleaf. *G. Nash s.n.* Historic.
- Ranunculaceae — *Anemone canadensis* L., Canada Anemone. *P. Wilson s.n.* Historic.
- Ranunculaceae — *Anemone quinquefolia* L., Wood Anemone. *T. Edmondson* 1067; *G. Nash* 154, 55; *M. Pace & J. Schuler* 531; *A. Vail s.n.* Rare.
- Ranunculaceae — *Anemone virginiana* L., Tall Thimbleweed. *G. Nash* 398. Historic.
- Ranunculaceae — *Aquilegia canadensis* L., Columbine. *A. Vail s.n.*; *G. Nash* 81. Historic.
- Ranunculaceae — *Clematis terniflora* DC., Japanese Virgin's Bower. *D. Atha* 8986. Not Native. Infrequent.
- Ranunculaceae — *Clematis virginiana* L., Virgin's Bower. *G. Nash* 445. Historic.
- Ranunculaceae — *Eranthis hyemalis* (L.) Salisb., Winter Aconite. *D. Atha* 6969. Not Native. Waif. Rare.
- Ranunculaceae — *Ficaria verna* Huds., Lesser Celandine. *D. Atha* 6917, 6924; *M. Bennett s.n.*; *S. Mori & C. Gracie* 18815; *M. Nee & K. Cameron* 54246, 54264; *W. Nieder* 1. Not Native. Frequent.
- Ranunculaceae — *Ranunculus abortivus* L., Littleleaf Buttercup. *G. Nash* 92; *P. Wilson s.n.* Historic.
- Ranunculaceae — *Ranunculus acris* L., Tall Buttercup. *G. Nash s.n.*; *P. Wilson s.n.* Not Native. Historic.
- Ranunculaceae — *Ranunculus ambigens* S. Watson, {*Ranunculus obtusiusculus*}, Waterplantain Spearwort. *G. Nash* 429. Historic.
- Ranunculaceae — *Ranunculus bulbosus* L., Bulbous Buttercup. *C. Gilly* 290. Not Native. Historic.
- Ranunculaceae — *Ranunculus caricetorum* Greene., {*Ranunculus septentrionalis*}, Swamp Buttercup. *D. Atha* 14405; *T. Edmondson* 1068; *C. Gilly* 289; *P. Wilson s.n.* Rare.
- Ranunculaceae — *Ranunculus hispidus* Michx., Hispid Buttercup. *T. Edmondson* 1062; *G. Nash* 33. Historic.
- Ranunculaceae — *Ranunculus recurvatus* Poir., Hooked Crowfoot. *G. Nash* 130. Historic.
- Ranunculaceae — *Ranunculus repens* L., Creeping Buttercup. *D. Atha* 14401; *E. Britton s.n.*; *M. Nee & D. McClelland* 54445. Not Native. Frequent.
- Ranunculaceae — *Ranunculus trichophyllus* Chaix, {*Batrachium trichophyllum*}, White Watercrowfoot. *W. Clute s.n.* Historic.
- Ranunculaceae — *Thalictrum pubescens* Pursh, {*Thalictrum polygamum*}, King-of-the-meadow. *C. Gilly* 344; *G. Nash s.n.* Historic.
- Ranunculaceae — *Thalictrum thalictroides* (L.) A. J. Eames & B. Boivin, {*Syndesmon thalictroides*}, Rue Anemone. *C. Gilly* 295; *G. Nash* 35. Historic.
- Rhamnaceae — *Frangula alnus* Mill., Glossy Buckthorn. *W. Nieder* 44, 59; *M. Nee & K. Cameron* 54451. Not Native. Infrequent.
- Rhamnaceae — *Rhamnus cathartica* L., Common Buckthorn. *D. Atha* 8506; *M. Nee & D. McClelland* 54439; *E. Roy* 47; *P. Wilson* 92, 10797. Not Native. Rare.
- Rosaceae — *Agrimonia gryposepala* Wallr., {*Agrimonia hirsuta*}, Common Agrimony. *G. Nash* 28. Historic.
- Rosaceae — *Agrimonia pubescens* Wallr., {*Agrimonia mollis*}, Downy Agrimony. *E. Bicknell* 4621. Historic.
- Rosaceae — *Agrimonia rostellata* Wallr., Beaked Agrimony. *W. Clute & P. Wilson s.n.* Historic.
- Rosaceae — *Agrimonia striata* Michx., Roadside Agrimony. *M. Nee & K. Cameron* 54531. Rare.
- Rosaceae — *Amelanchier arborea* (F. Michx.) Fernald, Common Serviceberry. *D. Atha* 6971, 6976. Infrequent.
- Rosaceae — *Amelanchier laevis* Wiegand, Smooth Serviceberry. *D. Atha* 6986, 7383; *W. Cahilly* 21; *C. Gilly* 273; *M. Nee* 43490, 43490-a; *M. Nee & K. Cameron* 54267; *E. Roy* 59. Frequent.
- Rosaceae — *Crataegus monogyna* Jacq., {*Crataegus oxyacantha*}, One-seeded Hawthorn. *W. Eggleston s.n.* Not Native. Historic.
- Rosaceae — *Crataegus pruinosa* (Wendl. f.) K. Koch., Frosted Hawthorne. *W. Eggleston* 154. Historic.
- Rosaceae — *Fragaria virginiana* Duch., Virginia Strawberry. *G. Nash s.n.*; *T. Edmondson* 1369. Historic.
- Rosaceae — *Geum canadense* Jacq., White Avens. *C. Gilly* 62; *G. Nash s.n.*; *M. Nee & K. Cameron* 54496; *E. Roy* 100. Infrequent.
- Rosaceae — *Geum virginianum* L., Cream-colored Avens. *J. Monachino* 162; *G. Nash s.n.* Historic.
- Rosaceae — *Malus floribunda* Van Houtte, Japanese Flowering Crabapple. *D. Atha & M. Nee* 7987; *M. Nee & D. Atha* 56505. Not Native. Infrequent.
- Rosaceae — *Malus hupehensis* (Pamp.) Rehder., Tea Crabapple. *D. Atha* 15042. Not Native. Frequent.
- Rosaceae — *Malus pumila* Mill., {*Malus malus*}, Apple. *T. Edmondson* 1087; *C. Gilly* 285. Not Native. Waif. Historic.
- Rosaceae — *Potentilla anglica* Laichard., English Cinquefoil. *J. Monachino* 622, *s.n., s.n.* Not Native. Historic.
- Rosaceae — *Potentilla indica* (Andrews) T. Wolf, Indian Strawberry. *R. Abbott* 26867; *D. Atha* 7650, 11821. Not Native. Frequent.
- Rosaceae — *Potentilla norvegica* L., Rough Cinquefoil. *D. Atha* 7923; *C. Gilly* 76. Not Native. Rare.
- Rosaceae — *Potentilla recta* L., Sulfur Cinquefoil. *D. Atha* 7941. Not Native. Rare.
- Rosaceae — *Potentilla simplex* Michx., Common Cinquefoil. *Dragonetti* 6. Rare.
- Rosaceae — *Prunus avium* L., Sweet Cherry. *D. Atha* 13359; *T. Edmondson* 1073; *G. Nash s.n.*; *J. Schuler & A. Aiello* 9. Not Native. Waif. Infrequent.
- Rosaceae — *Prunus incisa* Thunb., Fuji Cherry. *J. Schuler & A. Aiello* 13. Not Native. Waif. Infrequent.
- Rosaceae — *Prunus padus* L., European Bird Cherry. *D. Atha* 6954. Not Native. Waif. Rare.
- Rosaceae — *Prunus persica* L., Peach. *C. Gilly* 271. Not Native. Waif. Rare.
- Rosaceae — *Prunus sargentii* Rehder., Sargent's Cherry. *J. Schuler & A. Aiello* 7. Not Native. Waif. Infrequent.

- Rosaceae — *Prunus serotina* Ehrh., Black Cherry. *W. Cahilly* 10; *J. Luteyn* 8083; *H. Moldenke* 10911; *M. Nee* 43575; *M. Nee & K. Cameron* 54343; *W. Nieder* 53. Frequent.
- Rosaceae — *Prunus subhirtella* Miq., Winterflowering Cherry. *M. Nee & K. Cameron* 54256; *J. Schuler & A. Aiello* 10, 11. Not Native. Waif. Infrequent.
- Rosaceae — *Prunus virginiana* L., Choke Cherry. *D. Atha* 7024; *D. duMouchel s.n.*; *M. Nee & K. Cameron* 54307. Infrequent.
- Rosaceae — *Prunus x yedoensis* Matsum., Hybrid Cherry. *D. Atha* 13350; *M. Nee* 59041; *M. Nee & K. Cameron* 54253; *J. Schuler & A. Aiello* 8. Not Native. Waif. Infrequent.
- Rosaceae — *Rhodotypos scandens* (Thunb.) Makino, Jetbead. *M. Nee & K. Cameron* 54295; *P. Wilson* 88. Not Native. Rare.
- Rosaceae — *Rosa carolina* L., Pasture Rose. *G. Nash* 12. Historic.
- Rosaceae — *Rosa multiflora* Thunb., Multiflora Rose. *D. Atha* 7942; *D. McClelland* 324, 369; *M. Nee* 43043; *E. Roy* 94; *C. Ruiz* 4; *P. Wilson* 68. Not Native. Frequent.
- Rosaceae — *Rosa palustris* Marsh., Swamp Rose. *G. Nash s.n.* Historic.
- Rosaceae — *Rosa wichuriana* Crépín., Memorial Rose. *R. Naczi, A. Litt, M. Pace, T. Lane & D. Kaiser* 12560. Not Native. Waif. Rare.
- Rosaceae — *Rubus allegheniensis* Porter, Allegheny Blackberry. *D. Atha* 7662; *G. Nash s.n.*; *W. Nieder* 51. Frequent.
- Rosaceae — *Rubus canadensis* L., Smooth Blackberry. *D. Atha* 7562, 10606. Rare.
- Rosaceae — *Rubus discolor* Weihe & Nees, Himalayan Blackberry. *D. Atha* 7948. Not Native. Waif. Rare.
- Rosaceae — *Rubus enslenii* Tratt., Southern Dewberry. *G. Nash s.n.* Historic.
- Rosaceae — *Rubus flagellaris* Willd., {*Rubus villosus*}, Northern Dewberry. *D. Atha* 7762; *W. Blanchard s.n.* Rare.
- Rosaceae — *Rubus frondosus* Bigelow., Yankee Blackberry. *W. Blanchard s.n.* Historic.
- Rosaceae — *Rubus occidentalis* L., Black Raspberry. *G. Nash s.n.* Historic.
- Rosaceae — *Rubus odoratus* L., Flowering Raspberry. *C. Gilly s.n.* Historic.
- Rosaceae — *Rubus pensilvanicus* Poir., Pennsylvania Blackberry. *M. Nee & D. McClelland* 54436; *M. Wolf & C. Ruiz* 14. Infrequent.
- Rosaceae — *Rubus phoenicolasius* Maxim., Wineberry. *M. Nee* 54437. Not Native. Infrequent.
- Rubiaceae — *Cephalanthus occidentalis* L., Buttonbush. *D. Atha* 8133; *C. Gilly s.n.*; *M. Kearns* 7; *M. Nee & K. Cameron* 54470; *P. Wilson* 192. Infrequent.
- Rubiaceae — *Galium album* Mill., {*Galium mollugo*}, White Bedstraw. *S. Burnham s.n.*; *G. Nash s.n.*; *M. Nee & D. McClelland* 54427. Not Native. Infrequent.
- Rubiaceae — *Galium aparine* L., Annual Bedstraw. *G. Nash s.n.*; *M. Nee & K. Cameron* 54346. Infrequent.
- Rubiaceae — *Galium asprellum* Michx., Rough Bedstraw. *G. Nash s.n.* Historic.
- Rubiaceae — *Galium circaezans* Michx., Licorice Bedstraw. *G. Nash s.n.*; *W. Wiegmann s.n.* Historic.
- Rubiaceae — *Galium obtusum* Bigelow, Bluntleaved Bedstraw. *G. Nash s.n.* Historic.
- Rubiaceae — *Mitchella repens* L., Partridgeberry. *D. Atha* 7431. Infrequent.
- Rutaceae — *Phellodendron amurense* Rupr., Amur Corktree. *D. McClelland* 321; *M. Nee* 43585, 52599, 52594, 52600; *E. Roy* 38. Not Native. Frequent.
- Rutaceae — *Tetradium daniellii* (Hemsl.) Hartley, Evodia. *D. duMouchel s.n.*; *M. Nee* 58084; *M. Nee & A. Bardet* 56457. Not Native. Waif. Rare.
- Rutaceae — *Zanthoxylum simulans* Hance, Chinese Pepper. *M. Nee & K. Cameron* 54456. Not Native. Waif. Rare.
- Salicaceae — *Idesia polycarpa* Maxim., Idesia. *D. Atha* 15377. Not Native. Waif. Rare.
- Salicaceae — *Populus deltoides* Marshall, Eastern Cottonwood. *D. Atha* 6962. Rare.
- Salicaceae — *Populus grandidentata* Michx., Bigtooth Aspen. *G. Nash* 30, 107, 342, 749; *W. Nieder* 15; *E. Roy* 50, 51. Historic.
- Salicaceae — *Populus tremuloides* Michx., Quaking Aspen. *D. Atha* 6993, 7046; *M. Nee & K. Cameron* 54479. Rare.
- Salicaceae — *Salix discolor* Muhl., Pussy Willow. *G. Nash*, 29, 89; *M. Nee* 57785, 58071. Rare.
- Salicaceae — *Salix fragilis* L., Crack Willow. *D. Atha* 6995, 7022, 7382; *S. Mori* 24071; *M. Nee* 43496; *M. Nee & K. Cameron* 54269. Not Native. Rare.
- Salicaceae — *Salix petiolaris* Sm., Meadow Willow. *G. Nash* 6. Historic.
- Salicaceae — *Salix sericea* Marshall, Silky Willow. *G. Nash* 50, 51. Historic.
- Santalaceae — *Comandra umbellata* (L.) Nutt., Bastard Toadflax. *G. Nash* 132. Historic.
- Sapindaceae — *Acer campestre* L., Hedge Maple. *D. Atha* 8508; *D. du Mouchel s.n.* Not Native. Waif. Rare.
- Sapindaceae — *Acer negundo* L., Boxelder. *D. Atha* 6789, 6790, 6984, 7448; *C. Gilly* 384; *M. Nee* 43571; *M. Nee & K. Cameron* 54289; *E. Roy* 43, 56; *P. Wilson* 10937. Infrequent.
- Sapindaceae — *Acer platanoides* L., Norway Maple. *D. Atha* 6958, 7385; *M. Nee* 43606; *M. Nee & K. Cameron* 54272; *E. Roy* 18, 57; *P. Wilson* 10918. Not Native. Infrequent.
- Sapindaceae — *Acer pseudoplatanus* L., Sycamore Maple. *D. McClelland* 318; *M. Nee* 43873; *M. Nee & K. Cameron* 54290; *W. Nieder* 46; *P. Wilson* 10917. Not Native. Infrequent.
- Sapindaceae — *Acer rubrum* L., Red Maple. *D. Atha* 6916, 6949; *N. Britton s.n., s.n.*; *M. Curtis s.n.*; *T. Delendick* 76/178, 76/796, 76/882, 77/273, 78/215, 1097; *G. Nash s.n., s.n., s.n.*; *M. Nee & K. Cameron* 54244, 54250; *W. Nieder* 10; *E. Roy* 33, 52; *P. Wilson* 10906, *s.n., s.n., s.n.* Frequent.
- Sapindaceae — *Acer saccharum* Marshall, Sugar Maple. *D. Atha* 6743, 6960, 6963, 7376, 7640, 7641; *W. Cahilly* 20; *T. Delendick* 76/1075; *M. Nee* 50113; *M. Nee & K. Cameron* 54278, 54282, 54487; *M. Nee, D. Atha & A. Bardet* 56452; *P. Wilson* 10905, 10920. Frequent.
- Sapindaceae — *Acer spicatum* Lam. Mountain Maple. *W. Wiegmann s.n.* Not Native. Waif. Historic.
- Sapindaceae — *Aesculus glabra* Willd., Ohio Buckeye. *D. Atha* 6940, 7445, 13361; *R. Naczi et al.* 12564; *M. Nee* 43618. Not Native. Waif. Rare.
- Sapindaceae — *Aesculus sylvatica* W. Bartram, Painted Buckeye. *D. Atha* 6981, 6983, 7450, 7917, 7920; *D. Atha & M. Nee* 7993. Not Native. Waif. Rare.
- Saxifragaceae — *Heuchera americana* L., American Alumroot. *G. Nash* 164, 306. Historic.
- Saxifragaceae — *Micranthes virginianensis* (Michx.) Small, {*Saxifraga virginianensis*}, Early Saxifrage. *G. Nash* 23, 82. Historic.
- Scrophulariaceae — *Scrophularia lanceolata* Pursh, {*Scrophularia leporella*}, American Figwort. *G. Nash* 420, *s.n., s.n.* Historic.

Scrophulariaceae — *Scrophularia marilandica* L., Eastern Figwort. *G. Nash s.n.* Historic.

Scrophulariaceae — *Verbascum blattaria* L., Moth Mullein. *D. Atha* 7584; *C. Gilly* 7; *J. Luteyn* & *S. Mori* 7956; *M. Nee* 50142. Not Native. Infrequent.

Scrophulariaceae — *Verbascum thapsus* L., Common Mullein. *D. Atha* 7956; *P. Wilson* 75. Not Native. Frequent.

Simaroubaceae — *Ailanthus altissima* (Mill.) Swingle, {*Ailanthus glandulosa*}, Tree of Heaven. *D. Atha* 7947; *G. Nash* 2672; *M. Nee* & *J. Beitel* 32572; *M. Nee* 43566; *E. Roy* 28; *P. Wilson* 10865, *s.n.* Not Native. Infrequent.

Solanaceae — *Datura stramonium* L., Jimsonweed. *D. Atha* 7930. Not Native. Waif. Rare.

Solanaceae — *Physalis philadelphica* Lam., Tomatillo. *R. Abbott* 26964; *M. Nee* 37823. Not Native. Waif. Rare.

Solanaceae — *Solanum carolinense* L., Carolina Horsenettle. *D. Atha* 7953; *R. Meyer* 395. Rare.

Solanaceae — *Solanum dulcamara* L., Bittersweet. *C. Gilly* 55; *M. Kearns* 9; *J. Luteyn* & *S. Mori* 7957; *G. Nash* 630, *s.n.*; *M. Nee* & *D. McClelland* 54448; *M. Nee* & *S. Knapp* 57200; *E. Roy* 112; *P. Wilson* 79, *s.n.* Not Native. Frequent.

Solanaceae — *Solanum lycopersicum* L., Tomato. *D. Atha* & *M. Nee* 8009; *D. Atha*, *D. Stevenson* and *M. Thadeo* 8112. Not Native. Waif. Infrequent.

Solanaceae — *Solanum nigrum* L., Black Nightshade. *D. Atha* 7932; *J. Furlaud* 79; *C. Gilly* 87; *D. McClelland* 365; *R. Meyer* 402, *M. Nee* 43613, 54714; *M. Nee* & *S. Knapp* 57198; *M. Petrino* 7; *E. Yarrow s.n.* Not Native. Frequent.

Solanaceae — *Solanum ptychanthum* Dunal, West Indian Nightshade. *R. Meyer* 403; *M. Nee* 53366, 57199. Infrequent.

Staphyleaceae — *Staphylea trifolia* L., Bladdernut. *D. Atha* 6827, 6828; *W. Cahilly* 17; *S. Clarke s.n.*; *C. Gilly* 15a, 309; *D. McClelland* 320, 363; *D. du Mouchel s.n.*; *E. Roy* 26; *P. Wilson* 166, 10832. Infrequent.

Ulmaceae — *Ulmus americana* L., American Elm. *D. Atha* 6975; *H. T. Beck* 1441; *H. Moldenke* 11341; *G. Nash* 10; *M. Nee* 43488, 43488-a; *M. Nee* & *K. Cameron* 54249; *E. Roy* 30; *R. Schneider s.n.*; *P. Wilson* 1, 2, 10912. Infrequent.

Ulmaceae — *Ulmus parvifolia* Jacq., Lacebark Elm. *M. Nee* & *Cameron* 54693. Not Native. Waif. Rare.

Ulmaceae — *Ulmus rubra* Muhl., Slippery Elm. *W. Eggleston* & *R. Schneider s.n.*; *P. Wilson* 10921. Historic.

Ulmaceae — *Zelkova serrata* (Thunb.) Makino, Japanese Zelkova. *D. Atha* 7766, 10602, 11513; *M. Nee* 58117; *M. Nee* & *K. Cameron* 54461. Not Native. Waif. Infrequent.

Urticaceae — *Boehmeria cylindrica* (L.) Sw., False Nettle. *D. Atha* 8563; *C. Gilly* 387; *M. Nee* & *K. Cameron* 54471; *P. Wilson* & *E. Alexander* 252. Rare.

Urticaceae — *Laportea canadensis* (L.) Weddell, {*Urticastrum divaricatum*}, Canadian Woodnettle. *W. Gonzalez* 4; *M. Nee* & *K. Cameron* 54495; *E. Roy* 69; *P. Wilson* 180. Rare.

Urticaceae — *Parietaria pensylvanica* Muhl. ex Willd., Pennsylvania Pellitory. *D. Atha* 7653. Rare.

Urticaceae — *Pilea pumila* (L.) A. Gray, Canadian Cleanweed. *D. Atha* 6793; *C. Gilly* 157; *M. Nee* & *K. Cameron* 54529. Rare.

Urticaceae — *Urtica dioica* L., Eurasian Stinging Nettle. *D. Atha* 7381; *W. Gonzalez* 8; *J. Luteyn* & *S. Mori* 7952; *M. Nee* & *D. McClelland* 54422; *J. Walker* 738. Not Native. Frequent.

Urticaceae — *Urtica gracilis* Aiton., American Stinging Nettle. *J. Monachino* 51. Historic.

Verbenaceae — *Verbena bonariensis* L., Purpletop Vervain. *D. Atha* & *M. Nee* 8004; *M. Nee* 47132. Not Native. Rare.

Verbenaceae — *Verbena hastata* L., Common Vervain. *C. Gilly* 105. Historic.

Verbenaceae — *Verbena urticifolia* L., White Vervain. *D. Atha* 7754; *C. Gilly* 110; *M. Nee* & *K. Cameron* 54488; *G. Nash s.n.*; *R. Schneider* 25417. Frequent.

Violaceae — *Viola arvensis* Murray, European Field Pansy. *D. Atha* 7053. Not Native. Rare.

Violaceae — *Viola blanda* Willd., {*Viola blanda amoena*}, Sweet White Violet. *W. Nieder* 13. Infrequent.

Violaceae — *Viola fimbriatula* Sm., {*Viola ovata*}, Arrowleaved Violet. *J. Enquist* 499. Historic.

Violaceae — *Viola palmata* L., {*Viola palmata dilatata*}, Wood Violet. *T. White* 13-2. Historic.

Violaceae — *Viola pedata* L., Birdsfoot Violet. *S. Clarke s.n.* Historic.

Violaceae — *Viola pubescens* Aiton var. *pubescens*, Yellow Forest Violet. *C. Gilly* 291. Historic.

Violaceae — *Viola rotundifolia* Michx., Roundleaved Yellow Violet. *W. Wiegmann s.n.* Historic.

Violaceae — *Viola sororia* Willd., Dooryard Violet. *L. Andrews s.n.*; *D. Atha* 6961, 7023, 11553, 11555, 11556, 11784, 13362; *D. Atha* & *J. Arcate* 6997; *N. Britton s.n.*; *C. Gilly* 286, 294; *N. Holmgren* 503 (UTC), 645 (UTC); *C. Morenberg* 89; *S. Mori* & *C. Gracie* 18822; *M. Nee* 57024; *M. Nee* & *K. Cameron* 54273; *W. Nieder* 27, 34; *A. Vail s.n.*; *E. Wolfson* 1. Frequent.

Violaceae — *Viola striata* Aiton, Striped Cream Violet. *D. Atha* 11561, 15093. Infrequent.

Vitaceae — *Ampelopsis brevipedunculata* (Maxim.) Trautv., Porcelainberry. *D. Atha* 534, 7372, 7750, 7751; *H. Beck* 1329; *J. Gunderson* 5; *D. McClelland* 366; *M. Nee* 43577; *M. Nee* & *K. Cameron* 54498. Not Native. Frequent.

Vitaceae — *Parthenocissus quinquefolia* (L.) G. Planch., Virginia Creeper. *D. Atha* 6731; *W. Cahilly* 31; *C. Morenberg* 88; *M. Nee* & *K. Cameron* 54482. Frequent.

Vitaceae — *Parthenocissus tricuspidata* (Siebold & Zucc.) G. Planch., Boston Ivy. *D. Atha* & *M. Nee* 7991. Not Native. Waif. Rare.

Vitaceae — *Vitis aestivalis* Michx., Summer Grape. *N. Britton s.n.*; *M. Nee* & *K. Cameron* 54452. Rare.

Vitaceae — *Vitis labrusca* L., Fox Grape. *D. Atha* & *R. Naczi* 7582; *N. Britton s.n.*; *P. Wilson* 10816. Rare.

Vitaceae — *Vitis riparia* Michx., Riverbank Grape. *R. Gunderson* 4. Rare.

Appendix II. Native taxa named from Garden Specimens

The following taxa were named from plants collected on the grounds of The New York Botanical Garden or Bronx Park.

Malvaceae — *Hibiscus oculiroseus* Britton. *G. Nash s.n.* = *Hibiscus moscheutos* L.

Oleaceae — *Fraxinus michauxii* Britton. *N. Britton s.n.* = *Fraxinus profunda* (Bush) Bush.

Poaceae — *Panicum atlanticum* Nash. *G. Nash s.n.* = *Dichanthelium villosissimum* (Nash) Freckmann.

Poaceae — *Panicum bicknellii* Nash. *E. Bicknell s.n.* = *Dichanthelium boreale* (Nash) Freckmann.

Poaceae — *Panicum tsugetorum* Nash. *G. Nash* 287 = *Dichanthelium columbianum* (Scribn.) Freckmann.

Rosaceae — *Crataegus bronxensis* Sarg. *W. Eggleston* 154 = *Crataegus pruinosa* (Wendl. f.) K. Koch.

Scrophulariaceae — *Scrophularia leporella* E. P. Bicknell. = *Scrophularia lanceolata* Pursh.

Appendix III. New Records

The following 46 taxa are new records for Bronx County and/or New York State (Weldy et al., 2015). Not all are extant in 2015.

Adoxaceae — *Viburnum plicatum* Thunb.
 Amaranthaceae — *Amaranthus blitoides* S. Watson
 Amaranthaceae — *Chenopodium standleyanum* Aellen
 Amaranthaceae — *Dysphania pumilio* (R. Br.) Mosyakin & Clemants
 Apocynaceae — *Asclepias incarnata* L. subsp. *incarnata*
 Araceae — *Wolffia brasiliensis* Wedd.
 Asteraceae — *Bellis perennis* L.
 Asteraceae — *Bidens cernua* L.
 Asteraceae — *Gamochaeta pensylvanica* (Willd.) Cabrera, also new for New York State (Atha et al., 2016).
 Asteraceae — *Sonchus asper* (L.) Hill
 Balsaminaceae — *Impatiens pallida* Nutt.
 Bignoniaceae — *Catalpa speciosa* (Warder) Warder ex Engelm.
 Brassicaceae — *Barbarea verna* (Mill.) Asch.
 Brassicaceae — *Cardamine flexuosa* With.
 Campanulaceae — *Lobelia cardinalis* L.
 Caryophyllaceae — *Cerastium arvense* L.
 Cyperaceae — *Carex aggregata* Mack., was historic for New York State, but discovered at the Garden in 2009 and is now planted from local stock.
 Cyperaceae — *Carex communis* Bailey var. *communis*
 Cyperaceae — *Carex debilis* Michx. var. *debilis*
 Cyperaceae — *Carex digitalis* Willd. var. *digitalis*
 Cyperaceae — *Carex gracillima* Schwein.
 Cyperaceae — *Carex reznicekii* Werier
 Cyperaceae — *Carex sprengei* Dewey ex Spreng.
 Cyperaceae — *Carex umbellata* Schkuhr ex Willd.
 Cyperaceae — *Cyperus squarrosus* L.
 Ericaceae — *Gaultheria procumbens* L.
 Fagaceae — *Quercus macrocarpa* Michx.
 Lamiaceae — *Ajuga reptans* L.
 Lamiaceae — *Pycnanthemum muticum* (Michx.) Pers.
 Oleaceae — *Fraxinus profunda* (Bush) Bush, also new for New York State.
 Orchidaceae — *Corallorhiza maculata* (Raf.) Raf. var. *maculata*
 Oxalidaceae — *Oxalis dillenii* Jacq.
 Plantaginaceae — *Callitriche stagnalis* Scop.
 Poaceae — *Bromus commutatus* Schrad.
 Poaceae — *Dichanthelium boscii* (Poir.) Gould & C. A. Clark
 Poaceae — *Festuca rubra* L.
 Polygonaceae — *Persicaria careyi* (Olney) Greene
 Rosaceae — *Agrimonia striata* Michx.
 Rosaceae — *Potentilla anglica* Laichard., also new for New York State.
 Rosaceae — *Prunus virginiana* L.
 Rosaceae — *Rubus canadensis* L.
 Rubiaceae — *Galium circaezans* Michx.
 Violaceae — *Viola blanda* Willd.
 Violaceae — *Viola pedata* L.
 Violaceae — *Viola striata* Aiton
 Vitaceae — *Vitis aestivalis* Michx.

Appendix IV. Rare Plants

S1. Critically imperiled in New York State because of extreme rarity (five or fewer sites or very few remaining individuals) or

extremely vulnerable to extirpation from New York State due to biological or human factors (DEC, 2016).

Cyperaceae — *Carex amphibola* Steud. S1.

Cyperaceae — *Carex reznicekii* Werier. S1S2.

Hypericaceae — *Hypericum stragulum* P. Adams & N. Robson, S1 (as *Hypericum hypericoides* subsp. *multicaule* in DEC, 2016).

S2. Imperiled in New York State because of rarity (6–20 sites or few remaining individuals) or highly vulnerable to extirpation from New York State due to biological or human factors (DEC, 2016).

Cyperaceae — *Carex debilis* Michx. var. *debilis*, S2.

Cyperaceae — *Cyperus lupulinus* (Spreng.) Marcks. S2 (as *Cyperus lupulinus* subsp. *lupulinus* in DEC, 2016).

SH. Historical. No existing sites known in New York State in the last 20–30 years but it may be rediscovered (DEC, 2016).

Cyperaceae — *Carex aggregata* Mack. SH. This species is extant on the grounds of NYBG and is being cultivated from local stock.

Appendix V. Sight Records

Included here are names reported by Britton (1898, 1899), Nash (1900) and observations by the authors for which no voucher specimen of a spontaneous occurrence was found. These names are not included in summaries of native and non-native taxa reported in the results.

FERNS

Cystopteridaceae — *Cystopteris fragilis* (L.) Bernh., Brittle Bladderfern. (Britton, 1899)

Dryopteridaceae — *Dryopteris marginalis* (L.) A. Gray, Marginal Woodfern. (Britton, 1899)

Osmundaceae — *Osmunda regalis* L., Royal Fern. (Britton, 1899)

Polypodiaceae — *Polypodium virginianum* L., {*Polypodium vulgare*}, Rock Polypody. (Britton, 1899)

Selaginellaceae — *Selaginella apoda* (L.) Spring, {*Selaginella apus*}, Meadow Spikemoss. (Britton, 1899)

Selaginellaceae — *Selaginella rupestris* (L.) Spring, Rock Spikemoss. (Britton, 1899)

Thelypteridaceae — *Phegopteris connectilis* (Michx.) Watt, {*Phegopteris phegopteris*}, Long Beechfern. (Britton, 1899)

Thelypteridaceae — *Phegopteris hexagonoptera* (Michx.) Fée, Broad Beechfern. (Britton, 1899)

Thelypteridaceae — *Thelypteris palustris* (A. Gray) Schott, {*Dryopteris thelypteris*}, Eastern Marsh Fern. (Britton, 1899)

GYMNOSPERMS

Pinaceae — *Larix laricina* (Du Roi) K. Koch, Tamarack. (Britton, 1899)

Pinaceae — *Picea abies* (L.) H. Karst., {*Picea excelsa*}, Norway Spruce. (Britton, 1899)

Pinaceae — *Picea mariana* (Mill.) Britton, Sterns & Poggenb., Black Spruce. (Britton, 1899)

MONOCOTS

Alliaceae — *Allium canadense* L., Wild Onion. (Britton, 1899)

Cyperaceae — *Carex cristatella* Britton, Crested Sedge. (Britton, 1899)

Cyperaceae — *Carex laxiflora patulifolia*. (Britton, 1899)
 Cyperaceae — *Carex sterilis* Willd., Dioecious Sedge. (Britton, 1899)
 Cyperaceae — *Carex typhina* Michx., {*Carex typhinoides*}, Cattail Sedge. (Britton, 1899)
 Cyperaceae — *Eleocharis tenuis* (Willd.) Schult., Slender Spikerush. (Britton, 1899)
 Juncaceae — *Juncus bufonius* L., Toad Rush. (Britton, 1899)
 Juncaceae — *Juncus effusus* L., Common Rush. (Britton, 1899)
 Liliaceae — *Lilium canadense* L., Wild Yellow Lily. (Britton, 1899)
 Liliaceae — *Medeola virginiana* L., Indian Cucumberroot. (Britton, 1899)
 Orchidaceae — *Spiranthes cernua* (L.) Rich., {*Gyrostachys cernua*}, Nodding Lady's-tresses. (Britton, 1899)
 Orchidaceae — *Spiranthes lacera* (Raf.) Raf. var. *gracilis* (Bigelow) Luer, {*Gyrostachys gracilis*}, Southern Slender Lady's-tresses. (Britton, 1899)
 Orchidaceae — *Spiranthes lacera* (Raf.) Raf. var. *lacera*, {*Habenaria lacera*}, Northern Slender Lady's-tresses. (Britton, 1899)
 Poaceae — *Agrostis hyemalis* (Walt.) Britton, Stearns & Poggenb., Winter Bentgrass. (Observed by the authors)
 Poaceae — *Aristida longespica* Poir. var. *longespica*, {*Aristida gracilis*}, Slimspike Threawn. (Britton, 1899)
 Poaceae — *Avena sativa* L., Oats. (Britton, 1899)
 Poaceae — *Bromus tectorum* L., Cheatgrass. (Observed by the authors)
 Poaceae — *Cenchrus tribuloides* L., Dune Sandbur. (Britton, 1899)
 Poaceae — *Glyceria fluitans* (L.) R. Br., {*Panicularia brachyphylla*}, Water Mannagrass. (Britton, 1899)
 Poaceae — *Panicum gattingeri* Nash, {*Panicum capillare gattingeri*}, Gattinger's Panicgrass. (Britton, 1899)
 Poaceae — *Panicum virgatum* L., Switch Grass. (Observed by the authors)
 Poaceae — *Phragmites australis* (Cav.) Trin. ex Steud., Common Reed. (Observed by the authors)
 Poaceae — *Schizachyrium scoparium* (Michx.) Nash, {*Andropogon scoparius*}, Little Bluestem. (Britton, 1899)
 Poaceae — *Setaria italica* (L.) P. Beauv., {*Panicum elongatum*}, Italian Foxtail. (Britton, 1899)
 Poaceae — *Sporobolus vaginiflorus* (Torr.) A. Wood, Sheathed Dropseed. (Britton, 1899)
 Poaceae — *Torreyochloa pallida* (Torr.) Church, {*Panicularia pallida*}, Pale Mannagrass. (Britton, 1899)
 Poaceae — *Vulpia octoflora* (Walter) Rydb., {*Festuca octoflora*}, Sixweeks Fescue. (Britton, 1899)

DICOTS

Apiaceae — *Pastinaca sativa* L., Wild Parsnip. (Britton, 1899)
 Apiaceae — *Sanicula canadensis* L., Canadian Black Snake-root. (Britton, 1899)
 Apocynaceae — *Asclepias exaltata* L., Poke Milkweed. (Britton, 1899)
 Araliaceae — *Hydrocotyle americana* L., Marsh Pennywort. (Britton, 1899)
 Araliaceae — *Kalopanax septemlobus* (Thunb.) Koidz., Castor Aralia. (Observed by the authors)
 Asteraceae — *Bidens laevis* (L.) Britton, Stems & Poggenb., {*Bidens helianthoides*}, Smooth Beggarticks. (Britton, 1899)

Asteraceae — *Cirsium discolor* (Muhl. ex Willd.) Spreng., {*Carduus discolor*}, Field Thistle. (Britton, 1899)
 Asteraceae — *Erigeron pulchellus* Michx., Robins Plantain. (Britton, 1899)
 Asteraceae — *Eutrochium maculatum* (L.) E. E. Lamont, {*Eupatorium maculatum*}, Spotted Joepyeweed. (Britton, 1899)
 Asteraceae — *Helianthus annuus* L., Sunflower. (Observed by the authors)
 Asteraceae — *Helianthus strumosus* L., Roughleaved Sunflower. (Britton, 1899)
 Asteraceae — *Hieracium gronovii* L., Hairy Hawkweed. (Britton, 1899)
 Asteraceae — *Hieracium paniculatum* L., Panicked Hawkweed. (Britton, 1899)
 Asteraceae — *Hieracium scabrum* Michx., Rough Hawkweed. (Britton, 1899)
 Asteraceae — *Hieracium venosum* L., Rattlesnake Hawkweed. (Britton, 1899)
 Asteraceae — *Leucanthemum vulgare* Lam., {*Chrysanthemum leucanthemum*}, Oxeye Daisy. (Britton, 1899)
 Asteraceae — *Matricaria discoidea* DC., Pineapple Weed. (Observed by the authors)
 Asteraceae — *Packera aurea* (L.) Á. Löve & D. Löve, {*Senecio aureus*}, Golden Ragwort. (Britton, 1899)
 Asteraceae — *Scorzoneroide autumnalis* (L.) Moench, {*Leontodon autumnale*}, Fall Dandelion. (Britton, 1899)
 Asteraceae — *Solidago gigantea* Aiton, {*Solidago serotina*}, Smooth Goldenrod. (Britton, 1899)
 Asteraceae — *Symphotrichum ericoides* (L.) G. L. Nesom, {*Aster ericoides*, *Aster multiflorus*}, White Heath Aster. (Britton, 1899)
 Asteraceae — *Symphotrichum lowrieianum* (Porter) G. L. Nesom, {*Aster lowrieianus*}, Fall Aster. (Britton, 1899)
 Asteraceae — *Symphotrichum novae-angliae* (L.) G. L. Nesom, {*Aster novae-angliae*}, New England Aster. (Britton, 1899)
 Asteraceae — *Symphotrichum novi-belgii* (L.) G. L. Nesom, New York Aster. (Observed by the authors)
 Asteraceae — *Symphotrichum puniceum* (L.) A. & D. Löve var. *puniceum*, {*Aster puniceus*}, Purplestem Aster. (Britton, 1899)
 Asteraceae — *Symphotrichum tradescantii* (L.) G. L. Nesom, {*Aster tradescantii*}, Shore Aster. (Britton, 1899)
 Asteraceae — *Symphotrichum undulatum* (L.) G. L. Nesom, {*Aster undulatus*}, Wavyleaf Aster. (Britton, 1899)
 Asteraceae — *Taraxacum laevigatum* (Willd.) DC., {*Taraxacum erythrospermum*}, Rock Dandelion. (Britton, 1899)
 Berberidaceae — *Berberis thunbergii* DC., Japanese Barberry. (Observed by the authors)
 Betulaceae — *Alnus incana* (L.) Moench subsp. *rugosa* (Du Roi) Clausen, {*Alnus rugosa*}, Speckled Alder. (Britton, 1899)
 Bignoniaceae — *Campsis radicans* (L.) Seem., {*Tecoma radicans*}, Trumpet Creeper. (Britton, 1899)
 Boraginaceae — *Myosotis laxa* Lehm., Smaller Forget-me-not. (Britton, 1899)
 Brassicaceae — *Arabis canadensis* L., Sicklepod. (Britton, 1899)
 Brassicaceae — *Arabis laevigata* (Muhl. ex Willd.) Poir., Smooth Rockcress. (Britton, 1899)
 Brassicaceae — *Barbarea stricta* Andr., Yellow Rocket. (Britton, 1899)
 Cactaceae — *Opuntia humifusa* (Raf.) Raf., {*Opuntia opuntia*}, Eastern Pricklypear. (Britton, 1899)
 Campanulaceae — *Campanulastrum americanum* (L.) Small, American Bellflower. (Observed by the authors)

- Caryophyllaceae — *Arenaria serpyllifolia* L., Thyme-leaved Sandwort. (Britton, 1899)
- Caryophyllaceae — *Dianthus armeria* L., Deptford Pink. (Britton, 1899)
- Celastraceae — *Euonymus americanus* L., Strawberry Bush. (Britton, 1899)
- Ericaceae — *Pyrola elliptica* Nutt., Elliptic Shinleaf. (Britton, 1899)
- Euphorbiaceae — *Acalypha virginica* L., Virginia Copperleaf. (Britton, 1899)
- Fabaceae — *Albizia julibrissin* Durazz., Mimosa. (Observed by the authors)
- Fabaceae — *Amphicarpaea bracteata* (L.) Fernald, {*Falcata comosa*}, American Hogpeanut. (Britton, 1899)
- Fabaceae — *Apios americana* Medik., {*Apios apios*}, Common Groundnut. (Britton, 1899)
- Fabaceae — *Crotalaria sagittalis* L., Weedy Rattlebox. (Britton, 1899)
- Fabaceae — *Desmodium paniculatum* (L.) DC., {*Meibomia paniculata*}, Narrowleaved Tick-trefoil. (Britton, 1899)
- Fabaceae — *Lathyrus palustris* L., {*Lathyrus palustris*}, Marsh Pea. (Britton, 1899)
- Fabaceae — *Lotus corniculatus* L., Birdsfoot Trefoil. (Observed by the authors)
- Fabaceae — *Medicago sativa* L., Alfalfa. (Observed by the authors)
- Fabaceae — *Melilotus officinalis* (L.) Pall., Yellow Sweetclover. (Britton, 1899)
- Fabaceae — *Securigera varia* (L.) Lassen, Crownvetch. (Observed by the authors)
- Fabaceae — *Trifolium aureum* Pollich., {*Trifolium agrarium*}, Palmate Hopclover. (Britton, 1899)
- Fabaceae — *Vicia tetrasperma* (L.) Schreb., Lentil Vetch. (Britton, 1899)
- Fabaceae — *Wisteria floribunda* (Willd.) DC., Japanese Wisteria. (Observed by the authors)
- Fagaceae — *Quercus cerris* L., Turkey Oak. (Observed by the authors)
- Fagaceae — *Quercus montana* Willd., Chestnut Oak. (Observed by the authors)
- Gentianaceae — *Gentiana andrewsii* Griseb., Closed Bottle Gentian. (Britton, 1899)
- Hypericaceae — *Hypericum majus* (A. Gray) Britton, St. Johnswort (Observed by the authors)
- Lamiaceae — *Lycopus rubellus* Moench, Stalked Bugleweed. (Britton, 1899)
- Linaceae — *Linum virginianum* L., Virginia Yellow Flax. (Britton, 1899)
- Malvaceae — *Hibiscus syriacus* L., Rose of Sharon. (Britton, 1899)
- Malvaceae — *Malva neglecta* Wallr., {*Malva rotundifolia*}, Common Mallow. (Britton, 1899)
- Myricaceae — *Comptonia peregrina* (L.) J. M. Coult., Sweetfern. (Britton, 1899)
- Myrsinaceae — *Lysimachia nummularia* L., Creeping Jenny. (Britton, 1899)
- Nymphaeaceae — *Nuphar microphylla* (Pers.) Fernald, {*Nymphaea kalmiana*}, Yellow Pondlily. (Britton, 1899)
- Nymphaeaceae — *Nymphaea odorata* Aiton, {*Castalia odorata*}, American White Waterlily. (Britton, 1899)
- Oleaceae — *Syringa vulgaris* L., Lilac. (Britton, 1899)
- Onagraceae — *Epilobium ciliatum* Raf., Fringed Willowherb. (Observed by the authors)
- Onagraceae — *Oenothera pilosella* Raf., {*Kneiffia fruticosa pilosella*}, Midwestern Sundrops. (Britton, 1899)
- Orobanchaceae — *Pedicularis lanceolata* Michx., Swamp Lousewort. (Britton, 1899)
- Phrymaceae — *Mimulus ringens* L., Monkey Flower. (Observed by the authors)
- Plantaginaceae — *Callitriche palustris* L., Vernal Waterstarwort. (Britton, 1899)
- Plantaginaceae — *Nuttallanthus canadensis* (L.) D. A. Sutton, {*Linaria canadensis*}, Canada Toadflax. (Britton, 1899)
- Polygonaceae — *Fallopia convolvulus* (L.) A. Löve, {*Polygonum convolvulus*}, Black Bindweed. (Britton, 1899)
- Polygonaceae — *Persicaria arifolia* (L.) Haraldson, {*Polygonum arifolium*}, Triangleleaf Tearthumb. (Britton, 1899)
- Polygonaceae — *Rumex britannica* L., Water Dock. (Britton, 1899)
- Ranunculaceae — *Thalictrum dioicum* L., Early Meadow Rue. (Observed by the authors)
- Rhamnaceae — *Ceanothus americanus* L., New Jersey Tea. (Britton, 1899)
- Rosaceae — *Potentilla argentea* L., Silvery Cinquefoil. (Britton, 1899)
- Rosaceae — *Potentilla canadensis* L., {*Potentilla pumila*}, Running Cinquefoil. (Britton, 1899)
- Rosaceae — *Pyrus communis* L., Pear. (Britton, 1899)
- Rosaceae — *Rosa virginiana* Mill., {*Rosa humilis*}, Virginia Rose. (Britton, 1899)
- Rosaceae — *Rubus setosus* Bigelow, Bristly Blackberry. (Britton, 1899)
- Rubiaceae — *Galium tinctorium* L., Stiff Bedstraw. (Britton, 1899)
- Rubiaceae — *Galium triflorum* Michx., Fragrant Bedstraw. (Britton, 1899)
- Rubiaceae — *Oldenlandia uniflora* L., Clustered Mille Graines. (Lamont et al., 2011, based on sight record)
- Salicaceae — *Populus alba* L., White Poplar. (Britton, 1899)
- Salicaceae — *Salix alba* L., {*Salix alba vitellina*}, White Willow. (Britton, 1899)
- Salicaceae — *Salix nigra* Marshall, Black Willow. (Britton, 1899)
- Sapindaceae — *Acer saccharinum* L., Silver Maple. (Britton, 1899)
- Saxifragaceae — *Chrysosplenium americanum* Schwein. ex Hook., American Golden Saxifrage. (Britton, 1899)
- Solanaceae — *Physalis heterophylla* Nees, Clammy Groundcherry. (Britton, 1899)
- Solanaceae — *Physalis longifolia* Nutt., Longleaf Groundcherry. (Observed by the authors)
- Ulmaceae — *Ulmus pumila* L., Siberian Elm. (Observed by the authors)
- Violaceae — *Viola cucullata* Aiton, {*Viola obliqua*}, Marsh Blue Violet. (Britton, 1899)
- Violaceae — *Viola labradorica* Schrank, Alpine Violet. (Britton, 1899)
- Violaceae — *Viola pubescens* Aiton var. *scabriuscula* Schwein. ex Torr. & A. Gray, {*Viola scabriuscula*}, Yellow Forest Violet. (Britton, 1899)
- Vitaceae — *Parthenocissus inserta* (A. Kern.) Fritsch, Woodbine. (Observed by the authors)