THE VASCULAR FLORA OF HAYWOOD COUNTY, TENNESSEE

PAUL O. LEWIS
The Ohio State University
Columbus, Ohio 43210
and
EDWARD T. BROWNE, JR.
Memphis State University
Memphis, Tennessee 38152

ABSTRACT

A floristic survey of Haywood County, Tennessee, in the western third of the state between Memphis and Jackson, was conducted from October, 1982, to July, 1984. Habitats in the study area were classified as: 1) upland forest; 2) bottomland forest; 3) cypress-gum swamp; 4) beaver marsh; 5) old field; 6) wet field; and 7) disturbed areas. Of the 734 taxa documented, 552 were county records and 15 were state records. Seventy taxa from Haywood County of which voucher specimens exist were not rediscovered during the course of this study. The list of taxa consists of 113 families, 383 genera, and 710 species.

Introduction

A study of the native and naturalized vascular flora of Haywood County, Tennessee, was conducted from October, 1982, to July, 1984 (Lewis 1984). The choice of Haywood County as the study area resulted from the need for floristic

attention to western Tennessee, especially in light of the current development of an "Atlas of the Vascular Plants of Tennessee" (Wofford 1980; Wofford and Evans 1979a, 1979b), and the rapid rate of habitat destruction in western Tennessee. A total of 67 trips to the study area has resulted in 1610 field collection numbers. A voucher specimen of each reported taxon was accessioned in either the Ramond Athey Herbarium at Memphis State University (MEM), Memphis, Tennessee, or the Herbarium of the Ohio State University (OS), Columbus, Ohio.

DESCRIPTION OF THE STUDY AREA

Haywood County is located in the western half of the Gulf Coastal Plain, an area of low elevation, flat to rolling topography, and humid, subtropical climate (Espenshade 1970). It encompasses the Hatchie National Wildlife Refuge that covers 45.3 of the county's 1365 square kilometers. The two rivers draining the county are the Hatchie River, a State Scenic River unaltered by man, and the channelized South Fork of the Forked Deer River.

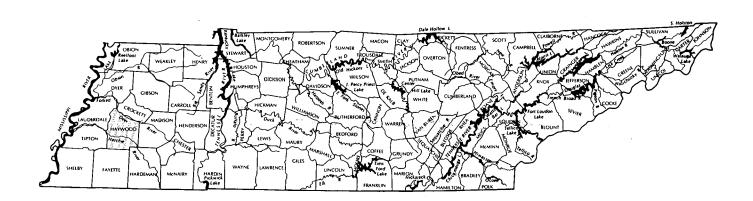


Figure 1. Map showing Haywood and surrounding counties.

Loess covers underlying sands, sandy clays, and clays to an average depth of two meters (U.S. Department of Agriculture 1982). Temperatures range from 3.8° C in January to 27° C in July, with a mean annual temperature of 15.8° C. Precipitation ranges from 7.49 cm in August to 14.2 cm in April with an annual mean of 130 cm. (U.S. Department of Commerce 1950-1983).

MAJOR HABITATS

Habitats in the county were classified into seven types: upland forest, bottomland forest, cypress-gum swamp, beaver marsh, old field, wet field, and disturbed (Lewis 1984). Each habitat type has been described with several characteristic species (the abbreviation "intr." designates introduced species) in the following discussion.

Upland Hardwood Forest

Upland hardwood forests occur on well-drained slopes on bluffs along the Hatchie River and hilly areas in the northwest and southeast parts of Haywood county. Typical canopy species are Acer saccharum, Carya tomentosa, Nyssa sylvatica, Quercus alba, Q. marilandica, Q. velutina, Q. stellata, and Q. pagoda. Subcanopy species include Aesculus pavia, Cornus florida, Ostrya virginiana, Ulmus alata, and Vaccinium arboreum. Herbaceous species include Antennaria plantaginifolia, Chasmanthium sessiliflorum, Danthonia spicata, Luzula bulbosa, Phryma leptostachya, and Tipularia discolor.

Bottomland Hardwood Forest

Bottomland hardwood forests occur on level, poorly-drained flood plains of the Hatchie and the South Fork of the Forked Deer Rivers and their major tributaries. Characteristic canopy trees are Acer saccharinum, Carya aquatica, Diospyros virginiana, Liquidambar styraciflua, Quercus lyrata, Q. michauxii, and Q. nigra. The riverbanks are dominated by Acer saccharinum, Betula nigra, Quercus phellos, and Salix nigra. Typical subcanopy species are Carpinus caroliniana, Cornus foemina, and Ilex decidua. Species most commonly inhabiting the forest floor are Arundinaria gigantea, Asclepias perennis, Campsis radicans, Toxicodendron radicans, Onoclea sensibilis, and Smilax glauca.

Cypress-Gum Swamp

Cypress-Gum Swamp Forests are characteristically flooded most of the year and have a canopy of *Taxodium distichum* and *Nyssa aquatica*. In Haywood County, some of the *Taxodium* dominated wetlands appear to have arisen after inundation due to beaver activity destroyed the original forest. Subcanopy trees include *Alnus serrulata* and *Itea virginica* and herbaceous species include *Peltandra virginica*, *Sagittaria latifolia*, and *Saururus cernuus*.

Beaver Marsh

Beaver marshes are open, lush, nearly treeless areas with standing water created by the damming of streams by beaver and characterized by dead, standing or toppled trunks of trees killed by the inundation. Woody species include *Taxodium distichum* and *Cephalanthus occidentalis*. Typical herbaceous growth consists of *Bidens frondosa*, *Ceratophyllum demersum*, *Echino-*

dorus cordifolius, Eclipta prostrata, Polygonum hydropiperoides, Scirpus cyperinus, Sparganium americanum, Spirodela punctata, and Typha latifolia.

Old Field

Old fields are totally or nearly treeless areas that are dry most of the year and typically covered with grasses and sedges. These disturbed areas have been created through the destruction of upland forests. Andropogon virginicus, Conyza canadensis, Dichanthelium scoparium, Festuca elatior (intr.), Lespedeza cuneata (intr.), Panicum anceps, P. rigidulum, Schizachyrium scoparium, and Solidago canadensis var. scabra are common herbaceous species of old fields.

Wet Field

Wet fields, low-lying areas that are totally or nearly treeless and soggy for most of the year, represent disturbed areas created by the destruction of bottomland forests. Representative species include Commelina virginica, Cyperus ovularis, Helenium flexuosum, Juncus tenuis and other species of Juncus, Phyla lanceolata, Rhexia virginica, Spilanthes americana var. repens, and Xanthium strumarium (intr.).

Disturbed Areas

Disturbed areas not represented in the habitat types above include roadsides, railroads, cultivated fields, and lawns. Conspicuous weeds in these habitats include Ambrosia artemisiifolia, Chaerophyllum tainturieri, Erigeron annuus, E. philadelphicus, Geranium carolinianum, Hypericum punctatum, Lactuca canadensis, Sorghum halepense (intr.), and Viola rafinesquii (intr.).

RESULTS

The checklist of the vascular plants of Haywood County, Tennessee, consists of 734 vascular plant taxa in 113 families, encompassing 383 genera and 710 species. Of the 734 taxa collected during this study, 552 were judged new county records since no specimens of these taxa were housed in either the Herbarium of the University of Tennessee at Knoxville [TENN] or the Raymond Athey Herbarium at Memphis [MEM], and 130 are not native to the central and eastern United States. The five largest families of vascular plants in Haywood County are the Poaceae (95 species), Asteraceae (73 species), Fabaceae (51 species), Cyperaceae (39 species) and Rosaceae (24 species). The largest genera are Carex (22 species), Quercus (15 species), Dichanthelium (14 species), Carya (10 species) and Juncus and Cyperus (9 species each).

According to Ayensu and DeFilipps (1978) and the Committee for Tennessee Rare Plants (1978), none of the species collected for this study were considered endangered, threatened, or possibly extirpated in Tennessee; however, three taxa, *Spilanthes americana* var. *repens, Quercus nuttallii*, and *Elodea nuttallii* were placed in the category "Special Concern" for Tennessee (Committee for Tennessee Rare Plants 1978).

Several species and varieties collected by the first author (Agalinis heterophylla, Antennaria plantaginifolia var. arnoglossa, Aster simplex, Bothriochloa saccharoides, Carex complanata var. hirsuta, Carya glabra var. hirsuta, Cucurbita pepo var. pepo, Erythronium umbilicatum, Festuca versuta, Glechoma hederacea var. hederacea, Glyceria arkansana, Linum floridanum, Ludwigia polycarpa, Tridens albescens, Xanthium strumar-

ium var. strumarium) or by others (Micranthemum umbrosum) do not appear in the preliminary checklist of the dicots of Tennessee issued by Sharp et al. (1960). These species are also not listed as occurring in western Tennessee in the recent checklist of the flora of the middle Mississippi River valley compiled by Heineke (1987). Other references checked include Wofford and Evans (1979a, 1979b), Wofford (1980) and Kral (1973, 1976). The collections of these species made during the course of this study are thus considered new state records and should be reviewed for inclusion in the next revision of the Tennessee Department of Conservation's Rare Plant List of Tennessee. Lathyrus pusillus is also rare, being known from only one other county in western Tennessee (Chester County, specimen in TENN, Heineke 1987). In addition to the species above, the following species are additions to the flora of the Middle Mississippi River Valley: Sagittaria australis, Aster simplex, Eupatorium capillifolium, Weigela floribunda, Dioclea multiflora, Galactia volubilis, Erythronium umbilicatum, Linum floridanum, Plantago major and Lysimachia tonsa.

CHECKLIST

The list of the vascular plants of Haywood County, Tennessee, which begins on page 40, is arranged alphabetically by family and taxon. Nomenclature follows Kartesz and Kartesz (1980); however, synonomy is indicated where the name used in that work differs from the one used by Fernald (1950). For taxa not included by Fernald (1950), the following manuals were used for the purpose of synonomy: Radford, Ahles and Bell (1968); Steyermark (1963); Gleason (1952); Hitchcock (1950); or Parks and Hardin (1963; for Erythronium only). Identifications were made by the authors using "Manual of the Vascular Flora of the Carolinas" (Radford et al. 1968) and "Flora of Missouri" (Steyermark 1981) and problem specimens were sent to specialists (see Acknowledgements) to have identifications checked. An asterisk (*) beside the name of a taxon in the list indicates that the taxon was never collected in Haywood County before this study (i.e., a county record). A plus sign (+) beside the name of a taxon indicates that the occurrence of that taxon in Haywood County was documented either from the literature or from herbarium specimens not collected by the authors. We relied on Heineke (1987) and the knowledge of one of us (ETB) of the flora of western Tennessee to determine whether each taxon was native or introduced. Introduced taxa are followed by the abbreviation "intr." in the list below.

ACKNOWLEDGEMENTS

We wish to thank Vernon Bates, Jr., for assistance on several productive field trips and the following specialists for verification of our identification of problematic specimens: William P. Adams, Ted M. Barkley, Andre F. Clewell, Janice Coffey, Wilbur H. Duncan, Robert R. Haynes, Samuel B. Jones, Robert Kral, Wayne E. Manning, Guy L. Nesom, Frederick J. Peabody, John and Charlotte Reeder, Alfred E. Schuyler, Edwin B. Smith and Constance S. and R. John Taylor. Also, thanks is given for the comments made by anonymous reviewers of this manuscript.

LITERATURE CITED

- Ayensu, E. S., and R. A. DeFilipps. 1978. Endangered and threatened plants of the United States. Smithsonian Institution and the World Wildlife Fund, Inc., Washington, D.C. 403 pp.
- Committee for Tennessee Rare Plants. 1978. The rare vascular plants of Tennessee. *J. Tennessee Acad. Sci.* 53: 128-133.
- Espenshade, E. B. 1970. *Goode's world atlas*. 13th. ed. Rand McNally & Company, Chicago, Illinois. 314 pp.
- Fernald, M. L. 1950. *Gray's manual of botany*. 8th. ed. American Book Co., New York, New York. 1632 pp.
- Gleason, H. A. 1952. The new Britton and Brown illustrated flora of the northeastern United States and adjacent Canada. Hafner Press, New York, New York. 3 volumes.
- Heineke, T. H. 1987. The flora and plant communities of the middle Mississippi River Valley. Ph.D. dissertation, Southern Illinois Univ., Carbondale. 653 pp.
- Hitchcock, A. S. 1950. Manual of the grasses of the United States.2nd. ed. Revised by A. Chase, 1971 printing. Dover Publications, Inc., New York, New York. 1051 pp.
- Kartesz, J. T., and R. Kartesz. 1980. A synonymized checklist of the vascular flora of the United States, Canada, and Greenland. The University of North Carolina Press, Chapel Hill, North Carolina. 498 pp.
- Kral, R. 1973. Some notes on the flora of the southern states, particularly Alabama and Middle Tennessee. *Rhodora* 75: 366-410.
- Kral, R. 1976. Additions to some notes on the flora of the southern states, particularly Alabama and Middle Tennessee. *Rhodora* 78: 438-456.
- Lewis, P. O. 1984. The vascular flora of Haywood County, Tennessee. Master's thesis: Memphis State University, Memphis, Tennessee. 143 pp.
- Parks, C. R., and J. W. Hardin. 1963. Yellow erythroniums of the eastern United States. *Brittonia* 15: 245-259.
- Radford, A. E., H. E. Ahles, and C. R. Bell. 1968. *Manual of the vascular flora of the Carolinas*. The University of North Carolina Press, Chapel Hill, North Carolina. 1183 pp.
- Sharp, A. J., R. E. Shanks, H. L. Sherman and D. H. Norris. 1960. A preliminary checklist of dicots in Tennessee. Published by the authors. 114 pp.
- Steyermark, J. A. 1963. *Flora of Missouri*. The Iowa State University Press, Ames, Iowa. 1981 printing. 1725 pp.
- U. S. Department of Agriculture, Soil Conservation Service. 1982. Long Range Work Plan, Haywood County Soil Conservation District. District Office, Brownsville, Tennessee.
- U. S. Department of Commerce, National Oceanic and Atmospheric Administration. 1950-1983. Climatological data, Tennessee. National Oceanic and Atmospheric Administration, Asheville, North Carolina.
- Wofford, B. E. 1980. Atlas of the vascular plants of Tennessee. III. Caryophyllidae: Caryophyllales, Polygonales. J. Tennessee Acad. Sci. 55: 110-114.
- Wofford, B. E., and A. M. Evans. 1979a. Atlas of the vascular plants of Tennessee. I. Pteridophytes and gymnosperms. *J. Tennessee Acad. Sci.* 54: 32-38.
- Wofford, B. E., and A. M. Evans. 1979b. Atlas of the vascular plants of Tennessee. II. Magnoliidae: Aristolochiales, Magnoliales, Nymphaeales, Papaverales, Piperales, Ranunculales. *J. Tennessee Acad. Sci.* 54: 75-80.

CHECKLIST OF VASCULAR PLANTS OF HAYWOOD COUNTY, TENNESSEE

PTERIDOPHYTA

Adiantaceae

*Adiantum pedatum L.

Aspleniaceae

Asplenium platyneuron (L.) Oakes ex D.C. Eat.

+A. platyneuron (L.)

Oakes ex D.C. Eat.

var, incisum (Howe ex Peck) B.L.Robins.

*Athyrium filix-femina (L.)

Roth var. asplenioides (Michx.) Farw.

Onoclea sensibilis L.

Polystichum acrostichoides

(Michx.) Schott

*Thelypteris hexagonoptera

(Michx.) Weatherby

[=Dryopteris hexagonoptera

(Michx.) Christens.]

Woodsia obtusa (Spreng.) Torr.

Azollaceae

*Azolla caroliniana Willd.

Blechnaceae

*Woodwardia areolata (L.) T. Moore

Dennstaedtiaceae

*Pteridium aquilinum (L.) Kuhn var. pseudocaudatum (Clute) Heller

Ophioglossaceae

Botrychium biternatum (Savaiter) Underwood [=Botrychium dissectum

var. tenuifolium (Underw.) Farw.]

+B. dissectum Spreng.

B. virginianum (L.) Sw.

+Ophioglossum vulgatum L.

var. pycnostichum Fern.

Osmundaceae

*Osmunda regalis L.

var. spectabilis (Willd.) Gray

Polypodiaceae

+Polypodium polypodioides (L.) Watt

P. polypodioides (L.) Watt

var. michauxianum Weatherby

GYMNOSPERMAE

Cupressaceae

*Juniperus virginiana L.

Taxodiaceae

*Taxodium distichum (L.) L. C. Rich.

ANGIOSPERMAE

Acanthaceae

*Justicia ovata (Walt.) Lindau

*Ruellia caroliniensis (J. F. Gmel.) Steud.

Aceraceae

- *Acer negundo L.
- *A. rubrum L.
- +A. rubrum L.

var. drummondii (Hook. & Arn.

ex Nutt.) Sarg.

*A. rubrum L.

var. trilobum Torr. & Gray ex K. Koch

- *A. saccharinum L.
- *A. saccharum Marsh.

Agavaceae

*Manfreda virginica (L.) Rose [= Agave virginica L.]

Aizoaceae

*Mollugo verticillata L. (intr.)

Alismaceae

+Alisma plantago-aquatica L.

var. parviflorum (Pursh) Torr. [= A. subcordatum Raf.]

*Echinodorus cordifolius (L.) Griseb.

- *Sagittaria australis (J. G. Sm.) Small
- *S. brevirostra Mackenzie & Bush
- *S. latifolia Willd.

Amaranthaceae

- *Amaranthus albus L.
- +A. retroflexus L. (intr.)
- *A. spinosus L. (intr.)
- *Froelichia gracilis (Hook.) Moq.

Anacardiaceae

- *Rhus copallina L.
- *R. glabra L.
- *Toxicodendron radicans (L.) Kuntze [= Rhus radicans L.]

Annonaceae

*Asimina triloba (L.) Dunal

Apiaceae

*Ammoselinum butleri (Engelm.) Coult. & Rose (intr.)

- *Chaerophyllum tainturieri Hook.
- *Cicuta maculata L.
- *Cryptotaenia canadensis (L.) DC.
- *Daucus carota L. (intr.)
- Eryngium prostratum Nutt.
- *Osmorhiza longistylis (Torr.) DC.
- *Ptilimnium capillaceum (Michx.) Raf.
- *Sanicula canadensis L.
- *Thaspium trifoliatum (L.) Gray
- *Torilis arvensis (Huds.) Link (intr.)

Apocynaceae

*Amsonia tabernaemontana Walt. var. salicifolia (Pursh) Woods.

Apocynum cannabinum L.

*Trachelospermum difforme (Walt.) Gray

Aquifoliaceae

Ilex decidua Walt.

I. opaca Ait.

Araceae

Arisaema dracontium (L.) Schott Peltandra virginica (L.) Schott

Araliaceae

Aralia spinosa L.

Asclepiadaceae

- *Asclepias amplexicaulis Sm.
- +A. incarnata L.
- *A. perennis Walt.
- *A. syriaca L.
- *A. tuberosa L.
- *Cynanchum laeve (Michx.) Pers.
 - [= Ampelamus albidus (Nutt.) Britt.]

*Matelea gonocarpa (Walt.) Shinners [=Gonolobus gonocarpos (Walt.) Perry]

Asteraceae

- *Achillea millefolium L. (intr.)
- *Ambrosia artemisiifolia L.
- *A. bidentata Michx.
- *A. trifida L.
- *Antennaria plantaginifolia (L.) Richards. var, arnoglossa (Greene) Cronq. [= A. parlinii Fern. var. arnoglossa (Greene) Fern.]
- *Anthemis cotula L. (intr.)
- *Aster drummondii Lindl.
 - [=A. sagittifolius Wedemeyer var. drummondii (Lingl) Shinners]
- *A. dumosus L.
- *A. novae-angliae L.
- *A. pilosus Willd.
- A. simplex Willd.
- *A. subulatus Michx.

var. ligulatus Shinners [= A. exilis Ell.]

*A. vimineus Lam.

Bidens aristosa (Michx.) Britt.

*B. aristosa (Michx.) Britt.

var. retrorsa (Sherff) Wunderlin [= B. polylepis Blake var. retrorsa Sherff]

- *B. discoidea (Torr. & Gray) Britt.
- *B. frondosa L.
- *Boltonia asteroides (L.) L'Her.

var. recognita (Fern. & Grisc.) Crong. [= B. latisquama var. recognita

Fern. & Grisc.]

+B. diffusa Ell.

- *Cacalia atriplicifolia L.
- Cirsium discolor (Muhl. ex Willd.) Spreng.
- *Conyza canadensis (L.) Cronq.
- [= Erigeron canadensis L.]
- *Coreopsis tinctoria Nutt. *Eclipta prostrata (L.) L.
- [= Eclipta alba (L.) Hassk.]
- *Elephantopus carolinianus Raeusch.
- *Erigeron annuus (L.) Pers.
- E. philadelphicus L.
- +E. pulchellus Michx.
- *E. strigosus Muhl. ex Willd.
- *Eupatorium capillifolium (Lam.) Small
- E. coelestinum L.
- *E. perfoliatum L.
- *E. rugosum Houtt.
- *E. serotinum Michx. *Euthamia leptocephala (Torr. & Gray)
- Greene [=Solidago leptocephala T. & G.]
- *Gnaphalium obtusifolium L.
- *G. purpureum L. *Helenium amarum (Raf.) H. Rock
- [= H. tenuifolium Nutt.]

*H. flexuosum Raf.

[= H. nudiflorum Nutt.] Helianthus angustifolius L.

- *H. divaricatus L.
- *H. hirsutus Raf.
- +H. mollis Lam.

^{&#}x27;asterisk (*) indicates taxon never collected in Haywood County before this study plus sign (+) indicates occurrence of taxon in Haywood County documented either from literature or from herbarium specimens not collected by the authors.

Checklist of Vascular Plants of Haywood County, Tennessee 41 *H. strumosus L. *Capsella bursa-pastoris (L.) Medic. (intr.) [=Ascyrum hypericoides L.] H. tuberosus L. Cardamine bulbosa (Schreb.) B.S.P. *H. lobocarpum Gattinger *Hieracium gronovii L. *C. hirsuta L. (intr.) H. mutilum L. [=H. densiflorum Pursh var. *Krigia caespitosa (Raf.) Chambers *Draba brachycarpa Nutt. ex Torr. & Gray lobocarpum(Gattinger)Svenson] *Erophila verna (L.) Chev. (intr.) [= Serinia oppositifolia (Raf.) Ktze.] *H. perforatum L. (intr.) *K. dandelion (L.) Nutt. [=Draba verna L.] *H. punctatum Lam. *Lactuca canadensis L. *Lepidium virginicum L. *H. stragalum P. Adams & Robson *L. canadensis L. var. longifolia *Rorippa palustris (L.) Bess. [= Ascyrum hypericoides L. (Michx.) Farw. [=R. islandica (Oeder) Borbas var. multicaule (Michx.) Fern.] *L. canadensis L. var. obovata Wieg. var. fernaldiana Butt. & Abbe] *Triandenum walteri (J. G. Gmel.) Gleason *L. floridana (L.) Gaertn. +R. palustris (L.) Bess. ssp. fernaldiana [= Hypericum tubulosum Walt. *L. serriola L. (intr.)[=L. scariola L.] (Butters & Abbe) Jonsell var. walteri (Gmel.) Lott.] *Leucanthemum vulgare Lam. (intr.) [= R. islandica (Oeder) Borbas Commelinaceae [= Chrysanthemum leucanthemum L.] var. fernaldiana Butt. & Abbel *Commelina communis L. (intr.) *Matricaria matricarioides (Less.) *R. sessiliflora (Nutt.) A. S. Hitchc. *C. diffusa Burm. f. Porter (intr.) *Sibara virginica (L.) Rollins *C. virginica L. Mikania scandens (L.) Willd. Cactaceae *Tradescantia ohiensis Raf. *Pluchea camphorata (L.) DC. *Opuntia humifusa (Raf.) Raf. Convolvulaceae *Pyrrhopappus carolinianus (Walt.) DC. Callitrichaceae *Convolvulus arvensis L. (intr.) *Rudbeckia hirta L. *Callitriche heterophylla Pursh emend. Darby *Cuscuta campestris Yuncker *R. laciniata L. *C. terrestris Raf. emend. Torr. +C. cuspidata Engelm. *R. triloba L. [= C. deflexa A. Br. var. austinii *Ipomoea lacunosa L. *Senecio glabellus Poir. (Engelm.) Hegelm.] *I. nil (L.) Roth (intr.) *Solidago caesia L. Campanulaceae [= I. hederacea (L.) Jacq.] *S, canadensis L. *Lobelia cardinalis L. *I. pandurata (L.) G. F. W. Mey. var. scabra (Muhl.) Torr. & Grav *L. inflata L. Cornaceae [= S. altissima L.] *L. puberula Michx. *Cornus florida L. S. gigantea Ait. *Triodanis perfoliata (L.) Nieuwl. C. foemina P. Mill. +S. juncea Ait. [= Specularia perfoliata (L.) A. DC.] Cucurbitaceae *S. nemoralis Ait. *T. perfoliata (L.) Nieuwl. var. biflora (Ruiz *Cayaponia grandifolia (Torr. & Gray) Small *Sonchus asper (L.) Hill (intr.) *Curcurbita pepo L. (intr.) & Pavon) Bradley[= Specularia biflora *S. oleraceus L. (intr.) (R. & P.) Fisch. & Mey.] +Melothria pendula L. *Spilanthes americana (Mutis) Hieron. Caprifoliaceae Cyperaceae var. repens (Walt.) A. H. Moore *Carex annectens (Bickn.) Bickn. Lonicera japonica Thunb. (intr.) *Taraxacum officinale Weber (intr.) *L. sempervirens L. +C. blanda Dewey *Vernonia gigantea (Walt.) Sambucus canadensis L. *C. bromoides Willd. Trel. ex Branner & Coville *Triosteum angustifolium L. *C. caroliniana Schwein. [= V. altissima Nutt.] +Viburnum prunifolium L. *C. cephalophora Muhl. ex Schkuhr *V. missurica Raf. +V. rufidulum Raf. *C. complanata Torr. & Hook. var. hirsuta *V. missurica Raf. X gigantea (Walt.) *Weigela floribunda (Sieb. & Zucc.) C. A. (Bailey) Gl.[= C. hirsutella Mackenzie] Trel. ex Branner & Coville Mey. (intr.) [= Weigelia florida (Sieb. & *C. crinita Lam. *Xanthium strumarium L. (intr.) Zucc.) A. DC.] C. crus-corvi Shuttlw. ex Kunze Balsaminaceae Caryophyllaceae *C. festucacea Schkuhr *Impatiens balsamina L. (intr.) *Cerastium fontanum Baumg. ssp. triviale *C.flaccosperma Dewey *I. capensis Meerb. (Link) Jalas (intr.) *C. frankii Kunth Berberidaceae [= C. vulgatum L. var. holosteoides Fries] *C. grayi Carey *Podophyllum peltatum L. *Dianthus armeria L. (intr.) +C. intumescens Rudge Betulaceae *Sagina decumbens (Ell.) Torr. & Gray (intr.) *C. louisianica Bailey *Alnus serrulata (Ait.) Willd. *Saponaria officinalis L. (intr.) *C. lupulina Muhl. ex Schkuhr *Betula nigra L. Silene antirrhina L. +C. oxylepis Torr. & Hook. *Carpinus caroliniana Walt. *S. stellata (L.) Ait. f. *C. rosea Schkuhr Corylus americana Walt. *S. virginica L. C. squarrosa L. *Ostrya virginiana (P. Mill.) K. Koch *Stellaria media (L.) Vill. (intr.) *C. swanii (Fern.) Mackenzie Bignoniaceae Celastraceae *C. tribuloides Wahlenb. *Bignonia capreolata L. +Celastrus scandens L. *C. typhina Michx. *Campsis radicans (L.) Seem. ex Bureau Euonymus americanus L. C. vulpinoidea Michx. *Catalpa bignonioides Walt. (intr.) *Cyperus erythrorhizos Muhl. Ceratophyllaceae *Paulownia tomentosa (Thunb.) *Ceratophyllum demersum L. *C. esculentus L. Sieb. & Zucc. ex Steud. (intr.) Chenopodiaceae C. iria L. (intr.) Boraginaceae *Chenopodium album L. (intr.) *C. ovularis (Michx.) Torr. *Buglossoides arvense (L.) I. M. Johnston *C. ambrosioides L. (intr.) *C. pseudovegetus Steud.[= C. virens Michx.] (intr.) [= Lithospermum arvense L.] +Salsola iberica Sennen & Pau (intr.) +C. rotundus L. (intr.) *Cynoglossum virginianum L. [= S. kali L. var. tenuifolia Tausch] *C. strigosus L. *Hackelia virginiana (L.) I. M. Johnston Cistaceae

Brassicaceae

*Arabidopsis thaliana (L.) Heynh. (intr.)

*Heliotropium indicum L. (intr.)

*Myosotis macrosperma Engelm.

*Brassica napus L. (intr.)

*B. rapa L. (intr.)

*L. villosa Ell. Clusiaceae

*Hypericum drummondii (Grev. & Hook.)

*C. tenuifolius (Steud.) Dandy

+Fimbristylis autumnalis (L.)

Roemer & Schultes

*F. vahlii (Lam.) Link

Eleocharis obtusa (Willd.) Schultes

Rhynchospora corniculata (Lam.) Gray

+C. virens Michx.

Torr. & Gray

H. hypericoides (L.) Crantz

*Lechea tenuifolia Michx.

*Scirpus cyperinus (L.) Kunth

*S. georgianus Harper [= S. atrovirens Willd. var. georgianus (Harper) Fern.]

*S. koilolepis (Steud.) Gleason

*S. pendulus Muhl.[= S. lineatus Michx.]

Dioscoreaceae

+Dioscorea quaternata (Walt.) J. F. Gmel.

*D. villosa L.

Ebenaceae

*Diospyros virginiana L.

Ericaceae

Vaccinium arboreum Marsh

*V. pallidum Ait. [= V. vacillans Torr.]

Euphorbiaceae

*Acalypha rhomboidea Raf.

*A. virginica L.

*Chamaesyce humistrata (Engelm. ex Gray) Small [= Euphorbia humistrata Engelm.]

*C. maculata (L.) Small

[= Euphorbia maculata L.]

*Croton glandulosus L.

var. septentrionalis Muell.-Arg.

*C. monanthogynus Michx.

*Euphorbia corollata L.

*Phyllanthus caroliniensis Walt.

Fabaceae

*Albizia julibrissin Durazz. (intr.)

+Amorpha fruticosa L.

*Apios americana Medic.

*Baptisia lactea (Raf.) Thieret [= B. leucantha T. & G.]

*Cassia fasciculata Michx.

+C. hebecarpa Fern.

[= C. nictitans L. var. hebecarpa Fern.]

C. marilandica L.

*C. nictitans L.

Cercis canadensis L.

*Clitoria mariana L.

*Crotalaria sagittalis L.

Desmodium canescens (L.) DC.

*D. glutinosum (Muhl. ex Willd.) Wood

*D. marilandicum (L.) DC.

*D. nudiflorum (L.) DC.

*D. paniculatum (L.) DC.

Dioclea multiflora (Torr. & Gray) C. Mohr

Galactia volubilis (L.) Britt.

Gleditsia triacanthos L.

*Glycine max (L.) Merr. (intr.)

*Kummerowia stipulacia (Maxim.) Makino (intr.) [= Lespedeza stipulacia Maxim.]

*K. striata (Thunb.) Schindl. (intr.)

[= Lespedeza striata (Thunb.) H. & A.]

*Lathyrus hirsutus L. (intr.)

*L. latifolius L. (intr.)

*L. pusillus Ell.

*Lespedeza bicolor Turcz. (intr.)

*L. cuneata (Dum.-Cours.) G. Don (intr.)

*L. intermedia (S. Wats.) Britt.

*L. procumbens Michx.

*L. repens (L.) Bart.

+L. stuevei Nutt. X virginica (L.) Britt.

*Melilotus alba Medic. (intr.)

*M. officinalis (L.) Pallas (intr.)

Phaseolus polystachyus (L.) B.S.P.

Pueraria lobata (Willd.) Ohwi (intr.)

*Robinia pseudoacacia L.

*Schrankia microphylla (Dry.) J. F. Macbr.

*Sesbania macrocarpa Muhl. ex Raf. [= S. exaltata (Raf.) Cory]

*Strophostyles helvola (L.) Ell.

S. umbellata (Muhl. ex Willd.) Britt.

*Stylosanthes biflora (L.) B.S.P.

*Tephrosia virginiana (L.) Pers.

*Trifolium arvense L. (intr.)

T. campestre Schreb. (intr.)

[=T. procumbens L.]

*T. hybridum L. (intr.)

*T. pratense L. (intr.)

*T. repens L. (intr.)

*T. resupinatum L. (intr.)

*Vicia sativa L. ssp. nigra (L.) Ehrh. (intr.)
[= V. angustifolia Reichard]

*V. villosa Roth. ssp. varia (Host)Corb. (intr.)

*Wisteria frutescens (L.) Poir.

+W. macrostachya Nutt.

Fagaceae

+Castanea dentata (Marsh.) Borkh.

+C. pumila (L.) P. Mill.

*Fagus grandifolia Ehrh.

*Quercus alba L.

*Q. coccinea Muenchh.

*Q. falcata Michx.

O. lyrata Walt.

Q. marilandica Muenchh.

Q. michauxii Nutt.

*Q. muhlenbergii Engelm.

*Q. nigra L.

*Q. nuttallii Palmer

*Q. pagoda Raf. [= Q. falcata Michx. var. pagodaefolia Ell.]

*Q. palustris Muenchh.

*Q. phellos L.

*Q. rubra L.

*Q. stellata Wang.

*Q. velutina Lam.

Gentianaceae

*Sabatia angularis (L.) Pursh

Geraniaceae

*Geranium carolinianum L.

Haloragidaceae

+Myriophyllum aquaticum (Vell.) Verdc. (intr.) [= M. brasiliense Camb.] +M. pinnatum (Walt.) B.S.P.

*Proserpinaca pectinata Lam.

Hamamelidaceae

*Liquidambar styraciflua L.

Hippocastanaceae

*Aesculus pavia L.

Hydrocharitaceae

*Elodea nuttallii (Planch) St. John

Hydrophyllaceae

*Hydrolea uniflora Raf.

Iridaceae

+Belamcanda chinensis (L.) DC. (intr.)

Iris virginica L. var. shrevei

(Small) E. Anders.

*Sisyrinchium angustifolium P. Mill.

Juglandaceae

Carya aquatica (Michx. f.) Nutt.

*C. cordiformis (Wang.) K. Koch

*C. glabra (P. Mill.) Sweet

*C. glabra (P. Mill.) Sweet var. hirsuta (Ashe) Ashe [= C. ovalis (Wang.) Sarg.

var. hirsuta (Ashe) Sarg.] C. illinoinensis (Wang.) K. Koch

C. laciniosa (Michx. f.) Loud.

+C. ovalis (Wang.) Sarg.

C. ovata (P. Mill.) K. Koch *C. pallida (Ashe) Engl. & Graebn.

*C. tomentosa (Poir.) Nutt.

*Juglans nigra L.

Juncaceae

*Juncus acuminatus Michx.

*J. brachycarpus Engelm.

*J. bufonius L.

*J. coriaceus Mackenzie

*J. diffusissimus Buckl.

*J. effusus L. var. solutus Fern. & Wieg.

*J. marginatus Rostk.

+J. polycephalus Michx.

*J. tenuis Willd.

*Luzula bulbosa (Wood) Rydb.

*L. echinata (Small) F. J. Herm.

Lamiaceae

*Glechoma hederacea L. (intr.)

*Hedeoma pulegioides (L.) Pers.

*Lamium amplexicaule L. (intr.)

*L. purpureum L. (intr.)

Lycopus rubellus Moench

*Perilla frutescens (L.) Britt. (intr.)
*Prunella vulgaris L. (intr.)

*Pycnanthemum incanum (L.) Michx.

*P. muticum (Michx.) Pers.

*P. tenuifolium Schrad.

*Salvia lyrata L.

*Scutellaria elliptica Muhl.

*S. incana Biehler

*S. integrifolia L.

*S. lateriflora L.

*S. parvula Michx.

*Stachys tenuifolia Willd. *S. tenuifolia Willd. var. hispida

(Pursh) Fern. +S. tenuifolia Willd. var. perlonga Fern.

+3. tenuijona Wind. vai Teucrium canadense L.

Lauraceae

Lindera benzoin (L.) Blume

Sassafras albidum (Nutt.) Nees

Lemnaceae *Lemna minuta H.B.K.[= L. minor L.]

*Spirodela polyrhiza (L.) Schleid. +S. punctata (Mey.) C. H. Thompson

[= S. oligorhiza (Kurtz) Hegelm.]

*Wolffia braziliensis Weddell

[= W. papulifera C. H. Thompson]

Lentibulariaceae

*Utricularia gibba L. Liliaceae

*Allium ampeloprasum L. (intr.)
*A. canadense L.

*A. sativum L. (intr.)

*A. vineale L. (intr.)

Asparagus officinalis L. (intr.)

*Chamaelirium luteum (L.) Gray

+Disporum lanuginosum (Michx.) Nichols. *Erythronium albidum Nutt.

*E. umbilicatum Parks & Hardin

*Hemerocallis fulva (L.) L. (intr.)
*Hymenocallis caroliniana (L.) Herbert

*Narcissus poeticus L. (intr.)

*N. pseudonarcissus L. (intr.)
*Polygonatum biflorum (Walt.) Ell.

*Smilacina racemosa (L.) Desf.

*Trillium recurvatum Beck *Uvularia grandiflora Sm.

+U. perfoliata L. +U. sessilifolia L.

Linaceae
*Linum floridanum (Planch.) Trel.

Loganiaceae

- *Polypremum procumbens L. *Spigelia marilandica L. Lythraceae
- *Ammannia coccinea Rottb. *Rotala ramosior (L.) Koehne
- Magnoliaceae
- *Liriodendron tulipifera L.
- Malvaceae
- *Hibiscus laevis Ait. [= H. militaris Cav.]
- H. moscheutos L.
- *Sida spinosa L. (intr.)
- Melastomataceae *Rhexia mariana L.
- *R. virginica L.
- Moraceae
- *Morus alba L. (intr.)
- *M. rubra L.
- Nymphaeaceae
- *Brasenia schreberi J. F. Gmel.
- *Cabomba caroliniana Gray
- Nyssaceae
- Nyssa aquatica L.
- *N. sylvatica Marsh.
- Oleaceae
- *Forestiera acuminata (Michx.) Poir.
- *Fraxinus americana L.
- *F. americana L. var. biltmoreana (Beadle) J. Wright
- F. pennsylvanica Marsh.
- F. profunda (Bush) Bush
- [= F. tomentosa Michx. f.]
- *Ligustrum sinense Lour. (intr.)
- Onagraceae
- *Circaea lutetiana (L.) Aschers. & Magnus ssp. canadensis (L.) Aschers. & Magnus
- *Gaura biennis L.
- *Ludwigia alternifolia L.
- *L. decurrens Walt.
- [= Jussiaea decurrens (Walt.) DC.]
- *L. glandulosa Walt.
- *L. palustris (L.) Ell. (intr.)
- L. peploides (H.B.K.) Raven ssp. glabrescens (Kuntze) Raven [= Jussiaea repens L. var. glabrescens Ktze.]
- *L. polycarpa Short & Peter
- *Oenothera biennis L.
- *O. laciniata Hill
- *O. speciosa Nutt.
- Orchidaceae
- *Aplectrum hyemale (Muhl. ex Willd.)Torrey
- *Platanthera flava (L.) Lindl.
- [= Habenaria flava (L.) R. Br.] *Tipularia discolor (Pursh) Nutt.
- Orobanchaceae
- *Epifagus virginiana (L.) Bart.
- Oxalidaceae
- *Oxalis dillenii Jacq. [= O. florida Salisb.]
- *O. dillenii Jacq. var. filipes (Small) Eiten [= O. filipes Small]
- *O. stricta L.
- *O. violacea L.
- Passifloraceae
- *Passiflora incarnata L.
- *P. lutea L.
- Phytolaccaceae
- *Phytolacca americana L.
- Plantaginaceae
- *Plantago aristata Michx.
- *P. lanceolata L. (intr.)
- *P. major L. (intr.)

- *P. pusilla Nutt.
- *P. rugellii Dene.
- *P. virginica L.
- Platanaceae
- Platanus occidentalis L.
- *Agrostis hiemalis (Walt.) B.S.P.
- *A. perennans (Walt.) Tuckerman
- *A. stolonifera L. [= A. alba L.]
- *Aira elegans Willd. ex Gaudin (intr.)
- *Alopecurus carolinianus Walt.
- *Andropogon virginicus L.
- Aristida oligantha Michx.
- *Arundinaria gigantea (Walt.) Muhl.
- *Bothriochloa saccharoides (Sw.) Rydb. [=Andropogon saccharoides Sw.]
- *Brachiaria platyphylla (Griseb.) Nash
- [=B. extensa Chase]
- *Brachyelytrum erectum (Schreb.) Beauv.
- *Bromus commutatus Schrad. (intr.)
- *B. japonicus Thunb. ex Murr. (intr.)
- *B. secalinus L. (intr.)
- *B. sterilis L. (intr.)
- *B. tectorum L. (intr.)
- Chasmanthium latifolium (Michx.) Yates [= Uniola latifolia Michx.]
- *C. laxum (L.) Yates
- [= Uniola laxa (L.) BSP.] *C. sessiliflorum (Poir.) Yates
- [= Uniola sessiliflora Poir.]
- Cinna arundinacea L.
- *Cynodon dactylon (L.) Pers. (intr.) *Dactylis glomerata L. (intr.)
- *Danthonia spicata (L.)
 - Beauv. ex Roemer & Schultes
- Dichanthelium acuminatum (Sw.) Gould &
- Clark [= Panicum lanuginosum Ell.] D. acuminatum (Sw.) Gould & Clark
- var. lindheimeri (Nash) Gould & Clark [=Panicum lanuginosum Ell.
 - var. lindheimeri (Nash) Fern.]
- *D. acuminatum (Sw.) Gould & Clark var. longiligulatum (Nash) Gould & Clark $[=Panicum\ longiligulatum\ Nash]$
- D. boscii (Poir.) Gould & Clark
- [= Panicum boscii Poir.] +D. clandestinum (L.) Gould
- [= Panicum clandestinum L.] D. commutatum (Schultes) Gould
- [= Panicum commutatum Schultes]
- +D. depauperatum (Muhl.) Gould
- [=Panicum depauperatum Muhl.] D. dichotomum (L.) Gould
- [= Panicum dichotomum L.]
- +D. laxiflorum (Lam.) Gould [=Panicum laxiflorum Lam.]
- +D. malacophyllum (Nash) Gould [= Panicum malacophyllum Nash]
- +D. ravenelii (Scribn. & Merr.) Gould [=Panicum ravenelii Scribn. & Merr.]
- D. scoparium (Lam.) Gould
- [=Panicum scoparium Lam.] D. sphaerocarpon (Ell.) Gould
- [=Panicum sphaerocarpon Ell,]
- D. sphaerocarpon (Ell.) Gould var. isophyllum (Scribn.) Gould & Clark [= Panicum microcarpon Muhl.]
- *Digitaria ischaemum (Schreb. ex Schweig.) Schreb. ex Muhl. (intr.)
- D. sanguinalis (L.) Scop. (intr.)

- +Diplachne fascicularis (Lam.) Beauv.
 - [=Leptochloa fascicularis
 - (Lam.) A. Gray]
- *Echinochloa crus-galli (L.) Beauv. (intr.)
- *E. muricata (Beauv.) Fern.
 - [= E. pungens (Poir.) Rydb.
 - var. lúdoviciana (Wieg.) Fern. & Grisc.]
- *Eleusine indica (L.) Gaertn. (intr.)
- *Elymus virginicus L.
- *Eragrostis capillaris (L.) Nees
- *E. cilianensis (All.) E. Mosher (intr.) [= E. megastachya (Koel.) Link]
- *E. curvula (Schrad.) Nees (intr.)
- *E. glomerata (Walt.) L. H. Dewey
- *E. hypnoides (Lam.) B.S.P.
- *E. minor Host (intr.)[=E. poaeoides Beauv.]
- *E. pectinacea (Michx.) Nees
- E. spectabilis (Pursh) Steud.
- *Erianthus alopecuroides (L.) Ell.
- *Festuca elatior L. (intr.)
- *F. obtusa Biehler
- *F. versuta Beal
- *Glyceria arkansana Fern.
- *G. striata (Lam.) A. S. Hitchc.
- *Hordeum pusillum Nutt.
- *H. vulgare L. (intr.)
- *Leersia lenticularis Michx.
- *L. oryzoides (L.) Sw.
- *L. virginica Willd.
- Leptochloa filiformis (Lam.) Beauv.
- *Lolium multiflorum Lam. (intr.)
- *L. perenne L. (intr.)
- *Melica mutica Walt.
- *Microstegium vimineum (Trin.) A. Camus [= Eulalia viminea (Trin.) Ktze.] (intr.)
- Panicum anceps Michx.
- P. dichotomiflorum Michx.
- *P. flexile (Gattinger) Scribn.
- *P. gymnocarpon Ell.
- P. hians Ell.
- *P. rigidulum Bosc. ex Nees
- [=P. agrostoides Spreng.]
- *Paspalum boscianum Flugge
- P. dilatatum Poir. (intr.)
- P. floridanum Michx.
- +P. floridanum Michx.
- var. glabratum Engelm. ex Vasev
- *P. fluitans (Ell.) Kunth
- P. laeve Michx. *P. pubiflorum Rupr. ex Fourn.
- var. glabrum Vasey ex Scribn.
- *P. setaceum Michx. +P. setaceum Michx. var. muhlenbergii (Nash) D. Banks [= P. ciliatifolium
- Michx. var. muhlenbergii (Nash) Fern.]
- *Poa annua L. (intr.)
- +P. autumnalis Muhl. ex Ell. *P. pratensis L. (intr.)
- *Schizachyrium scoparium (Michx.) Nash [= Andropogon scoparius Michx.]
- *Secale cereale L. (intr.)
- *Setaria faberi Herrm. (intr.) S. geniculata (Lam.) Beauv.
- *S. glauca (L.) Beauv. (intr.)
- *Sorghastrum nutans (L.) Nash
- *Sorghum halepense (L.) Pers. (intr.) *Sporobolus indicus (L.) R. Br.
- [= S. poiretii (R. & S.) Hitchc.]
- *Tridens albescens (Vasey) Woot. & Standl.
- *T. flavus (L.) A. S. Hitchc.

[= Triodia flava (L.) Smyth]

T. strictus (Nutt.) Nash

[= Triodia stricta (Nutt.) Benth.

Tripsacum dactyloides (L.) L.

*Triticum aestivum L. (intr.)

*Vulpia octoflora (Walt.) Rydb.

*V. octoflora (Walt.) Rydb. var. glauca (Nutt.) Fern.

Polemoniaceae

*Phlox glaberrima L.

ssp. interior (Wherry) Wherry

*P. paniculata L.

*P. pilosa L.

*Polemonium reptans L.

Polygalaceae

*Polygala sanguinea L.

Polygonaceae

Brunnichia ovata (Walt.) Shinners [= B. cirrhosa Gaertn.]

*Polygonum aviculare L. (intr.)

*P. hydropiper L.

P. hydropiperoides Michx.

*P. lapathifolium L.

*P. opelousanum Riddell ex Small

*P. pensylvanicum (L.) Small

*P. persicaria L. (intr.)

*P. punctatum Ell.

*Rumex acetosella L. (intr.)

*R. altissimus Wood

*R. conglomeratus Murr. (intr.)

*R. crispus L. (intr.)

*R. obtusifolius L. (intr.)

R. verticillatus L.

Pontederiaceae

+Heteranthera reniformis Ruiz & Pavon

Portulacaceae

*Claytonia virginica L.

*Portulaca oleracea L. (intr.)

Potamogetonaceae

*Potamogeton pulcher Tuckerman

Primulaceae

*Anagallis minima (L.) Krause

[= Centunculus minimus L.]

+Lysimachia lanceolata Walt.

+L. nummularia L. (intr.)

L. radicans Hook.

*L. tonsa (Wood) R. Knuth

*Samolus valerandi L. ssp. parviflorus (Raf.) Hulten [= S. parviflorus Raf.]

Ranunculaceae

*Actaea pachypoda Ell.

*Clematis crispa L.

*C. virginiana L.

+Hepatica nobilis Miller

var. acuta (Pursh) Steyerm.

*Myosurus minimus L.

+Ranunculus ambigens S. Wats.

*R. parviflorus L. (intr.)

R. pusillus Poir.

R. recurvatus Poir.

*R. sardous Crantz (intr.)

*Thalictrum thalictroides (L.)

Eames & Boivin [= Anemonella thalictroides (L.) Spach]

Rhamnaceae

*Berchemia scandens (Hill) K. Koch

Rosaceae

*Agrimonia rostellata Wallr.

*Amelanchier arborea (Michx. f.) Fern.

*Aronia melanocarpa (Michx.) Ell.

[=Pyrus melanocarpa (Michx.) Willd.]

+Crataegus crus-galli L.

*C. marshallii Egglest.

+C. viridis L.

*Geum canadense Jacq.

*Malus angustifolia (Ait.) Michx.

[= Pyrus angustifolia Ait.]

Potentilla simplex Michx. Prunus angustifolia Marsh.

+P. nigra Ait.

*P. serotina Ehrh.

*Pyrus communis L. (intr.)

*Rosa carolina L.

*R. eglanteria L. (intr.)

*R. multiflora Thunb. ex Murr. (intr.)

*R. palustris Marsh.

*R. setigera Michx.

*R. wichuraiana Crepin (intr.)

*Rubus argutus Link.

*R. flagellaris Willd.

*R. hispidus L.

*R. pensilvanicus Poir.

*R. trivialis Michx.

Rubiaceae

*Cephalanthus occidentalis L.

*Diodia teres Walt.

*D. virginiana L.

*Galium aparine L.

*G. circaezans Michx.

G. obtusum Bigelow

*G. pilosum Ait.

*G. tinctorium L.

*G. triflorum Michx.

*Hedyotis crassifolia Raf.[= H. minima Beck]

*Mitchella repens L.

*Spermacoce glabra Michx.

Salicaceae

*Populus alba L. (intr.)

*P. deltoides Bartr. ex Marsh.

P. heterophylla L.

*Salix nigra Marsh.

Saururaceae

Saururus cernuus L.

Saururus cernui Saxifragaceae

*Hydrangea arborescens L.

*H. quercifolia Bartr.

*Itea virginica L.

*Penthorum sedoides L.

*Saxifraga virginiensis Michx.

Scrophulariaceae

+Agalinis besseyana Britt. [= Gerardia tenuifolia Vahl. var. macrophylla Benth.]

A. fasciculata (Ell.) Raf.

[= Gerardia fasciculata Ell.]

*A. gattingeri (Small) Small

[=Gerardia gattingeri Small]

*A. heterophylla (Nutt.) Small

[=Gerardia heterophylla Nutt.]

*A. purpurea (L.) Pennell [= Gerardia purpurea L.]

+A. tenuifolia (Vahl) Raf.

[= Gerardia tenuifolia Vahl.]

+Bacopa rotundifolia (Michx.) Wettst.

+Chaenorrhinum minus (L.) Lange (intr.)

+Gratiola neglecta Torr.

+G. virginiana L.

*Linaria canadensis (L.) Dum.-Cour.

*Lindernia dubia (L.) Pennell

*L. dubia (L.) Pennell

var. anagallidea (Michx.) Cooperrider [= L. anagallidea (Michx.) Pennell]

*Mecardonia acuminata (Walt.) Small

[=Bacopa acuminata (Walt.)

B. L. Robins.]

+Micranthemum umbrosum (Walt.) Blake

*Mimulus alatus Ait.

+Pedicularis canadensis L.

Penstemon alluviorum Pennell

*P. laevigatus (L.) Ait.

*P. pallidus Small

*Verbascum blattaria L. (intr.)

*V. thapsus L. (intr.)

*Veronica arvensis L. (intr.)

*V. peregrina L.

Smilacaceae

+Smilax bona-nox L.

S. glauca Walt.

S. rotundifolia L.

*S. walteri Pursh

Solanaceae

*Datura stramonium L. (intr.)
*Physalis angulata L.

*P. heterophylla Nees

*Solanum americanum P. Mill.

*S. carolinense L.

Sparganiaceae

*Sparganium americanum Nutt.

Styracaceae

Styrax americana Lam.

Typhaceae *Typha latifolia L.

Ulmaceae

Celtis laevigata Willd.

Planera aquatica (Walt.) J. F. Gmel. *Ulmus alata Michx.

*U. americana L.

*U. rubra Muhl.

Urticaceae

*Boehmeria cylindrica (L.) Sw.

*Pilea pumila (L.) Gray

Valerianaceae *Valerianella radiata (L.) Dufr.

*V. locusta (L.) Betcke (intr.) [= V. olitoria (L.) Poll.]

Verbenaceae

*Callicarpa americana L.

+Glandularia canadensis (L.) Nutt.

[= Verbena canadensis (L.) Britt.]

*Phryma leptostachya L. *Phyla lanceolata (Michx.) Greene

[=Lippia lanceolata Michx.] *Verbena bonariensis L.

var. conglomerata Briq.

*V. hastata L. *V. urticifolia L.

Violaceae

Viola missouriensis Greene

*V. rafinesquii Greene (intr.) [= V. kitaibeliana Roemer & Schultes

var. rafinesquii (Greene) Fern.] (intr.)

*V. sororia Willd. *V. triloba Schwein.

var. dilatata (Ell.) Brainerd

Vitaceae

*Ampelopsis cordata Michx.

*Parthenocissus quinquefolia (L.) Planch.

+Vitis aestivalis Michx. *V. cinerea Engelm. ex Millard

*V. palmata Vahl. *V. rotundifolia Michx.

Zygophyllaceae

*Tribulus terrestris L. (intr.)