Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

AS 21
B44A7

United States
Department of
Agriculture

**Agricultural
Research
Service**

ARS-155

May 2000

Annotated List of the Flora of the Beltsville Agricultural Research Center, Beltsville, Maryland

United States
Department of
Agriculture

**Agricultural
Research
Service**

ARS-155

May 2000

Annotated List of the Flora of the Beltsville Agricultural Research Center, Beltsville, Maryland

E.E. Terrell, J.L. Reveal, R.W. Spjut, R.F. Whitcomb,
J.H. Kirkbride, Jr., M.T. Cimino, and M.T. Strong

Abstract

Terrell, E.E., J.L. Reveal, R.W. Spjut, R.F. Whitcomb, J.H. Kirkbride, Jr., M.T. Cimino, and M.T. Strong. 2000. Annotated list of the flora of the Beltsville Agricultural Research Center, Beltsville, Maryland. U.S. Department of Agriculture, Agricultural Research Service, ARS-155.

This annotated list of the flora of the Beltsville Agricultural Research Center, Prince George's County, Maryland, provides scientific names and selected common names for 901 native and naturalized plant species. This total includes 13 species of lichens, 71 mosses, 24 ferns and fern allies, 7 gymnosperms, and 786 angiosperm species (526 dicots and 260 monocots). Also listed are 32 angiosperm species planted in experimental meadows. The center is partitioned into five farms and four research forests. For each species data are provided concerning habitats and frequency of occurrence. A special project dealing with experimental meadows is discussed in detail. Lists of representative tree species are presented to highlight the common or dominant species. The occurrences of rare species, as well as pernicious weeds, are noted. Up-to-date scientific nomenclature is based largely on the database of the computerized Germplasm Resources Information Network (GRIN) of the USDA, Agricultural Research Service. Several taxonomic specialists have contributed their expertise concerning the more difficult angiosperm species.

Keywords: angiosperms, Ascomycophyta, Beltsville Agricultural Research Center, Bryophyta, club-mosses, dicotyledons, Equisetophyta, ferns, gymnosperms, horsetails, lichens, Liliopsida, Lycopodiophyta, Magnoliophyta, Magnoliopsida, Maryland, meadows, monocotyledons, mosses, Pinophyta, plant communities, Polypodiophyta, Prince George's County, spike-mosses.

While supplies last, single copies of this publication can be obtained at no cost from USDA, Agricultural Research Service, Systematic Botany and Mycology Laboratory, Bldg. 011A, Room 304, Beltsville, MD 20705-2350, or by e-mail from <joe@nt.ars-grin.gov>.

Copies of this publication may be purchased from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161; telephone (703) 605-6000.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Office of Civil Rights, Room 326BW, Whitten Building, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Acknowledgments

We thank the following persons for identifications of difficult genera or species (cited previously in the Introduction): Michel Lelong, Stephen Darbyshire, Charles Davis, Neil Harriman, Paul Peterson, Robert Soreng, and John Wiersema. The following persons have contributed collections or data: Rose Broome, Mark Burchick, James Duke, Jeff Lerner, Sandra Sauffurer, Rod Simmons, and Hope Stanton. We thank John Wiersema for his cooperation in accessing and checking GRIN nomenclature, and Harold Robinson for checking Asteraceae and lichen and moss nomenclature. David Lellinger reviewed the ferns. Christopher Frye, Maryland Department of Natural Resources, reviewed *Carex* and supplied data on rare species.

James Plaskowitz prepared and printed the electronic version of the maps. We are also grateful to Kevin Thorpe, Chairman of the BARC Ecology Committee, for his collections and valuable support of this project. Tim Badger, Chief of Farm Operations, guided our arrangements for collecting in various sections of BARC and provided important information. The following Beltsville Area administrators, Daryl Cole, Phyllis Johnson, and Darwin Murrell, have supported our activities and arranged for funds for herbarium work and publication. We thank Charles Davis, Aaron Goldberg, Paul Peterson, Stanwyn Shetler, and John Wiersema for very helpful reviews of the manuscript.

Contents

Agricultural areas and plant communities	1
Experimental meadows	8
Methods	8
Noteworthy species	9
Summary of taxa	10
Definitions and Symbols	10
List of the flora	12
Division Ascomycophyta—Lichens	12
Division Bryophyta—Mosses	12
Division Lycopodiophyta—Club-mosses and spike-mosses	15
Division Equisetophyta—Horsetails	15
Division Polypodiophyta—Ferns	16
Division Pinophyta—Gymnosperms	17
Notes	19
Division Magnoliophyta—Angiosperms	20
Class Magnoliopsida—Dicotyledons	20
Notes	52
Class Liliopsida—Monocotyledons	53
Notes	67
Literature Cited	68
Name Index	69

Annotated list of the flora of the Beltsville Agricultural Research Center, Beltsville, Maryland

by E.E. Terrell, J.L. Reveal, R.W. Spjut, R.F. Whitcomb,
J.H. Kirkbride, Jr., M.T. Cimino, and M.T. Strong

The Beltsville Agricultural Research Center (BARC) of the U. S. Department of Agriculture (USDA) is located in Prince George's County, Maryland, about six miles northeast of the District of Columbia (Fig. 1). It comprises about 6,866 acres (2,780 hectares) of level or rolling terrain just east of the Fall Line, a meeting place of the floras of the Atlantic Coastal Plain and Piedmont Provinces. This annotated list of the BARC flora includes mosses, lichens, and native and naturalized vascular plant species. In addition, we include 32 vascular species (denoted by asterisks) planted in recent years in experimental meadows.

The coordinates of the Center are approximately 39° N latitude and 76° 50' W longitude. The elevation ranges from approximately 40 to 260 feet (12–80 m) above sea level. Data from weather stations on BARC, as collected by George Meyers of the Farm Operations Branch, are as follows for 1995–1998: The annual maximum temperature was 101° F. (38.3° C.) in August 1997; annual minimum temperature 13° F. (-10.6° C.) in February 1996; annual average temperature 55° F.

(12.8° C.); average annual total precipitation 37.75 inches (958.9 mm); maximum annual total snow depth 51.2 inches (1.3 m) in 1996; minimum annual total snow depth 1 inch (0.03 m) in 1998; and average annual total snow depth 28.5 inches (0.7 m). Hotchkiss and Stewart (1979) presented climatic data for the adjacent Patuxent Wildlife Research Center (Department of the Interior).

Agricultural areas and plant communities

Within the Center a variety of soil types, soil acidities, moisture conditions, land uses, and historical changes guarantee substantial habitat diversity. The majority of the forested land (3,074 acres; 1,244 hectares) is riparian buffer between streams and open land. The main activities of the Center involve experimental work on many aspects of agriculture, including the growing of corn, wheat, soybeans, and other crops, as well as the operation of an active animal sciences program emphasizing dairy science, poultry research, and swine production.

Certain adjacent areas were formerly part of the Center, but have recently been transferred to other government departments. The Beltsville Airport was originally wholly a property of the USDA, but was abandoned, and outlying sections of it were transferred to the Department of the Interior as part of the Patuxent Wildlife Research Center (PWRC). Plants collected at the Airport were sometimes difficult to designate as occurring on the land of either department, and a few species are included in the present list regardless of their exact locations on the Airport property. One listed species, *Magnolia acuminata*, that was formerly on USDA land, is on adjacent State Department property. The Treasury Department and NASA (National Aeronautics and Space Administration) also now hold substantial tracts that were once USDA property.

Terrell is a Collaborator, Department of Botany, Smithsonian Institution, and retired taxonomic botanist, USDA, ARS, Beltsville; presently at 14001 Wildwood Drive, Silver Spring MD 20905. Reveal is a systematic botanist and Professor Emeritus, University of Maryland, College Park, Maryland; presently at 18625 Spring Canyon Road, Montrose, CO 81401. Spjut is a retired USDA, ARS botanist, and currently Director of World Botanical Associates, P.O. Box 2829, Laurel, MD 20709. Whitcomb is a retired ecologist and now Collaborator, USDA, ARS; current address at Bee Research Center, 2000 East Allen Road, Tucson, AZ 85719. Kirkbride is a Research Botanist with USDA, ARS, Systematic Botany and Mycology Laboratory, Rm. 304, Bldg. 011A, BARC-West, Beltsville, MD 20705-2350, E-mail: joe@nt.ars-grin.gov. Cimino is a graduate student, Department of Cell Biology and Molecular Genetics, University of Maryland, College Park, MD 20742. Strong is a taxonomic botanist and Museum Specialist with the Department of Botany, Smithsonian Institution, Washington, DC 20560. Address requests for reprints and correspondence to Kirkbride.

Figure 1. Location of Beltsville Agricultural Research Center in Prince George's County, Maryland.

The Agricultural Research Center is divided into five Farms. In 1985, and shortly thereafter, four Research Forests were designated within two of these Farms.

The North and South Farms (Fig. 2) have been partly reserved for field plot experiments on various horticultural and vegetable crops. The North Farm (548 acres; 222 hectares) includes administration and research buildings along the west side of U. S. Route 1 (Baltimore-Washington Boulevard), and extends west and north to include cultivated fields and meadows adjoining Sellman Road and Cherry Hill Road, as well as some forest. The Little Paint Branch Creek provides habitats for riparian plant species. Six experimental meadows are located on the North Farm.

The South Farm (367 acres; 149 hectares) is a separate tract south of the Washington Beltway (I-495) and Cherry Hill Road. It is a mosaic of experimental fields, fallow fields, well drained oak forest, and poorly drained lowland forest. Riparian habitats occur along Paint Branch Creek.

The Linkage Farm (Fig. 2), a tract of 460 acres (186 hectares), lies between Edmonston Road and Rhode Island Avenue, connecting the North Farm with the Central Farm. The National Agricultural Library occupies an area on the east side of U. S. Route 1 opposite the main buildings of the North Farm, and its grounds include nineteen experimental meadows. The Linkage Farm is bisected into north and south segments by Sunnyside Avenue. An extensive swamp forest (271 acres; 110 hectares) along Indian Creek parallels Edmonston Road. Several herbaceous species absent or rare elsewhere (e.g., *Panax trifolius*, *Uvularia sessilifolia*, and *Veratrum viride*) occur on the forest floor. In August 1998

in a slightly drier area of swamp forest adjacent to Sunnyside Road the following representative tree species were recorded: *Acer rubrum*, *Fagus grandifolia*, *Liquidambar styraciflua*, *Liriodendron tulipifera*, *Quercus alba*, *Q. palustris*, and *Q. phellos*. In the understory *Lindera benzoin* was prominent, and frequently the pernicious weedy grass *Microstegium vimineum* had invaded open places.

The Central Farm (Fig. 3) is a large tract of 3,010 acres (1,218 hectares) of which 1,408 acres (570 hectares) are forested. It lies east of Edmonston Road and extends to the Baltimore-Washington Parkway. The Log Lodge National Visitor Center area includes a small pond established long ago by an iron mining operation. This pond supports much *Nuphar advena* and a dense cover of duckweeds (*Lemna*). A smaller pond in the forest to the south is entirely dominated by duckweeds. To the southwest of the Log Lodge area, on both sides of Research Road, an open swamp occupies the bottomland along Beaver Dam Creek. The swamp, formed by beaver activity, has much *Peltandra virginica* and scattered plants of *Iris versicolor*, *Polygonum arifolium*, and other wetland species. Entomology Road in the north part of the Central Farm parallels an extensive wooded area and a large experimental meadow by Building 465. A fairly large pond is located in the forest at the end of Entomology Road and a smaller pond is to the west of Entomology Road. Another part of the Central Farm lies at the end of Poultry Road, where there are several meadows under active study, including an oak savanna with scattered large oaks (see comments under meadows).

The Central Farm also includes the extensive Bottomland Research Forest intersected by Beaver Dam Road. This forest lies along Beaver Dam Creek just west of the Baltimore-Washington

Figure 2. South, North, and Linkage Farms of Beltsville Agricultural Research Center in Prince George's County, Maryland. B&ORR, Baltimore and Ohio Railroad Tracks; B-W BLVD, Baltimore-Washington Boulevard (U. S. Route 1). NAL, National Agricultural Library; USDA, U. S. Department of Agriculture Office Complex; Other abbreviations explained in text. Meadows numbered within squares: Building 011A Upland Meadow [1]; Building 011A Wet Meadow [2]; NAL South Meadows [3-5]; NAL North Meadows [15-22]; Sellman Road Meadows [24]; Cherry Hill Meadows [29,30].

Figure 3. Central Farm of Beltsville Agricultural Research Center in Prince George's County, Maryland. API, Animal Parasitology Institute; FDA complex formerly leased to Food and Drug Administration; VISITOR CENTER, "Log Lodge"; other abbrev. in text; Meadows numbered within squares: Poultry Road Meadow [6]; Poultry Road Savanna Meadows [7,8]; Beef Barn Meadow [9]; Statistics Lab Savanna [10]; Oak Barren Meadows [11-13]; East *Bidens* Meadow [23]; Fescue Living Mulch Meadow [26]; Building 465 Meadow [27]; Poultry Road West Meadow [31]; Power Line Meadow [33].

Parkway. It is partly lowland with an understory of *Lindera benzoin* and *Clethra alnifolia*. Several years ago the western part of the forest supported many plants of *Cypripedium acaule*, but these were absent in 1997, 1998, and 1999, perhaps due to deer depredations or other factors. A ¼ mile transect in this forest along a tributary of Beaver Dam Creek included the following representative tree species: *Acer rubrum*, *Carpinus caroliniana*, *Cornus florida*, *Liquidambar styraciflua*, *Liriodendron tulipifera*, *Quercus alba*, and *Q. rubra*. Another transect one mile east along the lowland forest border had the same tree species and also *Nyssa sylvatica*, *Prunus serotina*, and *Sassafras albidum*. At this place the roadside was covered with the grass *Microstegium vimineum*, which had also invaded open areas in the lowland forest. At the southwest corner of the Bottomland Research Forest a Washington Metropolitan Area Transit Authority (WMATA) mitigation project has been established. Saplings of bald cypress (*Taxodium distichum*) have been planted there. Thirteen experimental meadows are on the Central Farm. The former Food and Drug Administration complex (FDA) occupies the northcentral part of the Central Farm, and includes a number of large trees of *Quercus montana* and other oak species.

The East Farm (Fig. 4), a large tract (2,481 acres; 1,004 hectares) of which 1,267 acres (513 hectares) are forested, is located east of the Baltimore-Washington Parkway. It includes the abandoned Airport, with several kinds of habitats not occurring elsewhere on BARC. A large pond (Beck Lake) on the East Farm along Soil Conservation Road is shallow and choked with *Nuphar* and *Nymphaea*. South of the pond is a large stand of predominantly coniferous forest, the Coniferous Research Forest. Such forests are more acidic and support populations of *Pinus virginiana*, *P. taeda*, and various oak species with an extensive understory of *Gaylussacia* and *Vaccinium* species. A transect along the border of

this forest recorded the following tree species: *Diospyros virginiana*, *Liquidambar styraciflua*, *Pinus taeda*, *P. virginiana*, *Prunus serotina*, *Quercus marilandica*, and *Q. phellos*. A second forest tract, the Deciduous Research Forest, lies along the eastern part of Beaver Dam Road opposite the NASA Antenna Range. An east-west power line crosses part of the forest, and under it are two open boggy areas about 1/4 mile apart (the west bog is designated Powerline Bog 1, the east bog is Powerline Bog 2) in the headwaters of Beaver Dam Creek. These two bogs and adjacent swamps support a number of species rare or not found elsewhere on the Center (e.g., *Utricularia subulata*, *Sarracenia purpurea*, *Rhynchospora gracilentia*, *R. microcephala*, and *Bartonia paniculata*). Along a ¼ mile transect of the forest in a level area near the powerline the following tree species were present in 1998: *Acer rubrum*, *Diospyros virginiana*, *Liquidambar styraciflua*, *Nyssa sylvatica*, *Pinus virginiana*, *Quercus alba*, *Q. falcata*, *Q. palustris*, *Q. velutina*, and *Sassafras albidum*.

The Wetland Research Forest (East Farm) has two parts. The east part is a *Clethra* shrub swamp that once was much more open and marshy than it is today. A large open area in the western part of the forest was clear-cut and later became a switchgrass (*Panicum virgatum*) field. In the 1980's this land was established as a wetland mitigation project of WMATA, and two ponds occupy this site.

In addition to the Powerline Bogs cited previously, the flora lists certain species collected in former years in the "Beltsville Bog." The application of this name has been uncertain, as several bogs formerly existed in the Beltsville area. Within the Center one application of the name "Beltsville Bog" has been to wet areas in the Wetland Research Forest on the East Farm;

Figure 4. East Farm of Beltsville Agricultural Research Center in Prince George's County, Maryland. APHIS, Animal and Plant Health Inspection Service; HAYDEN FARM, University of Maryland Research Farm; PMC, Plant Materials Center, NRCS ; other abbrev. in text; Meadows numbered within squares: Springfield Road Meadow [28]; Airport Meadow [32].

however, these have undergone sedimentary filling in recent years. In addition, the name has been applied to small sphagnum seepages among the scrub pine forest in the Airport; however, these areas (which formerly had *Bartonia virginica* and *Polygala lutea*) have been nearly destroyed by the effects of various agricultural intrusions.

Experimental meadows

In 1993 a study of natural and artificial meadows was initiated as a cooperative program of the BARC Ecology Committee and the Farm Operations Branch. About 30 meadows were selected for study. Some of these were created *de novo* by killing existing vegetation with herbicides and then tilling. Other horticultural meadows were created by no-till technology. Many of the meadows, both natural and artificial, proved to be quite diverse, having as many as 200 species. In contrast to the horticultural meadows, many of the units were created simply by permitting existing areas to develop into meadows. This proved to be especially effective on acid, sandy soils, where planted lawn grasses had failed. On such soils, many native species had colonized and even become dominant. In the meadows on the north grounds of the National Agricultural Library, communities appeared in which *Schizachyrium scoparium*, *Tridens flavus*, and *Eragrostis spectabilis* were complemented by *Euphorbia corollata* and *Solidago juncea*. Weed invasion of uncultivated fields occurred over long time periods (30–50 years), permitting development of relatively high species richness. More than 500 species appeared in the meadows without having been planted there.

On the Central Farm large fields with scattered oaks were designated as savannas. These meadows simulate the savanna aspect that may have existed at the time of European colonization, when central Maryland was, according to

historians (Marye 1950), burned by Native Americans to form a “Great Barrens.” If this historical analysis is accurate, the land now covered by scattered large oaks (e.g., a 4–5' diameter specimen of *Quercus montana*) may well be a relict of the earlier barrens. This is one explanation for the high plant species diversity in the Poultry Road Oak Savanna. Other diverse meadows include the meadow at Building 465 along Entomology Road and a roadside meadow on the west side of Springfield Road immediately south of Beaver Dam Road. These two meadows, each poorly drained and situated on acid sandy soils, had about 150 plant species. One meadow (Poultry Road Meadow) was interseeded with native species, and now resembles an old-field in the degree of invasion of the pre-existing grass cover. Other than this meadow, old-field communities are scattered and very small at BARC. In the 1970's, a large field along Soil Conservation Road harbored a diverse array of native plants, including some planted by the Soil Conservation Service (now the Natural Resources Conservation Service). The field was a sufficiently rich plant community to support three undescribed insect (leafhopper) species.

Methods

Botanists have collected wild plants on the Center for many years, as reflected in specimens housed in the herbaria of the University of Maryland (MARY) and the Smithsonian Institution (US). More intensive study of the flora began in the 1970's, and was formally initiated in 1997 with the cooperation of the University of Maryland and deposit of collections in their herbarium.

No flora is ever complete, and the varied habitats of BARC continually yield new species records. This annotated flora includes mosses, lichens, and vascular plants. Also included are 32 vascular

species planted in the experimental meadows; these are denoted by asterisks. A few of these meadow species appear to be spreading, while others have died out since being planted. We exclude planted ornamental trees and shrubs, unless they appear to have escaped from cultivation.

The families of vascular plants follow the classification adopted by the USDA, officially designated as follows: Agricultural Research Service (ARS), National Genetic Resources Program, Germplasm Resources Information Network (GRIN), [Online Database] National Germplasm Resources Laboratory, Beltsville, Maryland, URL: www.ars-grin.gov/npgs/tax/taxfam.html (4 December 1998).

Author abbreviations were checked for agreement with Brummit and Powell (1992). Most of the scientific names agree with those in the GRIN database, except as suggested by specialists or reviewers. We recognize that recent research, for example on the Liliaceae, suggests that reclassification is needed. Certain names were also checked in Kartesz (1994) and in Wiersema and León (1999). Latin words such as et al., ex, nom. illeg. are not italicized in the list, following rules suggested in the “CBE Style Manual” (1983) and procedures followed in botanical taxonomic journals such as Brittonia and Novon.

That U.S. Route 1, which bisects BARC, is located a few miles southeast of the Fall Line was noted by Brown and Brown (1984: map page xxii). We believe that the presence at BARC of both Coastal Plain and Piedmont species has made identification problems more difficult, a circumstance that deserves further study. In making identifications of vascular plants we relied heavily on the floras by Brown and Brown (1972, 1984), Gleason and Cronquist (1991), Radford et al. (1968), Voss (1972, 1985), the atlas by Harvill et al. (1992), and other floras and monographic

studies. A study of the vegetation of the neighboring Patuxent Wildlife Research Center (Hotchkiss and Stewart 1979) was helpful as a basis of comparison with the BARC flora.

Species in certain difficult groups were determined as follows: *Panicum* (Michel Lelong); *Carex* (Neil Harriman, Richard Spjut); *Poa* (Rob Soreng); *Eragrostis* (Paul Peterson); *Nymphaea* and *Nuphar* (John Wiersema); *Festuca trachyphylla* (Stephen Darbyshire); and other problematical species (Charles Davis). Lemnaceae were done by Reveal. *Juncus* and Cyperaceae (except *Carex*) were reviewed or identified by Strong. Poaceae were treated by Terrell, except as cited above. Spjut collected and identified all mosses and lichens, but these were not as extensively surveyed as the vascular flora. Specimens are deposited in the following herbaria: MARY, US, or OSH (*Carex*).

Common names were included if a species had a well-established common name, but we attempted to avoid contrived names, whether part of extensive lists or from other sources.

Noteworthy species

Certain weeds deserve special note because of their intrusive and pernicious characteristics. *Microstegium vimineum*, an Asian grass, has become widely distributed in the eastern U. S. (Redman 1995). On BARC it has blanketed roadsides and invaded many areas of forest, e.g., in the Bottomland Research Forest south of Beaver Dam Road. This annual grass produces many individual plants that cover the ground, hence the common name coined here, cover-all grass; it has also been called stilt grass and Nepalese browntop. *Polygonum perforatum*, mile-a-minute weed, is also troublesome (Oliver 1996). It climbs over other vegetation and forms a solid blanket of prickly stems. It invades fairly rich forests wherever it finds open disturbed areas,

such as canopy gaps created by gypsy moth infestations. The long-familiar *Lonicera japonica*, Japanese honeysuckle, persistently invades forests, meadows, and fields.

Two shrubs or small trees of cultivated species are unusually aggressive in producing seedlings: *Viburnum dilatatum*, an attractive ornamental, has become locally frequent on the Central Farm; and *Malus toringo* has invaded meadows and fields.

We have noted the recent absence or reduction in numbers of formerly more frequent species (e.g., *Cypripedium acaule* and *Smilacina racemosa*). We believe that the over-abundance of deer on BARC has been responsible for part of this disappearance. Another factor affecting the vegetation has been gypsy moth depredations, especially in the late 1980's and early 1990's. A number of oaks and other kinds of trees were damaged or killed in this infestation. Certain mosses previously observed in the 1970's by Spjut were judged to be much less abundant in recent years, a circumstance possibly attributable to acid rain.

Certain species are listed as rare in the state in the two Maryland floras (Brown and Brown 1972, 1984). Data on rare species were also provided by the Maryland Department of Natural Resources, and have enabled us to focus on the more noteworthy species occurring on BARC, whether or not they are rare regionally or statewide.

Several species occur in the sphagnum bogs designated previously as Powerline Bogs 1 and 2, located at a tributary of Beaver Dam Creek in the Deciduous Research Forest. These species that grow in this unusual habitat include the following: *Woodwardia virginica*, *Bartonia paniculata*, *Eupatorium pilosum*, *Solidago latissimifolia*, *Rhynchospora microcephala*, *Sarracenia*

purpurea, *Xyris difformis*, and *Utricularia subulata*.

Grass species not recorded from the state by Brown and Brown (1984) include *Echinochloa colona* (a pantropical weed extending its range northward), and the European or Eurasian taxa, *Festuca trachyphylla* and *Poa pratensis* subsp. *angustifolia*. Species occurring naturally only in the meadows around the National Agricultural Library include *Eragrostis hirsuta* and *Euphorbia ipecacuanhae*. Other species in BARC in various habitats include *Cyperus lancastricensis*, *C. iria*, *Ophioglossum pycnostichum*, *Cruciata pedemontana*, *Kalmia angustifolia*, *Krigia dandelion*, *Juncus brachycarpus*, *J. diffusissimus*, *Veratrum viride*, *Viola brittoniana*, and *Chenopodium leptophyllum*.

Summary of taxa

The total number of plant taxa, including species, subspecies, and varieties, found on BARC is 901. Of these, 13 are lichens, 71 mosses, 24 ferns and fern allies, 7 gymnosperms, and 786 angiosperms including 526 dicots and 260 monocots. The total number of vascular plants is 817. In addition, 32 (29 dicots, 3 monocots) angiosperm species (denoted by asterisks) were planted in the meadows and did not occur elsewhere in BARC. Excluding the 32 planted species, the number of species of vascular plants designated as "rare" is 141 or 17% of the total (817). The number of species designated as "rare or infrequent" is 12 or 1.5%. The total of these two categories is 18.5%. Many of these species are Eurasian weeds. Others are native species that may be scarce or rare in Maryland.

Definitions and Symbols

The following terms designate the approximate number of sites where a species occurs. A site is defined here as usually a relatively small area with one to many plants. Sometimes a species occupies

one large area. For example, *Panax trifolius* occurs only in the Indian Creek swamp forest, but it is scattered within that forest; this is described as rare but locally frequent. Designations of frequency are as follows: *Rare*—1 site; *Infrequent*—2–4 sites; *Occasional*—5–approximately 7 sites; *Common*—generally distributed in suitable habitats; and *Abundant* or *Locally Abundant*—many individuals usually occurring at each site. *Common and Abundant*

means that a species is widely distributed and also locally abundant. For some adventive or escaped naturalized species, for aquatic species, and for some lichens and mosses we sometimes omit a frequency estimate and merely list the locations. The term *meadows* refers only to the experimental meadows, whereas the term *fields* has a more general meaning. For some species we refer to both fields and meadows. An asterisk (*) denotes a species planted in the experimental meadows.

List of the flora

Division Ascomycophyta—Lichens

Division Ascomycophyta—Lichens

Cladina subtenuis (Abbayes) Hale & Culb.

Locally abundant: edges of pine forests on sandy soil, East Farm.

Cladonia caespiticia (Pers.) Flörke

Rare: soil bank along Odell Road, Central Farm.

Cladonia chlorophaea (Flörke ex Sommerf.) Spreng.

Occasional: road banks, deciduous forests.

Cladonia cristatella Tuck.

Occasional: road banks, deciduous forests.

Cladonia incrassata Flörke

Infrequent: decaying logs, bottomland forests.

Cladonia ochrochlora Flörke

Occasional: bases of trees, decaying logs.

Cladonia parasitica (Hoffm.) Hoffm.

Occasional: decaying logs in bottomland forests.

Cladonia ramulosa (With.) J. R. Laundon

Rare: rotting log in upland deciduous forest.

Cladonia squamosa (Scop.) Hoffm.

Common: shaded road banks.

Flavoparmelia caperata (L.) Hale

Trunks of old hardwood trees along roads and forest edges, Bottomland Research Forest.

Physcia dimidiata (Arnold) Nyl.

Rare: bark of old tree in ravine forest.

Physcia millegrana Degel.

Rare: bark of old tree among mosses.

Punctelia rudecta (Ach.) Krog

Occasional: trunks of old hardwood trees, often occurring with *Flavoparmelia caperata*, forest margins near ponds and pastures.

Division Bryophyta—Mosses

Amblystegium riparium (Hedw.) Bruch,

Schimp. & W. Gümbel

Wet soil along old dirt road in coniferous forest, Airport.

Amblystegium serpens (Hedw.) Bruch, Schimp. & W. Gümbel

Tree roots in pasture, Poultry Road.

Amblystegium tenax (Hedw.) Jenn.

Sandy soil in coniferous forest off Springfield Road near Airport.

Amblystegium trichopodium (Schultz) C. Hartm.

Old cement foundation in forest north of Poultry Road.

Amblystegium varium (Hedw.) Lindb.

Locally frequent: pavement of deteriorated road in hardwood forest north of Poultry Road.

Anomodon attenuatus (Hedw.) Huebener

Infrequent: near base of old trees in ravine forests.

Atrichum angustatum (Brid.) Bruch, Schimp. & W. Gümbel

Common: forming strips along road and along creek banks in bottomland forests.

Atrichum crispum (James) Sull.

Occasional: wet soil of sphagnum places, shady creek banks, Beaver Dam Creek, Indian Creek, Beck Lake.

Aulacomnium heterostichium (Hedw.) Bruch, Schimp. & W. Gümbel

Old shady road-cut along Springfield Road, East Farm.

Aulacomnium palustre (Hedw.) Schwaegr.

Common: especially with sphagnum in wet pastures, meadows, hardwood forests.

Barbula convoluta Hedw.

Weathered foundation of old building near Building 476, Central Farm.

Barbula fallax Hedw.

Shady soil bank, Biocontrol Road, Central Farm.

Bartramia pomiformis Hedw.

Rare: once collected on shady road cut along Springfield Road, East Farm, now a developed area.

Division Bryophyta—Mosses

Brachythecium laetum (Brid.) Bruch, Schimp. & W. Gümbel

Occasional: pastures with scattered trees or carpeting old paved roads.

Brotherella recurvans (Michx.) Fleisch.

Bases of old trees, Beck Lake, Airport.

Bryhnia novae-angliae (Sull. & Lesq. ex Sull.)

Grout

Infrequent: branches or debris in dense shade along creeks of bottomland forest, Indian Creek.

Bryoandersonia illecebra (Hedw.) H. Rob.

Occasional: in pastures partially shaded by trees and road banks in hardwood forest.

Bryum argenteum Hedw.

shaded soil of road-cut, edges of parking lots, Building 011A, North Farm; Odell Road, Central Farm.

Bryum caespiticum Hedw.

Rare: wet pasture near margin of pine forest, Powder Mill Road.

Callicladium haldanianum (Grev.) Crum

Wet tree bases, rotting wood, bare soil, bottomland forest, Indian Creek.

Ceratodon purpureus Hedw.

Common: shaded bare soil near buildings, partially shaded soil of pastures, cracks of sidewalks, carpeting old paved roads.

Clasmatodon parvulus (Hampe) Hook.

Old foundation of building.

Cratoneuron filicinum (Hedw.) Spruce

Rare: densely shaded soil along Indian Creek in bottomland forest, Edmonston Road.

Dicranella heteromalla (Hedw.) Schimp.

Once common on BARC as a pioneer species along roadbanks and mounds near forest margins; occasionally seen since 1987.

Dicranum condensatum Hedw.

Rare: understory of hardwood forest near junction of Odell and Springfield roads, not seen since 1993.

Dicranum flagellare Hedw.

Occasional: old rotting wood, base of trees, in hardwood forests along streams or about bogs.

Dicranum flagellare Hedw var. **minutissimum**

Grout

Occasional: base of trees in wet hardwood forests.

Dicranum scoparium Hedw.

Formerly common, now occasional: Odell and Springfield Roads near forest margins.

Ditrichum lineare (Sw.) Lindb.

Rare: soil of cut-over forest along Poultry Road.

Entodon seductrix (Hedw.) Müll. Hal.

Occasional: partially shaded rocks and old concrete foundations; carpeting tar roofs of buildings overgrown by vegetation.

Eurhynchium pulchellum (Hedw.) Jenn.

Shaded soil of road banks, Odell Road, Central Farm.

Grimmia apocarpa Hedw.

Shaded pavement of road in hardwood forest north of Poultry Road.

Haplocladium microphyllum (Hedw.) Broth.

Wet tree bases, bottomland forest, South Farm; Indian Creek.

Haplocladium virginianum (Brid.) Broth.

Rare: wet rotting log, bottomland forest, South Farm.

Hedwigia ciliata (Hedw.) P. Beauv.

Occasional: roof tops, on soil near edges of pavements of parking lots.

Helodium paludosum (Sull.) Austin

Locally abundant: wet depressions in pasture among grasses.

Hypnum curvifolium Hedw.

Rare: moist tree bases in dense shade, hardwood forest, Odell Road, Central Farm.

Hypnum imponens Hedw.

Occasional: rotting logs, mostly in older growth bottomland hardwood forests; Airport; Indian Creek; Beck Lake.

Hypnum lindbergii Mitt.

Wet shady soil, bottomland forest, Indian Creek.

Hypnum pallescens (Hedw.) P. Beauv.

Rare: rotting logs in heath understory of hardwood forest, Central Farm.

List of the flora

Division Bryophyta—Mosses

Isopterygium elegans (Sw.) Mitt.

Wet shaded soil in mixed conifer hardwood forest, Beck Lake, not collected since 1983.

Isopterygium tenerum (Sw.) Mitt.

Wet soil, Beck Lake.

Leskea gracilescens Hedw.

Old partially shaded concrete foundations and pavement, Poultry Road.

Leskea polycarpa Hedw.

Occasional: tree roots in partially shaded pasture, Poultry Road.

Leucobryum albidum (Brid.) Lindb.

Occasional: tree bases, soil banks, margins of old growth forests.

Leucobryum glaucum (Hedw.) Ångstr. ex E. M. Fr.

Common: near margins of old growth forests of pine and hardwoods.

Plagiomnium cuspidatum (Hedw.) T. J. Kop.

Formerly abundant along stream banks in forests, now infrequent.

Plagiothecium cavifolium (Brid.) Z. Iwats

Formerly on soil of stream banks in forest off Soil Conservation Road, East Farm; not collected since 1976.

Platygyrium repens (Brid.) Bruch, Schimp. & W. Gumbel

Old rotting wood in wet bottomland forests, Beaver Dam Creek; Indian Creek.

Pleuridium subulatum (Hedw.) Rabenh.

Locally frequent: soil of old shady road and ant mounds in older growth hardwood forest, Odell Road, Central Farm.

× ***Pleuriditrichum marylandicum*** A. L.

Andrews & F. J. Herm.

One collection from South Farm.

Pogonatum pensilvanicum (Hedw.) P. Beauv.

Formerly locally frequent in road cuts in hardwood forest, Odell Road; not seen since 1985.

Pohlia nutans (Hedw.) Lindb.

Bare soil near tree bases and on road cuts.

Polytrichastrum ohioense (Renauld & Cardot) G. L. Smith

Common: partially shaded soil in mixed hardwood and pine forests.

Polytrichum commune Hedw.

Common: shaded roadcuts, margins of forests, boggy places, pastures, and meadows.

Polytrichum juniperinum Hedw.

Rare: banks along Powder Mill Road, East Farm.

Polytrichum piliferum Hedw.

Infrequent: open siliceous soils of powerlines.

Pylaisiella polyantha (Hedw.) Grout

Occasional: on trunks of old trees in ravines.

Sematophyllum adnatum (Michx.) E. Britton

Infrequent: wet-decaying branches near ponds or streams in bottomland forests, Edmonston Road, Linkage Farm.

Sematophyllum demissum (Wils.) Mitt.

Rare: wet tree root near Beck Lake.

Sphagnum capillifolium (Ehrenb.) Hedw.

Wet seepages in mixed pine and hardwood forests, Odell Road; Airport.

Sphagnum compactum DC. ex Lam. & DC.

Beck Lake; Airport.

Sphagnum imbricatum Hornsch. ex J. L. Russell

Margins of Beck Lake.

Sphagnum palustre L.

Seepages along powerline near Beck Lake.

Sphagnum recurvum P. Beauv.

Shores of Beck Lake.

Sphagnum secundum Nees ex Sturm

Wet stream bank in forest, Odell Road, Central Farm.

Sphagnum subsecundum Nees ex Sturm

Seepage along powerline track near Beck Lake; Airport, occurring with *Sphagnum palustre*.

Steerecleus serrulatus (Hedw.) H. Rob.

Occasional: tree roots, old paved roads, concrete foundations, and hardwood forests.

Thuidium allenii Austin

Rare: wet soil bordering pond in forest, below Building 476, Central Farm.

List of the flora
Division Equisetophyta—Horsetails
Equisetaceae

Thuidium erectum Duby

T. delicatulum (Hedw.) Bruch, Schimp. & W.
 Gümbel, nom illeg.

Formerly common along stream banks in
 hardwood forest, largely vanished since 1987;

still frequent in wet pastures and on bases of
 trees in ravines.

Tortella humilis (Hedw.) Jenn.

Tree roots in pasture, Poultry Road.

Division Lycopodiophyta—Club-mosses and spike-mosses

Lycopodiaceae

Diphasiastrum digitatum (Dill. ex A. Braun)

Holub—fan club-moss.

Lycopodium digitatum Dill. ex A. Braun

L. complanatum var. *flabelliforme* Fernald

L. flabelliforme (Fernald) Blanch.

Common and abundant: forming continuous
 stands over small areas of forest.

Lycopodiella appressa (Chapman) Cranfill—
 appressed bog club-moss.

Lycopodium inundatum L. var. *bigelovii* Tuck.

Infrequent: Beck Lake shore; swamp adjacent to
 Airport.

Lycopodium clavatum L.—running club-moss.

Infrequent to occasional: Coniferous and
 Deciduous Research Forests; Entomology
 Road.

Lycopodium obscurum L.—tree club-moss.

Common: forests, occasionally forming
 continuous stands.

Selaginellaceae

Selaginella apoda (L.) Spring—meadow spike-
 moss.

Rare: along stream in pine forest, Airport (in or
 near the Patuxent Wildlife Research Center).

Division Equisetophyta—Horsetails

Equisetaceae

Equisetum arvense L.—field horsetail.

Infrequent: Beaver Dam Creek swamp; around
 greenhouses and outbuildings, Entomology
 Road.

List of the flora
Division Polypodiophyta—Ferns
Aspleniaceae

Division Polypodiophyta—Ferns

Aspleniaceae

Asplenium platyneuron (L.) Britton, Sterns, &
Poggenb. var. **platyneuron**—ebony
spleenwort.
Infrequent: forests of Central and East Farms.

Blechnaceae

Woodwardia areolata (L.) T. Moore—netted
chain fern.
Occasional: moist forests and swampy areas.

Woodwardia virginica (L.) Sm.—Virginia chain
fern.
Rare: Powerline Bog 2, East Farm.

Dennstaedtiaceae

Dennstaedtia punctilobula (Michx.) T. Moore—
hay-scented fern.
Infrequent: open slope, South Farm; forests in
Central and East Farms.

Pteridium aquilinum (L.) Kuhn—bracken fern.
Occasional: forest edges and under powerlines.

Dryopteridaceae

Dryopteris carthusiana (Vill.) H.P. Fuchs—
spinulose wood fern.
D. spinulosa (O. F. Muell.) Watt
Occasional: moist deciduous forests, Central and
East Farms.
Dryopteris cristata (L.) A. Gray—crested wood
fern.
Infrequent: deciduous forests along Entomology
Road and Indian Creek swamp forest.

Dryopteris intermedia (Muhl. ex Willd.) A.
Gray—intermediate wood fern.
Occasional: deciduous forests, Central and East
Farms.
Polystichum acrostichoides (Michx.) Schott—
Christmas fern.
Common: moist forests.

Ophioglossaceae

Botrychium dissectum Spreng.—lace-frond
grape fern.
Occasional: open forests.

Botrychium virginianum (L.) Sw.—rattlesnake
fern.
Occasional: open forests.

List of the flora
Division Pinophyta—Gymnosperms
Pinaceae

Ophioglossum pycnostichum (Fernald) Å. Löve
& D. Löve —southeastern adder's-tongue.
Rare: local in deciduous forest at west end of
Bottomland Research Forest near Beaver Dam
Road.

Osmundaceae

Osmunda cinnamomea L.—cinnamon fern.
Occasional: moist forests and swamps.

Osmunda regalis L.—royal fern.
Occasional: wet forests and swamps.

Thelypteridaceae

Thelypteris noveboracensis (L.) Nieuwl.—New
York fern.
Dryopteris noveboracensis (L.) A. Gray
Common: moist forests.

Thelypteris palustris Schott var. **pubescens** (G.
Lawson) Fernald—marsh fern.
Dryopteris thelypteris (L.) A. Gray
Infrequent: forest, Beck Lake.

Woodsiaceae

Athyrium filix-femina (L.) Roth ex Mert. subsp.
asplenioides (Michx.) Hultén—southern lady
fern.
Occasional: rich forests.

Onoclea sensibilis L.—sensitive fern.
Common: forest edges, thickets.

Division Pinophyta—Gymnosperms

Cupressaceae

Juniperus virginiana L.—red cedar.
Common: roadsides, meadows, fields; seedlings
frequently invasive.

Pinaceae

Pinus echinata Mill.—yellow pine.
Rare: Coniferous Research Forest.
Pinus rigida Mill.—pitch pine.
Rare: Coniferous Research Forest.

Pinus taeda L.—loblolly pine.
Common: mixed forest.

List of the flora

Division Pinophyta—Gymnosperms

Pinaceae

Pinus virginiana Mill.—Virginia pine.

Common and abundant: forests; seedlings occur in early successional habitats.

Tsuga canadensis (L.) Carrière—hemlock.

Small hill in the southeastern corner of the Bottomland Research Forest, apparently escaped from cultivation.

Taxodiaceae

Taxodium distichum (L.) Rich.—bald cypress.

Planted: Research Road Mitigation Project near Beck Lake; old planting downstream from Beck Lake.

List of the flora

Class Magnoliopsida—Dicotyledons

Aceraceae

Division Magnoliophyta—Angiosperms

Class Magnoliopsida—Dicotyledons

Aceraceae

Acer negundo L.—box elder.

Occasional: lowland forests, edges, and as seedlings in meadows.

Acer rubrum L.—red maple.

Common and abundant: often dominant in riparian forests; invading meadows as seedlings.

Acer saccharinum L.—silver maple.

Infrequent: along stream, South Farm; around building, North Dairy Road; forest border, Central Farm.

Adoxaceae

Sambucus canadensis L.—common elderberry.

Occasional: forest margins, moist thickets.

Viburnum dentatum L. var. **dentatum**—arrow-wood.

Infrequent: lowland forests, South Farm; Bottomland Research Forest.

Viburnum dentatum L. var. **lucidum** Aiton—arrow-wood.

V. recognitum Fernald

Occasional: forests.

Viburnum dilatatum Thunb.—linden arrow-wood.

Infrequent: a cultivated species from China and Japan producing seedlings and locally frequent

in the forest by the pond at the end of Entomology Road; spreading southwestward in the forest along Entomology Road. One small tree also found along Beaver Dam Road, Bottomland Research Forest.

Viburnum lentago L.—nannyberry.

Rare: border of forest, Research Road, Central Farm. Identification tentative.

Viburnum nudum L.—possum-haw, withe-rod.

Infrequent: Indian Creek swamp forest; powerline swamps in the Deciduous Research Forest.

Viburnum prunifolium L.—black haw.

Occasional in forests.

Amaranthaceae

Amaranthus albus L.—tumble-weed.

Infrequent: weedy in cultivated and waste places.

Amaranthus blitum L.—purple amaranthus.

A. lividus L.

Infrequent: North Farm, Sellman Road meadow; weed plot.

Amaranthus hybridus L.—smooth pigweed.

Common: weedy in cultivated fields.

Amaranthus retroflexus L.—redroot pigweed.

Occasional: weedy in cultivated fields.

Amaranthus spinosus L.—spiny amaranth.

Occasional: weedy in fields and waste places.

List of the flora
Class Magnoliopsida—Dicotyledons
Apocynaceae

Anacardiaceae

Rhus copallina L.—dwarf sumac.

Common: forest edges, roadsides, open places.

Rhus glabra L.—smooth sumac.

Occasional: forest edges, stream banks.

Rhus typhina L.—staghorn sumac.

R. hirta (L.) Sudw., nom. rej. prop.

Occasional: forest edges, stream banks.

Toxicodendron radicans (L.) Kuntze—poison ivy.

Rhus radicans L.

Common and abundant: forests, meadows, and roadsides.

Toxicodendron vernix (L.) Kuntze—poison sumac.

Rhus vernix L.

Infrequent: Indian Creek swamp forest; Wetland Research Forest; Powerline Bog 2.

Apiaceae

Cicuta maculata L.—water-hemlock.

Infrequent: Indian Creek swamp forest and other wet places.

Cryptotaenia canadensis (L.) DC.—wild chervil.

Infrequent: lowlands, thickets; Indian Creek; Beaver Dam Creek at Soil Conservation Road, East Farm.

Daucus carota L.—Queen Anne's lace.

Occasional: fields, meadows and roadsides.

Hydrocotyle americana L.—American water pennywort.

Infrequent: Central Farm: lowland forests along branch of Beaver Dam Creek; forest at end of Entomology Road.

Osmorhiza longistylis (Torr.) DC.—sweet cicely.
Formerly present in forests; not seen in 1997–1999.

Oxypolis rigidior (L.) Raf.—stiff cowbane.

Rare: powerline swamp, Deciduous Research Forest.

Sanicula canadensis L.—black snakeroot.

Occasional: Indian Creek swamp forest; oak forest at South Farm; Beck Lake area.

Apocynaceae

Apocynum cannabinum L.—hemp dogbane.

Common: fields and meadows.

Vinca minor L.—common periwinkle.

Infrequent: escape from cultivation.

List of the flora
Class Magnoliopsida—Dicotyledons
Aquifoliaceae

Aquifoliaceae

Ilex laevigata (Pursh) A. Gray—smooth winterberry.
Rare: *E. H. Walker 1341*, 14 Sep 1930, Beltsville Bog (MARY).

Ilex opaca Aiton—American holly.
Common: forest understory.
Ilex verticillata (L.) A. Gray—winterberry.
Infrequent: lowland forests, South Farm;
Deciduous and Coniferous Research Forests.

Araliaceae

Aralia spinosa L.—Hercules'-club.
Rare: oak forest, South Farm.

Hedera helix L.—English ivy.
Occasional escape from cultivation.

Panax trifolius L.—dwarf ginseng.
Rare but locally frequent in Indian Creek swamp forest.

Asclepiadaceae

Asclepias incarnata L.—swamp milkweed.
A. incarnata L. var. *incarnata*
A. incarnata L. var. *pulchra* (Ehrh. ex Willd.) Pers.

Occasional: fields, meadows, and ditches;
planted in certain meadows.

Asclepias syriaca L.—common milkweed.
Common: roadsides, fields, and meadows.

Asclepias tuberosa L.—butterfly weed.
Infrequent to occasional: fields and meadows; a native species, but also planted in meadows on North and Central Farms.

Asclepias viridiflora Raf.—green milkweed.
Infrequent: meadows near National Agricultural Library and elsewhere.

Asteraceae

***Achillea filipendulina** Lam.—golden yarrow, fern-leaf yarrow.
Planted in meadows.

Achillea millefolium L.—yarrow.

Common: fields, meadows, and edges.

Ambrosia artemisiifolia L.—common ragweed.
Common: weedy in cultivated fields, meadows, and waste places.

Ambrosia trifida L.—great ragweed.

Occasional: weedy places in lowlands.

Antennaria neglecta Greene var. *neodioica* (Greene) Cronquist—field pussy-toes.
Occasional: meadows and fields.

Antennaria plantaginifolia (L.) Richardson (sens. lat.)—plantain-leaved pussy-toes.
Common: roadsides, fields, meadows and lawns.

Anthemis arvensis L.—corn chamomile.

Infrequent: cornfields and waste places; locally abundant in 1998 at South Farm.

Anthemis cotula L.—dog-fennel, stinking chamomile.

Occasional: cornfields and waste places.

Arctium minus (Hill) Bernh.—common burdock.
Occasional: cultivated fields, meadows, and waste places.

List of the flora
Class Magnoliopsida—Dicotyledons
Asteraceae

- Artemisia annua** L.—annual wormwood.
Rare: roadside weed, Central Farm.
- Artemisia vulgaris** L.—common mugwort, wormwood.
Common: cultivated fields and waste places.
- Aster:**
Synonyms provided by Robinson represent a more up-to-date taxonomic view, following Nesom (1994).
- Aster lanceolatus** Willd. subsp. **lanceolatus**—tall white aster.
Aster simplex Willd.
Symphyotrichum lanceolatum (Willd.) Nesom
Rare: Indian Creek swamp forest.
- Aster lateriflorus** (L.) Britton—calico aster.
Symphyotrichum lateriflorum (L.) Nesom
Infrequent: Indian Creek swamp forest; forest, South Farm; Poultry Road Unseeded Meadow.
- ***Aster novae-angliae** L.—New England aster.
Symphyotrichum novae-angliae (L.) Nesom
Planted: meadows on North and Central Farms.
- Aster patens** Aiton var. **patens**—late purple aster.
Symphyotrichum patens (Aiton) Nesom
Meadows near National Agricultural Library.
- Aster pilosus** Willd. var. **pilosus**—white oldfield aster.
Symphyotrichum pilosum (Willd.) Nesom
Common: meadows and fallow fields; planted in meadows on North and Central Farms.
- Aster puniceus** L.
Symphyotrichum puniceum (L.) Å. Löve & D. Löve
Rare: ditch at South Farm.
- Aster racemosus** Elliott—small-headed aster.
A. vimineus Lam.
Symphyotrichum racemosum (Elliott) Nesom
Common: forest edges, roadsides, meadows, fields.
- Bidens bipinnata** L.—Spanish needles.
Occasional: thickets, open places.
- Bidens discoidea** (Torr. & A. Gray) Britton—small beggars-ticks.
Rare: shore of Beck Lake.
- Bidens frondosa** L.—common beggars-ticks.
Occasional: weedy places, swamps.
- Bidens polylepis** S.F. Blake—tickseed beggars-ticks.
Common and abundant: forest edges, meadows, ditches and roadsides, occupying both moist and dry habitats. Also planted and proved attractive in meadows.
- Bidens tripartita** L. (sens. Brown and Brown, Radford et al.)—three-lobed beggars-ticks.
B. comosa (A. Gray) Wiegand
B. connata Muhl. ex Willd.
Infrequent: swamp along Beaver Dam Creek; Beck Lake shore.
- Carduus nutans** L.—musk thistle.
Infrequent: fields at Airport; Poultry Road Infield Meadow.
- ***Centaurea cyanus** L.—garden cornflower.
Planted: National Agricultural Library meadows and other meadows on Central Farm.
- Centaurea maculosa** Lam.—spotted knapweed.
Occasional: weedy places, roadsides; locally abundant at Airport.
- Chondrilla juncea** L.—skeleton-weed, gum succory.
Meadows near National Agricultural Library and North Farm.
- Chrysopsis mariana** (L.) Elliott—Maryland golden aster.
Occasional: roadsides, fields and meadows.
- Cichorium intybus** L.—chicory.
Common: roadsides, fields, and occasional in meadows.
- Cirsium arvense** (L.) Scop.—Canada thistle.
Occasional: noxious weed in cultivated fields, meadows, and roadsides, forming large stands.
- Cirsium discolor** (Muhl. ex Willd.) Spreng.—field thistle.
Occasional: fields and meadows.

List of the flora

Class Magnoliopsida—Dicotyledons

Asteraceae

Cirsium vulgare (Savi) Ten.—Bull thistle.

Occasional: fields and meadows.

Conoclinium coelestinum (L.) DC.—blue mistflower.

Eupatorium coelestinum L.

Occasional: meadows and ditches.

Conyza canadensis (L.) Cronquist—horseweed.

Common: weedy in cultivated and fallow fields and meadows.

***Coreopsis lanceolata** L.—lance-leaved coreopsis, longstalk tickseed.

Planted: meadows of West, Central, and Linkage Farms, where it is increasing.

***Coreopsis tinctoria** Nutt.—golden tickseed.

Planted: scattered meadows.

Coreopsis verticillata L.—whorled tickseed.

Infrequent: oak forest, South Farm; Deciduous Research Forest.

***Cosmos bipinnatus** Cav.—cosmos.

Planted in certain meadows.

***Echinacea purpurea** (L.) Moench—purple coneflower.

Planted: meadows on North, Linkage, Central, and East Farms.

Eclipta prostrata (L.) L.—yerba-de-tajo.

E. alba (L.) Hassk.

Occasional: weedy in disturbed soil.

Elephantopus carolinianus Raeusch.—leafy elephant's foot.

Occasional: Poultry Road meadows and oak savanna; *Eragrostis* Hill Meadow near National Agricultural Library; other meadows.

Erechtites hieraciifolia (L.) Raf. ex DC.—fireweed.

Common: weedy in cultivated fields and meadows.

Erigeron annuus (L.) Pers.—annual fleabane, whitetop.

Common: weedy in cultivated and fallow fields and meadows.

Erigeron philadelphicus L.—Philadelphia fleabane.

Occasional: cultivated and fallow fields and meadows.

Erigeron strigosus Muhl. ex Willd.—whitetop.

Common: weedy in cultivated and fallow fields and meadows.

Eupatorium altissimum L.

Infrequent: roadside, Powder Mill and Soil Conservation Service Roads, East Farm.

Eupatorium dubium Willd. ex Poir.—three-nerved joe-pye-weed.

Infrequent: ditch at South Farm; powerline bogs, Deciduous Research Forest.

Eupatorium fistulosum Barratt—hollow-stemmed joe-pye-weed.

Infrequent to occasional: Entomology Road; Beck Lake; North Farm along creek.

Eupatorium hyssopifolium L.—hyssop-leaved thoroughwort.

Common: along roadsides, increasing in meadows and waste places.

Eupatorium maculatum L.—spotted joe-pye-weed.

Rare: Indian Creek swamp forest.

Eupatorium perfoliatum L.—boneset.

Occasional: meadows and moist places.

Eupatorium pilosum Walter—vervain thoroughwort.

Rare: powerline bogs, Deciduous Research Forest.

Eupatorium purpureum L.—sweet-scented joe-pye-weed.

Occasional: meadows and woodland borders.

Eupatorium rotundifolium L.—round-leaved thoroughwort.

Infrequent: forest, South Farm; Springfield Road Meadow, East Farm.

Eupatorium serotinum Michx.—late-flowering thoroughwort.

Common: meadows and waste places; planted in Poultry Road meadows.

List of the flora
Class Magnoliopsida—Dicotyledons
Asteraceae

Euthamia graminifolia (L.) Nutt.—flat-topped goldenrod.

Solidago graminifolia (L.) Salisb.

Occasional: powerlines and meadows on North and Central Farms.

***Gaillardia pulchella** Foug.—blanket-flower.

Planted: meadows on Linkage and Central Farms.

Galinsoga parviflora Cav.—galinsoga.

Occasional: weedy in disturbed soil.

Gnaphalium obtusifolium L.—fragrant cudweed.

Occasional: roadsides, meadows, and fields; planted in meadows on North and Central Farms.

Gnaphalium uliginosum L.—low cudweed.

Infrequent: Beaver Dam powerline, and elsewhere on Central Farm.

Helianthus tuberosus L.—Jerusalem artichoke.

Infrequent: two sites along Paint Branch Creek, North Farm.

***Heterotheca subaxillaris** (Lam.) Britton & Rusby—camphor-weed.

Planted: National Agricultural Library meadows.

Hieracium caespitosum Dumort.—king devil.

H. pratense Tausch

Occasional: open places.

Hieracium gronovii L.—hawkweed.

Infrequent: meadows and fields.

Hieracium venosum L.—rattlesnake-weed, poor robin's plantain.

Infrequent: Bottomland Research Forest; oak forest, South Farm.

Hypochaeris radicata L.—cat's-ear.

Common: weedy in lawns and meadows.

Krigia dandelion (L.) Nutt.—potato dandelion.

Rare or infrequent: grassy area along Biocontrol Road near Beaver Dam Road, Central Farm.

Krigia virginica (L.) Willd.—dwarf dandelion.

Occasional: meadows, forest borders.

Lactuca canadensis L.—tall lettuce.

Infrequent: meadows and open places; Springfield Road Meadow, East Farm.

Lactuca floridana (L.) Gaertn.—Florida blue lettuce.

Infrequent: lowland thickets, bottomlands.

Lactuca saligna L.—willow-leaf lettuce.

Infrequent: weedy around buildings, Central Farm; in pavements, Entomology Road.

Lactuca serriola L.—prickly lettuce.

Lactuca scariola L.

Common: obnoxious weed along roadsides; has recently invaded meadows on North Farm.

***Leucanthemum maximum** (Ramond) DC.—Shasta daisy.

Chrysanthemum maximum Ramond

Planted: meadows on North and Central Farms, flowering abundantly.

Leucanthemum vulgare Lam.—oxeye daisy.

Chrysanthemum leucanthemum L.

Common: fields and meadows.

Liatris graminifolia (Walter) Willd.—grass-leaved blazing star.

Infrequent: roadside, Biocontrol Road, Central Farm; Deciduous Research Forest powerline; Springfield Road; planted in meadows on North Farm.

***Liatris pycnostachya** Michx.—thick-spiked blazing star.

Planted: meadows on North Farm and National Agricultural Library.

Matricaria matricarioides (Less.) Porter—pineapple weed.

Occasional: disturbed sites on Central Farm.

Mikania scandens (L.) Willd.—climbing hempvine.

Infrequent: Beaver Dam Creek swamp and Bottomland Research Forest.

Prenanthes serpentaria Pursh—lion's foot, gall of the earth.

Infrequent: Poultry Road savanna; Odell Road, Central Farm.

List of the flora

Class Magnoliopsida—Dicotyledons

Asteraceae

***Ratibida pinnata** (Vent.) Barnhart—globular coneflower.

Planted: National Agricultural Library meadow.

Rudbeckia hirta L. (sens. lat.)—black-eyed susan.

Occasional: roadsides and open places; planted in meadows on North, Central, and Linkage Farms.

Rudbeckia laciniata L.—wild golden glow.

Rare: along Little Paint Branch Creek, North Farm.

Senecio anonymus A.W. Wood—Small's ragwort.

S. smallii Britton

Infrequent: Springfield Road meadow, East Farm; Poultry Road oak savanna, Central Farm.

Senecio vulgaris L.—common groundsel.

Occasional: cultivated fields and waste places.

Solidago caesia L.—axillary goldenrod.

Infrequent: Poultry Road Unseeded Meadow; oak forest, South Farm; border of forests along Beaver Dam Road near west bridge.

Solidago canadensis L. var. *scabra* (Muhl.) Torr. & A. Gray—tall goldenrod.

S. altissima L.

Occasional to common: roadsides, meadows, fields.

Solidago erecta Pursh

Rare: forest border, South Farm.

Solidago juncea Aiton—early goldenrod.

Occasional: fields and meadows.

Solidago latissimifolia Mill.

S. elliotii Torr. & A. Gray

Rare: powerline bogs, Deciduous Research Forest.

Solidago nemoralis Aiton—gray goldenrod.

Occasional: fields, meadows.

Solidago puberula Nutt.—dusty goldenrod.

Occasional: Powerline Meadow; Oak Barren; Center Meadow; Deciduous Research Forest; Biocontrol Road; Airport.

Solidago rugosa Mill. (sens. lat.)—wrinkle-leaved goldenrod.

Occasional: fields and meadows; also planted in Poultry Road meadows; variable, some plants resembling subsp. *aspera* (Aiton) Cronquist.

Sonchus asper (L.) Hill—spiny-leaved sow-thistle.

Occasional: fallow fields and meadows.

Taraxacum officinale Weber ex F.H. Wigg.—dandelion.

Common and abundant weed: roadsides, fields and lawns.

Tragopogon dubius Scop.—fistulous goat's-beard.

T. major Jacq.

Infrequent: Airport meadow and other meadows.

Tragopogon pratensis L.—yellow or showy goat's-beard.

Rare: Fescue Meadow near National Agricultural Library.

Tussilago farfara L.—colt's-foot.

Common: along moist roadsides.

Verbesina alternifolia (L.) Britton ex Kearney—wingstem.

Rare: along Paint Branch Creek, South Farm.

Vernonia noveboracensis (L.) Michx.—New York ironweed.

Occasional: meadows and fields.

Xanthium strumarium L.—cocklebur.

Occasional: roadsides, cultivated and fallow fields.

Youngia japonica (L.) DC.

Crepis japonica (L.) Benth.

Rare: roadside, east end of Beaver Dam Road, Central Farm.

Balsaminaceae

Impatiens capensis Meerb.—jewelweed.

I. biflora Walter

Occasional: moist or wet lowlands.

Berberidaceae

Berberis thunbergii DC.—Japanese barberry.

Occasional: forests and their borders as an escape from cultivation.

Podophyllum peltatum L.—may-apple.

Occasional: deciduous forests and thickets.

Betulaceae

Alnus serrulata (Aiton) Willd.—alder.

Rare or infrequent: riparian habitats, Indian Creek swamp forest.

Betula nigra L.—river birch.

Common: riparian habitats and lowland forests.

Carpinus caroliniana Walter—American hornbeam.

Common: forests.

Corylus americana Marshall—American hazelnut.

Infrequent: lowland forests, Indian Creek swamp forest; Entomology Road forest.

Bignoniaceae

Campsis radicans (L.) Seem. ex Bureau—trumpet creeper.

Common: weedy places, fencerows, fields, meadows.

Catalpa bignonioides Walter—southern catalpa.

Occasional: forest edges.

Boraginaceae

Buglossoides arvensis (L.) I. M. Johnst.—corn gromwell.

Lithospermum arvense L.

Occasional: roadsides and cultivated fields.

Myosotis arvensis (L.) Hill—mouse-ear scorpion-grass.

Rare: grassy place, junction of Beaver Dam Road and Research Road, Central Farm.

Myosotis stricta Link ex Roem. & Schult.—blue scorpion-grass.

M. micrantha non Pall. ex Lehm.

Infrequent but locally abundant: cornfield, South Farm; edge of fields in Central Farm.

***Myosotis sylvatica** Ehrh. ex Hoffm.—woodland forget-me-not.

Planted: National Agricultural Library meadow.

List of the flora

Class Magnoliopsida—Dicotyledons

Brassicaceae

Brassicaceae

Alliaria petiolata (M. Bieb.) Cavara & Grande—garlic mustard.

A. officinalis Andr. ex M. Bieb.

Common: roadsides and open forests.

Arabidopsis thaliana (L.) Heynh.—mouse-ear cress.

Occasional: cultivated fields.

Barbarea verna (Mill.) Asch.—early wintercress.

Cornfield on South Farm; roadside, East Farm; may occur more frequently as there is a close resemblance to the following species.

Barbarea vulgaris R. Br.—wintercress, yellow rocket.

Common and abundant: weedy in cultivated fields and meadows.

Capsella bursa-pastoris (L.) Medik.—shepherd's purse.

Common weed in cultivated fields and disturbed places.

Cardamine concatenata (Michx.) Sw.—cut-leaved toothwort.

Dentaria laciniata Muhl. ex Willd.

Infrequent to occasional: Deciduous and

Bottomland Research Forests; Entomology Road and Poultry Road forests.

Cardamine hirsuta L.—hairy bitter cress.

Common: weedy in cultivated fields, lawns, meadows, disturbed soil.

Draba verna L.—whitlow-grass.

Common: weed in lawns and disturbed places.

Eruca sativa Mill.—garden rocket.

Upper Meadow of Building 011A, North Farm.

Erysimum asperum (Nutt.) DC.—plains wallflower.

Rare: edge of Farm Operations Building; parking lot near Log Lodge, Central Farm.

***Erysimum marshallii** (Hemfr.) Bois

Planted in meadows; received as *Cheiranthus allionii*, a confused name.

***Hesperis matronalis** L.—dame's rocket.

Planted: meadows near National Agricultural Library.

Lepidium campestre (L.) R. Br.—field cress.

Occasional: weedy places and edges of lawns.

Lepidium virginicum L.—poor-man's peppergrass.

Common: cornfields, meadows and forest edges.

Rorippa palustris (L.) Besser subsp. **palustris**—common yellow-cress.

R. islandica (Oeder) Borbas, misapplied.

Occasional: weedy in meadows, fields and along roadsides.

Sisymbrium officinale (L.) Scop.—hedge mustard.

Rare: weed around Building 192 complex on North Dairy Road, Central Farm.

Thlaspi arvense L.—field pennycress.

Occasional: weedy in moist open places.

Cabombaceae

Brasenia schreberi J.F. Gmel.—water shield.

Beck Lake; Entomology Road Pond and in other ponds.

List of the flora
Class Magnoliopsida—Dicotyledons
Caprifoliaceae

Callitrichaceae

Callitriche heterophylla Pursh—greater water-starwort.
Swampy area at entrance to Airport; Beaver Dam Creek at Soil Conservation Road, East Farm.

Callitriche stagnalis Scop.—pond water-starwort.
Indian Creek at Sunnyside Road.

Calycanthaceae

Calycanthus floridus L. var. **glaucus** (Willd.) Torr. & A. Gray—Carolina allspice.
Escaped from cultivation, Entomology Road.

Campanulaceae

Lobelia cardinalis L.—cardinal flower.
Occasional: wet places, especially along Beaver Dam Creek and Beaver Dam Creek swamp; planted in Entomology Road meadow.

Lobelia inflata L.—Indian tobacco.

Common: meadows, fields, open forests.

Lobelia puberula Michx.—downy lobelia.

Infrequent: powerline in the Entomology Road area; Springfield Road Meadow; Airport.

***Lobelia siphilitica** L.—great blue lobelia.
Planted: Springfield Road and Poultry Road meadows; native, but not found on BARC in native habitats.

Triodanis perfoliata (L.) Nieuwl.—Venus's looking-glass.

Specularia perfoliata (L.) A. DC.

Occasional: open places and in early succession in meadows.

Cannabaceae

Humulus lupulus L. var. **pubescens** E. Small—hop.
Rare: bank of Little Paint Branch, North Farm.

Caprifoliaceae

Lonicera fragrantissima Lindl. & Paxton
Escape from cultivation near Building 476, Central Farm.

Lonicera japonica Thunb.—Japanese honeysuckle.

Common and abundant: ubiquitous invasive weed in various habitats.

Lonicera maackii (Rupr.) Maxim.—Maack's honeysuckle.

Common: cultivated and naturalized mainly along forest margins.

List of the flora

Class Magnoliopsida—Dicotyledons

Caprifoliaceae

Lonicera morrowii A. Gray—hairy-leaved honeysuckle.

Common: cultivated and naturalized mainly along forest margins.

Lonicera tatarica L.—Tartarian honeysuckle.
Established at edge of forest west of Building 011A, North Farm.

Caryophyllaceae

Arenaria serpyllifolia L.—broad-leaf sandwort.
Occasional: weedy in disturbed soil.

Cerastium fontanum Baumg. subsp. **vulgare** (Hartm.) Greuter & Burdet—mouse-ear chickweed.

C. vulgatum L., misapplied

C. holosteoides Fries

Common: weedy in cultivated and disturbed places.

Cerastium glomeratum Thuill.—clammy mouse-ear chickweed.

C. viscosum L.

Common: weedy in disturbed soil in open places.

Dianthus armeria L.—Deptford pink.

Common: grassy areas and meadows.

***Dianthus barbatus** L.—sweet william.
Planted in National Agricultural Library meadows.

***Gypsophila muralis** L.—cushion baby's breath.
Planted in National Agricultural Library meadows.

Saponaria officinalis L.—soapwort.

Rare: bank of Little Paint Branch, North Farm.

Scleranthus annuus L.—knawel.

Common: weedy in disturbed soil in lawns and meadows.

Silene antirrhina L.—sleepy catchfly.

Rare: weedy field at Airport.

***Silene armeria** L.—sweet william catchfly.

Planted: in meadows, persisting and escaping.

Silene latifolia Poir. subsp. **alba** (Mill.) Greuter & Burdet—white campion.

Lychnis alba Mill.

Occasional: roadsides and fields.

Spergula arvensis L.—corn spurrey.

Rare: meadow near National Agricultural Library.

Spergularia rubra (L.) J. Presl & C. Presl—sand-spurrey.

Rare: weed in cultivated fields at South Farm (*Terrell & Winters s.n.*, 13 Jun 1975, MARY).
Not seen in recent years.

Stellaria aquatica (L.) Scop.—giant chickweed.

Rare: forest border, east end of Bottomland Research Forest.

Stellaria graminea L.—common stitchwort.

Infrequent: meadows.

Stellaria media (L.) Vill. (sens. lat.)—chickweed.

Common and abundant weed in open and grassy places.

Celastraceae

Celastrus orbiculatus Thunb.—Oriental bittersweet.

Infrequent to occasional, sometimes locally abundant: climbing on vegetation, South and Central Farms.

Euonymus alatus (Thunb.) Siebold—winged euonymus.

Infrequent: naturalized, established along forest margins on Entomology Road; vicinity of waste-water treatment area, Central Farm.

List of the flora
Class Magnoliopsida—Dicotyledons
Clusiaceae

Euonymus americanus L.—strawberry bush.
Occasional: forests, especially on Central Farm.

Euonymus europaeus L.—European spindle-tree.
Entomology Road area, where possibly planted.

Chenopodiaceae

Atriplex patula L.—halberdleaf orach, spearscale.
Infrequent: weed in cultivated plots at North Farm; pavements, waste-water treatment area, Central Farm.

Chenopodium album L.—lamb's-quarter.
Common: weed on disturbed soil, growing to 2.5 m in Sellman Road Compost Meadow.

Chenopodium ambrosioides L.—epazote, wormseed.

Occasional: weedy places.

Chenopodium leptophyllum (Moq.) S.
Watson—narrow-leaf goosefoot.

Infrequent: Central Farm: weedy around Building 192 complex, North Dairy Road; waste-water treatment area.

Cistaceae

Helianthemum canadense (L.) Michx.—frostweed.
Infrequent: Coniferous Research Forest, Deciduous Research Forest powerline, and edges of forests in Entomology Road area.

Lechea minor L.—thyme-leaf pinweed.
Occasional: open places, margins of forests.

Lechea pulchella Raf.—Leggett's pinweed.
L. leggettii Britton & Hollick
Infrequent: Deciduous Research Forest under powerline; Powerline Meadow, Central Farm.

Clethraceae

Clethra alnifolia L.—sweet pepper bush.
Common: bottomland and swamp forests.

Clusiaceae

Hypericum canadense L.
Occasional: moist places under powerlines at Central and East Farms.
Hypericum gentianoides (L.) Britton, Sterns, & Poggenb.—pineweed.
Infrequent: under powerlines and in meadows.

Hypericum hypericoides (L.) Crantz—St. Andrew's cross.
Ascyrum hypericoides L.
Occasional: meadows and along powerlines.

List of the flora

Class Magnoliopsida—Dicotyledons

Clusiaceae

Hypericum mutilum L.—dwarf St. Johnswort.
Infrequent: powerlines, moist or wet fields,
meadows and forests.

Hypericum perforatum L.—common St.
Johnswort.

Common: weedy in fields and waste places.

Hypericum punctatum Lam.—spotted St.
Johnswort.

Occasional: weedy in fields and waste places.

Triadenum virginicum (L.) Raf.—marsh St.
Johnswort.

Hypericum virginicum L.

Infrequent: wet places, Beck Lake and
elsewhere.

Convolvulaceae

Calystegia sepium (L.) R. Br.—hedge bindweed.
Occasional: cultivated fields, stream banks.

Ipomoea coccinea L.—redstar.
Rare: cultivated plot, South Farm.

Ipomoea hederacea Jacq.—ivy-leaved morning-
glory.

Occasional: weedy in waste places.

Ipomoea lacunosa L.—white morning-glory.

Infrequent: along railroad, Sunnyside Road;
roadside, Springfield Road, East Farm.

Ipomoea pandurata (L.) G. Mey.—wild potato-
vine.

Infrequent: meadows and fields; Secret Meadow,
Central Farm; Deciduous Research Forest.

Cornaceae

Cornus amomum Mill.—knob-styled dogwood.
Infrequent: ditch, South Farm; Indian Creek
swamp forest.

Cornus florida L.—dogwood.

Common: forest understory.

Cuscutaceae

Cuscuta compacta Juss. ex Choisy—compact
dodder.

Infrequent: Beck Lake shoreline; meadows.

Cuscuta gronovii Willd. ex Schult.—dodder.

Infrequent: Bottomland Deciduous Forest and
Beaver Dam swamp.

Dipsacaceae

Dipsacus fullonum L. subsp. **fullonum**—Fuller's
teasel.

Rare: weedy places near Building 454, Central
Farm.

Dipsacus fullonum subsp. **sylvestris** (Huds.)
Clapham—teasel.

Infrequent: weedy places around buildings and
along ditches.

Ebenaceae

- Diospyros virginiana** L.—persimmon.
Occasional: forests, edges, and roadsides.
-

Elaeagnaceae

- Elaeagnus angustifolia** L.—oleaster, Russian olive.
Occasional: roadsides and forest borders.
-

Ericaceae

The treatment of this family follows Luteyn et al. (1996).

- Epigaea repens** L.—trailing arbutus.
Occasional: stream banks, under powerlines, and in forests.
- Gaultheria procumbens** L.—wintergreen.
Rare: Deciduous Research Forest. Not seen in recent years.
- Gaylussacia baccata** (Wangenh.) K. Koch—black huckleberry.
Common: forests.
- Gaylussacia dumosa** (Andrews) Torr. & A.
Gray—dwarf huckleberry.
Occasional: forests.
- Gaylussacia frondosa** (L.) Torr. & A. Gray—blue huckleberry, dangleberry.
Common: forests.
- Kalmia angustifolia** L.—sheep laurel.
Rare: sandy places under powerline near bogs, Deciduous Research Forest.
- Kalmia latifolia** L.—mountain laurel.
Occasional: forests.
- Leucothoe racemosa** (L.) A. Gray—fetterbush.
Infrequent: Coniferous Research Forest;
Entomology Road forests near pond.

- Lyonia ligustrina** (L.) DC.—male-berry.
Infrequent: Coniferous Research Forest; north shore of Beck Lake; Airport.
- Lyonia mariana** (L.) D. Don—staggerbush.
Infrequent: Coniferous Research Forest near Beck Lake; north of Beaver Dam Road near Springfield Road.
- Rhododendron periclymenoides** (Michx.) Shinn—wild azalea, pinxter-flower.
R. nudiflorum (L.) Torr., nom. illeg.
Occasional: forests and along their borders.
- Rhododendron viscosum** (L.) Torr.—swamp azalea.
Infrequent: moist or swampy forests and their borders.
- Vaccinium corymbosum** L.—highbush blueberry.
V. atrococcum (A. Gray) A. Heller
V. fuscatum Aiton, sens. Luteyn et al. 1996
Common: forests and their borders.
- Vaccinium pallidum** Aiton—low blueberry.
V. vacillans Aiton
Occasional: forests.
- Vaccinium stamineum** L.—deerberry.
Occasional: forests.
-

List of the flora
Class Magnoliopsida—Dicotyledons
Euphorbiaceae

Euphorbiaceae

- Acalypha gracilens** A. Gray—short-stalk copperleaf.
Occasional: meadows and fields, especially Poultry Road and National Agricultural Library areas.
- Acalypha rhomboidea** Raf.—rhombic copperleaf.
Occasional: meadows and fields, as noted for preceding.
- Acalypha virginica** L.—Virginia three-seed-mercury.
Infrequent: meadows as noted for preceding.
- Chamaesyce maculata** (L.) Small—spotted spurge.
Euphorbia maculata L.
E. supina Raf.
Occasional: weed in waste places.

- Chamaesyce nutans** (Lag.) Small
Euphorbia nutans Lag.
E. preslii Guss.
Occasional: weed in waste places.
- Croton glandulosus** L.—tooth-leaved croton.
Infrequent: along railroad, Sunnyside Road; meadows near National Agricultural Library.
- Euphorbia corollata** L.—flowering spurge.
Common: fields, meadows, and along roadsides.
- Euphorbia ipecacuanhae** L.—wild ipecac.
Rare: National Agricultural Library meadows.
- Phyllanthus caroliniensis** Walter
Rare: meadow near Building 011A, North Farm.

Fabaceae

- Albizia julibrissin** Durazz.—mimosa, silk tree.
Occasional: escaping from cultivation.
- ***Amorpha canescens** Pursh—lead-plank.
Planted and persisting in Poultry Road Meadow; failed to persist in Building 011A meadow, North Farm.
- Amorpha fruticosa** L.—indigo bush.
Rare: under powerline, Deciduous Research Forest.
- Amphicarpaea bracteata** (L.) Fernald—hog peanut.
Infrequent: lowland forest, Bottomland Research Forest; Entomology Road forest.
- Apios americana** Medik.—groundnut.
Infrequent: moist places, stream banks, East Farm.
- Baptisia tinctoria** (L.) R. Br.—false indigo.
Infrequent: Odell Road west; Deciduous Research Forest.
- Cercis canadensis** L.—redbud.
Rare: one tree by duckweed pond, SE of Log Lodge, Central Farm.
- Chamaecrista fasciculata** (Michx.) Greene—large-flowered partridge-pea.
Cassia fasciculata Michx.
Occasional: meadows.
- Chamaecrista nictitans** (L.) Moench—small-flowered partridge-pea.
Rare to infrequent: border of Deciduous Research Forest; Beaver Dam Road, Central Farm.
- Coronilla varia** L.—crown vetch.
Occasional: escaping from cultivation.
- Crotalaria sagittalis** L.—rattlebox.
Rare: Springfield Road Meadow, East Farm.

List of the flora
Class Magnoliopsida—Dicotyledons
Fabaceae

***Dalea purpurea** Vent.—purple prairie-clover.
Petalostemon purpureus (Vent.) Rydb.
 Planted in meadows.

Desmodium ciliare (Muhl. ex Willd.) DC.—hairy
 small-leaved tick-trefoil.

Rare: oak savanna, Poultry Road.

Desmodium nudiflorum (L.) DC.—naked-
 flowered tick-trefoil.

Rare: forest at end of Entomology Road
 (recorded in 1976). Not seen in later years.

Desmodium paniculatum (L.) DC.—panicked
 tick-trefoil.

Infrequent: thicket, Research Road; elsewhere
 on East Farm.

Kummerowia stipulacea (Maxim.) Makino—
 Korean lespedeza.

Lespedeza stipulacea Maxim.

Occasional: weedy places, lawns, around
 sidewalks.

Kummerowia striata (Thunb.) Schindl.—
 Japanese lespedeza.

Lespedeza striata (Thunb.) Hook. & Arn.

Common: weedy places, lawns, around
 sidewalks.

Lespedeza bicolor Turcz.—shrubby lespedeza.

Field on NASA land, adjacent to Coniferous
 Research Forest; perhaps planted.

Lespedeza cuneata (Dum. Cours.) G. Don—
 sericea lespedeza, Chinese bush-clover.

Common and abundant: roadsides, fields,
 meadows.

Lespedeza hirta (L.) Hornem.—hairy bush-
 clover.

Rare: open places, Deciduous Research Forest;
 not seen in recent years.

Lespedeza procumbens Michx.—trailing bush-
 clover.

Rare: Secret Meadow, end of Poultry Road,
 Central Farm.

Lespedeza repens (L.) W.P.C. Barton—creeping
 bush-clover.

Infrequent: Oak Barren North and Center,
 Central Farm; Deciduous Research Forest.

Lespedeza virginica (L.) Britton—slender bush-
 clover.

Occasional: roadsides, fields; Airport; near
 National Agricultural Library; Deciduous
 Research Forest.

Lotus corniculatus L.—bird's-foot trefoil.

Occasional: grassy places, escape from
 cultivation.

Lupinus perennis L.—wild lupine.

Rare: formerly west edge of Coniferous
 Research Forest; not seen in recent years.

Medicago sativa L.—alfalfa.

Occasional: escape in cultivated fields and
 meadows.

Melilotus albus Medik.—white sweet-clover.

Occasional: meadows and waste places.

Melilotus officinalis Lam.—yellow sweet-clover.

Occasional: meadows and waste places.

Robinia pseudoacacia L.—black locust.

Common: roadsides and borders of forests.

Senna hebecarpa (Fernald) H.S. Irwin &
 Barneby—wild senna.

Cassia hebecarpa Fernald

Rare: Beaver Dam Creek swamp; planted in
 meadows on North, Linkage and Central
 Farms.

Strophostyles helvula (L.) Elliott—annual
 woolly-bean.

Rare to infrequent: meadows.

Tephrosia virginiana (L.) Pers.—goat's rue.

Rare to infrequent: sandy places under
 powerline, Deciduous Research Forest;
 formerly seen in Coniferous Research Forest.

Trifolium arvense L.—rabbit-foot clover.

Infrequent: National Agricultural Library
 meadows; waste-water treatment area, Central
 Farm.

Trifolium campestre Schreb.—low hop-clover.

Common: edges of forests, powerlines, and
 meadows.

List of the flora

Class Magnoliopsida—Dicotyledons

Fabaceae

Trifolium dubium Sibth.—low hop-clover.

Infrequent to occasional: meadows and weedy places.

Trifolium hybridum L.—alsike clover.

Occasional: meadows.

Trifolium incarnatum L.—crimson clover.

Infrequent: escape in cultivated fields.

Trifolium medium L.—zigzag clover.

Rare: woodlot, Springfield Road, East Farm.

Trifolium pratense L.—red clover.

Common: fields, roadsides, and meadows.

Trifolium repens L.—white clover.

Common: lawns, pastures, and meadows.

Vicia grandiflora Scop.—bigflower vetch.

Rare: roadside near National Agricultural Library.

Vicia sativa L. subsp. **nigra** (L.) Ehrh.—narrow-leaved vetch.

Vicia angustifolia L.

Common: meadows, roadsides, and cultivated fields.

Vicia tetrasperma (L.) Schreb.—four-seeded vetch.

Occasional: meadows.

Vicia villosa Roth—hairy vetch.

Occasional: cultivated fields and meadows.

Vicia villosa Roth subsp. **varia** (Host) Corb.—hairy-fruit winter vetch.

Vicia dasycarpa Ten.

Climbing on fence near Dairy area, Central Farm.

Fagaceae

Castanea dentata (Marshall) Borkh.—American chestnut.

Infrequent: mixed forests, persisting only as sprouts and saplings.

Castanea pumila (L.) Mill.—chinquapin.

Infrequent to occasional: forest and their borders.

Fagus grandifolia Ehrh.—American beech.

Common: forests.

Quercus—oaks.

Some trees appear to be hybrids among *Q. marilandica*, *Q. falcata*, or other species. Trees with leaves resembling *Q. lyrata* may be hybrids involving *Q. stellata*.

Quercus acutissima Carruth.—saw-tooth oak.

Planted near National Agricultural Library and producing seedlings in meadows.

Quercus alba L.—white oak.

Common and abundant: a dominant forest tree and the dominant oak in the oak savannas.

Quercus bicolor Willd.—swamp white oak.

Infrequent: Deciduous Research Forest, along small stream, East Farm; one very large tree, oak savanna, Poultry Road; Indian Creek swamp forest.

Quercus coccinea Munchh.—scarlet oak.

Infrequent: forests; large trees on Central Farm.

Quercus falcata Michx.—southern red oak, Spanish oak.

Occasional to common: forests and edges.

Quercus imbricaria Michx.—shingle oak.

Infrequent: border of Coniferous Research Forest; Research Road, Central Farm.

Quercus marilandica Munchh.—blackjack oak.

Infrequent to occasional: forest borders and thickets.

Quercus michauxii Nutt.—swamp chestnut oak.

Rare: forest north of former Food and Drug Admin. (FDA) complex, Central Farm.

List of the flora
Class Magnoliopsida—Dicotyledons
Grossulariaceae

Quercus montana Willd.—chestnut oak.

Quercus prinus L., nom. ambig.

Occasional to common: dry forests; locally abundant in former FDA complex, Central Farm.

Quercus palustris Munchh.—pin oak.

Common: poorly drained forests; sometimes planted.

Quercus phellos L.—willow oak.

Common: poorly-drained forests; sometimes planted.

Quercus rubra L.—northern red oak.

Common: rich forests.

Quercus stellata Wangenh.—post oak.

Infrequent to occasional: forests and savannas.

Quercus velutina Lam.—black oak.

Occasional: forests.

Gentianaceae

Bartonia paniculata (Michx.) Muhl.—screwstem.

Rare: Powerline Bog 2, Deciduous Research Forest.

Bartonia virginica (L.) Britton, Sterns & Poggenb.—yellow screwstem.

Rare to infrequent: powerline swamps in the Deciduous Research Forest; formerly in boggy places at Airport.

Sabatia angularis (L.) Pursh—marsh pink.

Rare: Secret Meadow, Poultry Road.

Geraniaceae

Erodium cicutarium (L.) L'Hér.—filaree.

Common and locally abundant: cultivated fields, lawns and meadows.

Geranium carolinianum L. var. **confertiflorum** Fernald—Carolina cranesbill.

Common: lawns and open places.

Geranium maculatum L.—spotted geranium.

Infrequent: moist forests, Entomology Road near pond; forest, Research Road, Central Farm.

Geranium molle L.—dove-foot cranesbill.

Infrequent: around buildings, roadsides; waste-water areas, Central Farm.

Geranium pusillum L.—small-flower cranesbill.

Rare to infrequent: around buildings North Dairy Road, Central Farm.

Grossulariaceae

Ribes cynosbati L.—prickly gooseberry.

Rare: Indian Creek swamp forest, south of Sunnyside Road.

List of the flora
Class Magnoliopsida—Dicotyledons
Haloragaceae

Haloragaceae

Myriophyllum aquaticum (Vell.) Verdc.—
parrot's feather.
Infrequent: Entomology Road Pond; Beck Lake.

Hamamelidaceae

Hamamelis virginiana L.—witch-hazel.
Rare: Entomology Road forest. Not seen in
1997, 1998.

Liquidambar styraciflua L.—sweet gum.
Common: dominant tree in poorly drained areas;
seedlings invade meadows.

Hydrangeaceae

Philadelphus coronarius L.—mock orange.
Ornamental species established along gravel
road paralleling Beaver Dam Creek, Research
Road, Central Farm.

Juglandaceae

Carya glabra (Mill.) Sweet—pignut hickory.
Infrequent to occasional: Bottomland Research
Forest; Entomology Road forest, Central Farm;
savannas.
Carya ovalis (Wang.) Sarg.—sweet pignut.
Large tree behind building on Poultry Road,
Central Farm.

Carya tomentosa (Poir.) Nutt.—mockernut
hickory.
C. alba (L.) Nutt., nom. ambig.
Occasional: Deciduous Research Forest; forest
along Entomology Road; adjacent to oak
savanna, Poultry Road.
Juglans nigra L.—black walnut.
Occasional: woodland and margins of forests.

Lamiaceae

Ajuga reptans L.—creeping bugleweed.
Escape from cultivation in forest near
greenhouses, end of Entomology Road.
Clinopodium vulgare L.—wild basil.
Satureja vulgaris (L.) Fritsch
Rare: Beaver Dam Creek swamp, Central Farm.

Glechoma hederacea L.—gill-over-the-ground,
ground ivy.
Common and abundant: weedy in open places.
Hedeoma pulegioides (L.) Pers.—American
pennyroyal.
Rare: Poultry Road oak savanna.

List of the flora
Class Magnoliopsida—Dicotyledons
Lauraceae

Lamium amplexicaule L.—henbit.

Common: weedy in cultivated fields, lawns and waste places.

Lamium purpureum L.—purple dead-nettle.

Common and abundant: weedy in cultivated fields, lawns and waste places.

Leonurus cardiaca L.—common motherwort.

Infrequent to occasional: edges of fields and margins of forests.

Lycopus uniflorus Michx.—northern water-horehound.

Rare: Beck Lake border.

Lycopus virginicus L.—water-horehound.

Occasional: moist or wet meadows.

Mentha × citrata Ehrh.—lemon mint.

Rare: in ditch, North Farm.

Mentha spicata L.—spearmint.

Infrequent: roadsides, N. Dairy Road; FDA complex, Central Farm.

***Monarda citriodora** Cerv. ex Lag. (sens. lat.)—lemon beebalm.

Planted: National Agricultural Library meadows.

***Monarda didyma** L.—scarlet beebalm.

Planted: North Farm meadow.

Monarda punctata L.—horsemint.

Infrequent: forest border on Research Road; roadside on Springfield Road. Planted: Poultry Road and Springfield Road meadows.

Perilla frutescens (L.) Britton—perilla.

Occasional: edges of cultivated fields, meadows and along powerlines.

Prunella vulgaris L.—selfheal, heal-all.

Common: open places, forests.

***Pycnanthemum muticum** (Michx.) Pers.—

Clustered mountain-mint.

Planted: meadows on North and Central Farms.

Pycnanthemum tenuifolium Schrader—narrow-leaved mountain-mint.

Occasional: roadsides, powerlines, and meadows; also planted in certain meadows.

Salvia lyrata L.—lyre-leaf sage.

Occasional: meadows, fields, under powerlines.

Scutellaria elliptica Muhl. ex Spreng.—hairy skullcap.

Rare: oak savanna, Poultry Road.

Scutellaria integrifolia L.—large skullcap.

Infrequent: Poultry Road savanna; Oak Barren

Meadow: Powerline Meadow and Secret Meadow, Central Farm.

Scutellaria lateriflora L.—blue skullcap.

Infrequent: Beaver Dam Creek swamp;

Deciduous Research Forest.

Trichostema dichotomum L.—blue curls.

Infrequent: meadows, Airport; under powerlines.

Lauraceae

Lindera benzoin (L.) Blume—spice bush.

Common and abundant: bottomland forests.

Sassafras albidum (Nutt.) Nees—sassafras.

Common: forests, hedgerows, and edges.

List of the flora
Class Magnoliopsida—Dicotyledons
Lentibulariaceae

Lentibulariaceae

Utricularia gibba L.—creeping bladderwort.
Margin of Beck Lake.

Utricularia subulata L.—zigzag bladderwort.
Rare: In mud, Powerline Bog 1, Deciduous
Research Forest.

Utricularia vulgaris L.—common bladderwort.
Shallow water, north side of Beck Lake.

Linaceae

***Linum lewisii** Pursh—prairie flax.
Planted: meadows on North Farm.

Linum striatum Walter—ridged yellow flax.
Infrequent: open places; Beaver Dam Powerline
Meadow; edge of Deciduous Research Forest.

Magnoliaceae

Liriodendron tulipifera L.—tulip tree.
Common and abundant: important forest tree.

Magnolia acuminata L.—cucumber tree.
Rare: forest along stream, Springfield Road, U.
S. Department of State, formerly USDA land.

Magnolia virginiana L.—sweetbay magnolia.
Occasional: Coniferous, Deciduous and Wetland
Research Forests; vicinity Beaver Dam Creek,
Central Farm; Indian Creek swamp forest.

Malvaceae

Abutilon theophrasti Medik.—velvetleaf.
Occasional: weedy in cultivated fields and other
open places.

Hibiscus moscheutos L.—Rose mallow.
H. palustris L.
Infrequent: North Farm: bank of Little Paint
Creek; swamp near Beltway (I-495).

Hibiscus syriacus L.—Rose of Sharon.
Along Beaver Dam Creek, Central Farm,
escaped or planted.

Malva neglecta Wallr.—cheeses, common
mallow.
Occasional: weedy in waste places.

Melastomataceae

Rhexia mariana L.—Maryland meadow beauty.
Occasional: wet or moist meadows, often under
powerlines.

Rhexia virginica L.—meadow beauty.
Occasional: wet or moist meadows, often under
powerlines.

List of the flora
Class Magnoliopsida—Dicotyledons
Oleaceae

Molluginaceae

Mollugo verticillata L.—carpetweed.

Occasional: weedy in cultivated fields and waste places.

Monotropaceae

Monotropa hypopithys L.—pinesap.

Rare: rich forests of the Patuxent Wildlife Research Center (former BARC land) on the southeastern edge of the Airport (*Broome 1423*, MARY).

Monotropa uniflora L.—Indian pipe.

Infrequent: near Beck Lake; Entomology Road forest.

Moraceae

Maclura pomifera (Raf.) C.K. Schneid.—osage orange.

Infrequent: thickets, borders, Deciduous Research Forest in 1983; waste-water treatment area in 1999.

Morus alba L.—white mulberry.

Common: forests, meadows and cultivated fields.

Morus rubra L.—red mulberry.

Occasional: forests.

Nymphaeaceae

Nuphar advena (Aiton) W.T. Aiton—spatter dock, yellow pond-lily.

Beck Lake and other ponds.

Nymphaea odorata Aiton—fragrant water-lily.

Beck Lake (f. *rubra* (E. Guillon) Conard) and other ponds, where the white form predominates.

Nyssaceae

Nyssa sylvatica Marshall—black gum.

Common: forests.

Oleaceae

Chionanthus virginicus L.—fringe tree.

Infrequent: Indian Creek swamp forest; Entomology Road forest.

Fraxinus americana L.—white ash.

Occasional to common: forests.

List of the flora

Class Magnoliopsida—Dicotyledons

Oleaceae

Fraxinus pennsylvanica Marshall—red ash.

Rare: bottomland in waste-water treatment area,
Central Farm.

Ligustrum obtusifolium Siebold & Zucc.—
border privet.

Escaped from cultivation; two collections from
Central Farm: Poultry Road; FDA complex.

Ligustrum quihoui Carrière

Escaped from cultivation; two collections from
Central Farm: Poultry Road; Entomology
Road.

Onagraceae

Circaea lutetiana L. subsp. **canadensis** (L.)

Asch. & Magnus—enchanter's nightshade.

Occasional: forests.

Epilobium coloratum Biehler—eastern willow-
herb.

Infrequent: wet meadows.

Ludwigia alternifolia L.—seedbox.

Infrequent: moist places; Springfield Road
Meadow.

Ludwigia palustris (L.) Elliott—water purslane.

Occasional: wet places.

Oenothera biennis L. var. **biennis**—evening
primrose.

Common: weedy in waste places.

Oenothera fruticosa L.—narrow-leaved
sundrops.

Infrequent: swampy areas near Beck Lake;
Secret Meadow, Poultry Road.

Oxalidaceae

Oxalis—wood-sorrel.

Treatments of the yellow species differ widely.

Here we follow “Flora Europaea” (Young
1968). *Oxalis europaea* Jordan is expected to
occur here, but existing specimens were
identified as *O. stricta*.

Oxalis grandis Small—great yellow wood-sorrel.

Rare: Airport bog.

Oxalis stricta L.—upright wood-sorrel.

Oxalis dillenii Jacq.

Common: fields, meadows, open forests.

Oxalis violacea L.—violet wood-sorrel.

Infrequent to occasional: forests and open
places.

Papaveraceae

Corydalis flavula (Raf.) DC.—pale corydalis.

Rare: border of forest along Beaver Dam Creek
east of Research Road, Central Farm.

***Eschscholzia californica** Cham.—California
poppy.

Planted in National Agricultural Library
meadows.

***Papaver nudicaule** L.—Iceland poppy.

Planted in National Agricultural Library
meadows

List of the flora
Class Magnoliopsida—Dicotyledons
Polygalaceae

***Papaver rhoeas** L.—corn poppy.
Planted in National Agricultural Library
meadows.

Sanguinaria canadensis L.—bloodroot.
Infrequent: Central Farm: forest at NW end of
Beaver Dam Road; along Beaver Dam Creek,
Research Road.

Phytolaccaceae

Phytolacca americana L.—pokeweed.
Common: weedy in cultivated fields and
meadows.

Plantaginaceae

Plantago aristata Michx.—bracted plantain.
Occasional: poor sandy soils of lawns and
meadows.

Plantago lanceolata L.—buck plantain.
Common and abundant: weedy in fields,
meadows, and lawns.

Plantago major L.—common plantain.
Weedy in cultivated fields, meadows, and lawns.
Plantago rugelii Decne.—Rugel's plantain.
Weedy in cultivated fields, meadows, and lawns.
Plantago virginica L.—hoary plantain.
Occasional: cultivated fields and waste places.

Platanaceae

Platanus occidentalis L.—sycamore.
Common: bottomland forests.

Polemoniaceae

***Phlox maculata** L.—meadow phlox.
Planted: National Agricultural Library meadow.

Phlox paniculata L.
Escaped from cultivation on Powder Mill Road.

Polygalaceae

Polygala curtissii A. Gray—Curtiss's milkwort.
Occasional: meadows, open poorly drained
places and under powerlines, Central and East
Farms.

Polygala lutea L.—orange milkwort.
Rare: Airport bog; not seen recently.

List of the flora

Class Magnoliopsida—Dicotyledons

Polygalaceae

Polygala mariana Mill.—Maryland milkwort.
Infrequent: meadows, open poorly drained
places and under powerlines in Central and
East Farms.

Polygala nuttallii Torr. & A. Gray—Nuttall's
milkwort.
Rare: under powerline, Deciduous Research
Forest.

Polygonaceae

Polygonum arenastrum Jordan ex Boreau—
oval-leaf knotweed.
Weedy around buildings, North Dairy Road,
Central Farm; Springfield Road Meadow, East
Farm.

Polygonum arifolium L.—halberd-leaved
tearthumb.
Occasional: wet places.

Polygonum aviculare L.—prostrate knotweed.
Weedy in lawns, cultivated fields, and meadows.

Polygonum bellardii All.—narrowleaf knotweed.
P. neglectum Besser
Cultivated field, Central Farm.

Polygonum cespitosum Blume—Oriental lady's
thumb.
Common: weedy in forests and open places.

Polygonum cuspidatum Siebold & Zucc.—
Japanese knotweed.
Occasional: roadsides.

Polygonum hydropiper L.
Rare: moist or wet places, Deciduous Research
Forest at west end of power line.

Polygonum hydropiperoides Michx.—swamp
smartweed.
Occasional: wet places.

Polygonum lapathifolium L.
Rare: border of waste-water treatment pond,
Central Farm.

Polygonum pensylvanicum L.—Pennsylvania
smartweed.
Occasional: wet places.

Polygonum perfoliatum L.—mile-a-minute
weed.

Common and abundant: pernicious weed in
edges, meadows, fields, and open places in
forests.

Polygonum persicaria L.—spotted lady's thumb.
Occasional: forests and meadows.

Polygonum punctatum Elliott—dotted
smartweed.
Common: wet places.

Polygonum sagittatum L.—arrow-leaved
tearthumb.
Occasional: wet places.

Polygonum scandens L.—climbing false
buckwheat.
Rare: on fence, Springfield Road, East Farm.

Polygonum virginianum L.—jumpseed.
Infrequent: moist forest, Log Lodge forest
complex; Beaver Dam Creek drainage, Central
Farm.

Rumex acetosella L.—common sheep-sorrel.
Common: cultivated fields, lawns, forest edges
and meadows.

Rumex crispus L.—curly dock.
Common: weedy in open places.

Rumex obtusifolius L.—bitter dock.
Common: weedy in open places.

List of the flora
Class Magnoliopsida—Dicotyledons
Ranunculaceae

Portulacaceae

Claytonia virginica L.—spring-beauty.
Common, sometimes locally abundant,
especially along Entomology Road, Central
Farm.

Portulaca oleracea L.—purslane.
Common: weedy in cultivated plots, early
successional fields and other open places.

Primulaceae

Anagallis arvensis L.—scarlet pimpernel.
Infrequent: grassy or waste places and in early
succession in meadows.

Lysimachia quadrifolia L.—whorled loosestrife.
Infrequent: Odell Road; Deciduous and
Bottomland Research Forests.

Pyrolaceae

Chimaphila maculata (L.) Pursh—spotted
wintergreen.
Occasional: acid upland forests.

Chimaphila umbellata (L.) W.P.C. Barton—
pipsissewa.
Infrequent: Deciduous Research Forest;
Entomology Road.

Ranunculaceae

Anemone quinquefolia L.—wood anemone.
Rare: Indian Creek swamp forest near Sunnyside
Road (one plant seen in 1997).

Clematis virginiana L.—virgin's bower.
Infrequent: meadows and open places.

Ranunculus abortivus L.—small-flowered
crowfoot, kidney-leaf buttercup.
Common: meadows, forests and cultivated
fields.

Ranunculus bulbosus L.—bulbous buttercup.
Common and abundant: lawns, roadsides,
meadows, and fields.

Ranunculus hispidus Michx.—bristly buttercup.
Rare: forest at Entomology Road pond.

Ranunculus recurvatus Poir.—hooked crowfoot.
Infrequent: lowland forests, Indian Creek swamp
forest; Entomology Road.

Ranunculus sardous Crantz—hairy buttercup.
Infrequent: weedy around buildings, North Dairy
Road and waste-water area, Central Farm; field
at Airport.

Ranunculus sceleratus L.—cursed buttercup.
Occasional: moist or wet places.

Thalictrum pubescens Pursh—tall meadow-rue.
Infrequent: Indian Creek swamp forest;
Bottomland Research Forest; along a tributary
of Beaver Dam Creek north of Entomology
Road.

Thalictrum thalictroides (L.) Eames & Boivin—
rue anemone.

Anemonella thalictroides (L.) Spach

Rare: forest near pond at end of Entomology
Road.

List of the flora
Class Magnoliopsida—Dicotyledons
Rhamnaceae

Rhamnaceae

Ceanothus americanus L.—New Jersey tea.

Rare: Poultry Road savanna.

Rhamnus cathartica L.

Along trail around Log Lodge pond, Central Farm, where possibly planted.

Rosaceae

Amelanchier arborea (Michx. f.) Fernald—shadbush, serviceberry.

Occasional: well-drained forests and their borders.

Amelanchier canadensis (L.) Medik.—shadbush, serviceberry.

Infrequent: Central Farm: forests and their borders, Odell Road; Biocontrol Road area.

Aronia arbutifolia (L.) Pers.—red chokeberry.

Pyrus arbutifolia (L.) L.f.

Infrequent: Deciduous and Bottomland Research Forests.

Aronia melanocarpa (Michx.) Elliott—black chokeberry.

Reported in 1976; not seen in recent years.

Duchesnea indica (Andrews) Focke—Indian strawberry.

Common: lawns, meadows.

Fragaria virginiana Duchesne—wild or Virginia strawberry.

Common: meadows, fields, and powerlines.

Geum canadense Jacq.—white avens.

Infrequent: Indian Creek swamp forest; Entomology Road area; forest, South Farm.

Malus toringo (Siebold) Siebold ex de Vriese—Toringo crab-apple.

Malus sieboldii (Regel) Rehder

Pyrus sieboldii Regel

Common and prolific weedy escape from cultivation, a shrub or small tree invading meadows and fields.

Physocarpus opulifolius (L.) Maxim.—ninebark.

Escaped from cultivation, Entomology Road.

Potentilla argentea L.—silver-leaf cinquefoil.

Infrequent: weedy in National Agricultural Library meadows; also North Dairy Road and FDA complex, Central Farm.

Potentilla canadensis L.—dwarf cinquefoil.

Common: along powerlines, fields, and meadows.

Potentilla norvegica L. var. **hirsuta** (Michx.)

Lehm.—rough cinquefoil.

P. monspeliensis L.

Infrequent: East *Bidens* Meadow; Springfield Road field.

Potentilla recta L.—upright cinquefoil.

Occasional: meadows; near National Agricultural Library; FDA complex, Central Farm.

Potentilla simplex Michx.—oldfield cinquefoil.

Common: lawns, meadows.

Prunus persica (L.) Batsch—peach.

Border of forest opposite Log Lodge Visitors Center; North Cherry Hill Meadow.

Prunus serotina Ehrh.—black cherry.

Common forest tree; seedlings invading meadows and fields.

Pyrus calleryana Decne. 'Bradford'—Bradford pear.

Planted: invading meadows, thickets and forest borders.

List of the flora
Class Magnoliopsida—Dicotyledons
Rubiaceae

Rosa multiflora Thunb.—multiflora rose.
Common: meadows, fields, thickets, spreading rapidly and becoming locally abundant.

Rosa virginiana Mill.—pasture rose.
Infrequent: Bottomland Research Forest; meadow south of National Agricultural Library.

Rubus allegheniensis Porter—Allegheny blackberry.
Common: fields and meadows, a pernicious weed.

Rubus argutus Link—southern blackberry.
Infrequent: FDA complex, Central Farm.

Rubus enslenii Tratt.—southern dewberry.
Occasional: mixed forests.

Rubus flagellaris Willd.—northern dewberry.
Infrequent: mixed forests and along edges, Entomology Road and elsewhere.

Rubus hispidus L.—bristly dewberry.
Occasional: poorly-drained places in meadows and forests.

Rubus occidentalis L.—black raspberry.
Infrequent: mixed forests.

Rubus pensilvanicus Poir.—Pennsylvania blackberry.
Infrequent: FDA complex, Central Farm.

Rubus phoenicolasius Maxim.—wineberry.
Infrequent: two colonies; established at Deciduous Research Forest under powerline near bog; forest on south side of Beck Lake. These plants are somewhat atypical.

Sanguisorba canadensis L.—Canadian burnet.
Rare: along stream on North Farm. Not seen in recent years; probably extirpated.

Rubiaceae

Cephalanthus occidentalis L.—buttonbush.
Infrequent: Beck Lake area; drainage from the National Agricultural Library pond; Airport.

Cruciata pedemontana (Bellardi) Ehrend.—tiny-flowered bedstraw.

Galium pedemontanum (Bellardi) All.
Rare: Poultry Road oak savanna.

Diodia teres Walter—buttonweed.
Common: weedy in fields, lawns and meadows.

Galium aparine L.—cleavers.
Common: meadows and forests.

Galium circaeans Michx.—wild licorice.
Infrequent to occasional: forests.

Galium tinctorium (L.) Scop.—Clayton's bedstraw.
Infrequent to occasional: moist or wet places.

Galium triflorum Michx.—sweet-scented bedstraw.
Infrequent: forests, Coniferous Research Forest; Entomology Road.

Houstonia caerulea L.—blueets.
Common: roadsides, lawns, meadows, and open forests.

Houstonia purpurea L. var. **purpurea**—Venus'-pride, large houstonia.
Infrequent: Poultry Road savanna; edge of forest, Beaver Dam Road; Secret Meadow, Central Farm.

Mitchella repens L.—partridgeberry.
Common: forests.

List of the flora

Class Magnoliopsida—Dicotyledons

Salicaceae

Salicaceae

Populus alba L.—white or silverleaf poplar.
Planted or escaped, Coniferous Research Forest.

Populus deltoides W. Bartram ex Marshall—
cottonwood.
Rare: large tree along stream, waste-water
treatment area, Central Farm.

Populus grandidentata Michx.—large toothed
aspens.

Occasional: borders of forests.

Salix babylonica L.—weeping willow.
Waste-water treatment area, Central Farm.

Salix nigra Marshall—black willow.
Common: along streams, moist thickets.

Santalaceae

Comandra umbellata (L.) Nutt.—bastard
toadflax.
Infrequent: powerline in Deciduous Research
Forest; forest at end of Entomology Road.

Sarraceniaceae

Sarracenia purpurea L.—pitcher plant.
Rare or infrequent: Beck Lake, one plant seen in
1983; Powerline Bog 1, Deciduous Research
Forest, three plants seen in 1999, one
flowering. Origin of this species unknown;
possibly introduced some years ago.

Saxifragaceae

Penthorum sedoides L.—ditch stonecrop.
Infrequent: Central Farm: Beaver Dam Creek
swamp and drainage to the west; waste-water
area.

Scrophulariaceae

Agalinis purpurea (L.) Pennell—purple agalinis.
Rare: field at Airport in 1976. Not seen in recent
years.

Chaenorrhinum minus (L.) Lange—dwarf
snapdragon.
Rare: along railroad, Sunnyside Road.

List of the flora
Class Magnoliopsida—Dicotyledons
Solanaceae

- Chelone glabra** L.—turtlehead.
 Rare: wet places, drainage leading to Beck Lake.
- Kickxia elatine** (L.) Dumort.—sharpleaf cancerwort.
 Rare: weedy places, Central Farm.
- Linaria canadensis** (L.) Dum. Cours.—blue toadflax.
Nuttallanthus canadensis (L.) D.A. Sutton
 Common: meadows and fields, often in sandy, poor soil.
- Linaria vulgaris** Mill.—butter-and-eggs.
 Infrequent: weedy places, Airport, and elsewhere.
- Lindernia dubia** (L.) Pennell (sens. lat.)—false pimpernel.
 Rare: wet places, Poultry Road, Central Farm.
- Melampyrum lineare** Desr. var. *latifolium* Bart.—broad-leaf cow-wheat.
 Infrequent: Deciduous Research Forest, under powerlines.
- Mimulus alatus** Aiton—sharp-wing monkey flower.
 Infrequent: swampy area, Poultry Road; Beaver Dam swamp.
- Paulownia tomentosa** (Thunb.) Steud.—imperial tree, empress tree.
 Infrequent: fencerows and forest margins.

- Penstemon digitalis** Nutt. ex Sims—foxglove beard-tongue.
 Infrequent: powerline north of Entomology Road; Airport; meadow near National Agricultural Library.
- Verbascum blattaria** L.—moth mullein.
 Occasional: roadsides and in meadows.
- Verbascum thapsus** L.—great mullein.
 Occasional: open places.
- Veronica agrestis** L.—field speedwell.
 Occasional: weedy places; Odell West; Bottomland Research Forest.
- Veronica arvensis** L.—corn speedwell.
 Common: weedy in waste places.
- Veronica hederifolia** L.—ivy-leaf speedwell.
 Occasional: Indian Creek swamp forest; other lowland forests.
- Veronica officinalis** L.—common speedwell.
 Common: open forests, savannas.
- Veronica peregrina** L.—purslane speedwell.
 Occasional: weedy in waste places.
- Veronica persica** Poir.—bird's-eye speedwell.
 Common: weedy in waste places.
- Veronica polita** Fr.—gray field speedwell.
 Rare: lawn, Building 003, North Farm.
- Veronica serpyllifolia** L.—thyme-leaf speedwell.
 Occasional: weedy in grassy places and cultivated fields.

Simaroubaceae

- Ailanthus altissima** (Mill.) Swingle—tree-of-heaven, copal-tree.
 Common: forest margins.

Solanaceae

- Datura stramonium** L.—jimsonweed.
 Occasional: weedy in cultivated fields, roadsides, and waste places.
- Physalis heterophylla** Nees—clammy ground-cherry.
 Rare: around buildings northeast of Building 265, Central Farm.

List of the flora

Class Magnoliopsida—Dicotyledons

Solanaceae

Physalis longifolia Nutt. var. **subglabrata** (Mack. & Bush) Cronquist—smooth ground-cherry.

P. subglabrata Mack. & Bush

Infrequent: meadows, E. *Bidens* Meadow, Central Farm.

Solanum carolinense L.—horsenettle.

Common: weedy in fields and meadows.

Solanum dulcamara L.—climbing nightshade.
Occasional: edges of fields, thickets.

Solanum nigrum L. (sens. Gleason & Cronquist 1991)—black nightshade.

Infrequent: weedy around buildings, Central Farm.

Ulmaceae

Ulmus americana L.—American elm.

Occasional: forests.

Ulmus rubra Muhl.—slippery elm.

Occasional: Bottomland Research Forest and other lowland forests.

Ulmus viminalis Lodd. ex Bean—English elm.

U. procera Salisb.

Planted in National Agricultural Library oak savanna and South meadows; producing many seedlings.

Urticaceae

Boehmeria cylindrica (L.) Sw.—false nettle.

Common: open moist or wet places.

Parietaria pensylvanica Muhl. ex Willd.—

Pennsylvania pellitory.

Infrequent: meadows, open forests.

Pilea pumila (L.) A. Gray—clearweed, richweed.

Infrequent: bottomland forests and open places.

Urtica dioica L. var. **procera** (Muhl. ex Willd.)

Wedd.—slender stinging nettle.

U. gracilis Aiton

Infrequent: Deciduous Research Forest and Entomology Road area.

Valerianaceae

Valerianella locusta (L.) Laterr.—common corn-salad, lamb's lettuce.

Common: cultivated fields and meadows, at times abundant.

Valerianella radiata (L.) Dufr.—beaked corn-salad.

Infrequent: Airport roadside; Cherry Hill North Meadow; Sellman East Meadow, North Farm.

List of the flora
Class Magnoliopsida—Dicotyledons
Vitaceae

Verbenaceae

Verbena hastata L.—blue vervain.
Occasional: fields and meadows. Planted in
Poultry Road meadow.

Verbena urticifolia L. white vervain.
Occasional: fields and meadows.

Violaceae

Viola arvensis Murray—European field pansy.
Common: cultivated and fallow fields.

Viola brittoniana Pollard—Britton's violet.
Rare: Deciduous Research Forest under
powerline.

Viola cucullata Aiton—blue marsh violet.
Infrequent to occasional: Indian Creek swamp
forest, and other lowland forests.

Viola lanceolata L.—lance-leaved violet.
Infrequent to occasional: moist, wet, or boggy
places, East Farm, including Airport.

Viola palmata L. var. **palmata**—early blue
violet.
Rare: Poultry Road oak savanna.

Viola primulifolia L.—primrose-leaf violet.
Occasional: research forests; Entomology Road
meadow, sometimes appears to intergrade with
V. lanceolata.

Viola rafinesquii Greene—Rafinesque's wild or
field pansy.
Common and abundant: fields, meadows, and
lawns.

Viola sagittata Aiton—arrow-leaf violet.
Occasional: Poultry Road savanna; powerline
along Beaver Dam Road; Entomology Road
pond forest.

Viola sororia Willd. (sens. Gleason & Cronquist
1991)—hooded or dooryard violet.
V. papilionacea Pursh
Common: lawns and open grassy places, forests.

Vitaceae

Parthenocissus quinquefolia (L.) Planch.—
Virginia creeper.
Common: forests and open places.

Vitis aestivalis Michx.
Deciduous Research Forest; around dairy
buildings; waste-water treatment area, Central
Farm.

Vitis labrusca L.—fox grape.
Occasional: thickets, forest borders.

Vitis riparia Michx.—riverbank grape.
Fencerow, Beaver Dam Road, Central Farm.

Vitis vulpina L.—winter grape.
Forest along Entomology Road, Central Farm.

List of the flora

Notes

Class Liliopsida—Monocotyledons

Alismataceae

Alisma subcordatum Raf.—American water-plantain.

Infrequent: swampy lowlands, Beaver Dam Creek, Central Farm; Airport meadow.

Sagittaria engelmanniana J. G. Sm.—Engelmann's arrowhead.

Infrequent: spring area east of the Entomology Road building complex and powerline swamps in the Deciduous Research Forest.

Identifications tentative.

Sagittaria latifolia Willd. var. **latifolia**—broadleaf arrowhead.

Rare: Deciduous Research Forest.

Sagittaria latifolia Willd. var. **pubescens** (Muhl. ex Nutt.) J. G. Sm.—hairy broadleaf arrowhead.

Infrequent: margins of Beck Lake; Bottomland Research Forest; Beaver Dam Creek just south of Beaver Dam Swamp; powerline bogs.

Alliaceae

Allium schoenoprasum L.—chives.

Escaped from cultivation in Secret Meadow, Poultry Road, Central Farm.

Allium vineale L.—wild garlic.

Common and abundant: weedy in lawns and grassy places.

Amaryllidaceae

Narcissus pseudonarcissus L.—daffodil.

Common: escapes freely from cultivation.

Araceae

Arisaema triphyllum (L.) Schott—jack-in-the-pulpit.

Occasional: rich forests.

Peltandra virginica (L.) Schott—arrow-arum.

Infrequent: swamp, Beaver Dam Creek at Research Road (locally abundant); swampy area, Soil Conservation Road.

Symplocarpus foetidus (L.) Salisb. ex W.P.C. Barton—skunk-cabbage.

Common: swampy lowlands.

List of the flora
Class Liliopsida—Monocotyledons
Asparagaceae

Asparagaceae

Asparagus officinalis L.—asparagus.
Infrequent: cultivated fields and fencerows.

Commelinaceae

Commelina communis L.—dayflower.
Occasional: weedy in waste places.

Tradescantia virginiana L.—Virginia
spiderwort.
Rare: open place by Mitigation Area pond,
entrance to Airport.

Cyperaceae

Bulbostylis capillaris (L.) Kunth ex C.B. Clarke
Rare: under powerline, oak barren savanna,
Central Farm.
Carex abscondita Mack.
Occasional: rich forests.
Carex albicans Willd. ex Spreng.
Infrequent: meadows, forests.
Carex albolutescens Schwein.
Infrequent: margins of forests.
Carex annectens (E.P. Bicknell) E.P. Bicknell
C. vulpinoidea Michx. var. *ambigua* F. Boott
Common: dry meadows.
Carex aquatilis Wahlenb.
Infrequent: moist to wet areas. Soil Conservation
Road and near the entrance to the Airport.
Carex atlantica L.H. Bailey var. *atlantica*
C. incompta E. P. Bicknell
Occasional: swamps and marshes.
Carex atlantica L.H. Bailey var. *capillacea* (L.H.
Bailey) Reznicek
C. howei Mack.
Common: swamps and marshes, the more
common variety on BARC.
Carex blanda Dewey
Occasional: pastures and powerline cuts.
Carex cephalophora Muhl. ex Willd.
Infrequent: meadows and pastures.

Carex complanata Torr. & Hook. var.
complanata
Infrequent: Beck Lake area.
Carex crinita Lam.
Common: wet places, swamps.
Carex debilis Michx.
Occasional: floodplain forests, meadows,
swamps.
Carex digitalis Willd.
Central Farm: edge of pond.
Carex divisa Huds.
Rare: wooded pasture along Poultry Road.
Carex festucacea Schkuhr ex Willd.—fescue
sedge.
Occasional: wet places at forest edges.
Carex flaccosperma Dewey
Common: upland meadows, forest margins.
Carex folliculata L.
Common: moist forests, swamps, boggy places.
Carex frankii Kunth—Frank's sedge.
Common: ditches, wet meadows.
Carex glaucoidea Tuck. ex Olney
C. flaccosperma var. *glaucoidea* (Tuck. ex
Olney) Kük.
Airport meadow.

List of the flora
Class Liliopsida—Monocotyledons
Cyperaceae

- Carex gracilescens** Steud.
Infrequent to occasional: among huckleberry understory in mixed forests.
- Carex hirsutella** Mack.
C. complanata var. *hirsuta* (Willd.) Gleason
Meadows, Central and East Farms.
- Carex hormathodes** Fernald
Edges of wet forests.
- Carex intumescens** Rudge
Common: wet meadows, forests along shallow streams.
- Carex laevivaginata** (Kük.) Mack.
Occasional: wet places.
- Carex laxiculmis** Schwein.
Rich forests.
- Carex louisianica** L.H. Bailey—Louisiana sedge.
Infrequent: Beck Lake area.
- Carex lupulina** Muhl. ex Willd.—hop sedge.
Common: ditches, meadows, under powerlines.
- Carex lurida** Wahlenb.
Common: swamps, ditches, under powerlines.
- Carex normalis** Mack.
Rare: wet meadow west of Building 465, Central Farm.
- Carex pennsylvanica** Lam.—Pennsylvania sedge.
Rare: edge of pond near jct. of Entomology and Powder Mill Roads, Central Farm.
- Carex radiata** (Wahlenb.) Small
Infrequent: wet areas, Indian Creek; Entomology Road.
- Carex rosea** Schkuhr ex Willd.
C. convoluta Mack.
Rare: Indian Creek swamp forest.
- Carex scoparia** Schkuhr ex Willd.
Common: ditches, powerlines.
- Carex seorsa** Howe
Common: wet soil in forests.
- Carex squarrosa** L.—squarrose sedge.
Occasional: floodplain forests and savannas.
- Carex stipata** Muhl. ex Willd.
Occasional: wet places along powerlines, floodplain forests.
- Carex straminea** Willd. ex Schkuhr
Rare: oak barren savanna.
- Carex stricta** Lam.
Infrequent: powerlines, sphagnum bog, Coniferous Research Forest.
- Carex styloflexa** Buckley
Rare: forest, Beaver Dam Road.
- Carex swanii** (Fernald) Mack.
C. virescens Muhl. ex Willd. var. *swanii* Fernald
Occasional: moist places.
- Carex torta** W. Boott ex Tuck.
Common: wet places.
- Carex tribuloides** Wahlenb. var. **tribuloides**
Occasional: powerlines, shores of ponds, floodplain forests.
- Carex tribuloides** Wahlenb. var. **reducta** A. Gray
C. projecta Mack.
Occasional: standing water or wet meadows.
- Carex typhina** Michx.—cat-tail sedge.
Occasional: floodplain forests.
- Carex virescens** Muhl. ex Willd.
Forest borders.
- Carex vulpinoidea** Michx.—fox sedge.
Common: ditches and wet meadows.
- Cyperus echinatus** (L.) A.W. Wood—globose cyperus.
C. ovularis (Michx.) Torr.
Occasional: meadows, fields.
- Cyperus esculentus** L.—yellow nutsedge, chufa.
Occasional to common: meadows, fields.
- Cyperus iria** L.
Rare: weed by National Agricultural Library parking lot.
- Cyperus lancastricensis** Porter
Infrequent: meadows, Beaver Dam Road west of Parkway; meadow by Building 465, Central Farm.

List of the flora
Class Liliopsida—Monocotyledons
Cyperaceae

Cyperus lupulinus (Spreng.) Marcks

Cyperus filiculmis Vahl

Occasional: meadows, fields.

Cyperus refractus Engelm. ex Boeck.

Occasional: meadows.

Cyperus retrorsus Chapm.

Infrequent: moist meadows, Building 465 meadow; Statistics Lab Meadow; Deciduous Research Forest area.

Cyperus strigosus L.

Common: fields, meadows and waste places.

Dulichium arundinaceum (L.) Britton—three-square sedge.

Infrequent: border of Beck Lake; wet places in Building 465 Meadow, Central Farm.

Eleocharis acicularis (L.) Roem. & Schult.—needle spikerush.

Infrequent: north shore of Beck Lake; WMATA mitigation area, East Farm.

Eleocharis obtusa (Willd.) Schult.—blunt spikerush.

Infrequent to occasional: wet places, Airport; Beck Lake area; Wetland Research Forest.

Eleocharis olivacea Torr.—olive spikerush.

Rare to infrequent: shore of Beck Lake, Coniferous Research Forest.

Eleocharis quadrangulata (Michx.) Roem. & Schult.—square-stem spikerush.

Rare: Airport.

Eleocharis tenuis (Willd.) Schult.—slender spikerush.

Infrequent: wet places, Entomology Road; Building 465 meadow, Central Farm.

Kyllinga gracillima Miq.

C. brevifolioides Thieret & Delahoussaye

Infrequent to occasional: swampy meadow by Building 465, Entomology Road; along ditch, North Farm; Building 011A upland meadow.

Rhynchospora capitellata (Michx.) Vahl

Infrequent: wet meadows, poorly drained places, mainly on East Farm.

Rhynchospora gracilentia A. Gray

Rare: Powerline Bogs 1 and 2, Deciduous Research Forest.

Rhynchospora microcephala (Britton) Britton ex Small

Rare: Powerline Bog 2, Deciduous Research Forest.

Schoenoplectus pungens (Vahl) Palla

Scirpus pungens Vahl

Common three-square. Rare: WMATA Mitigation Area, East Farm.

Schoenoplectus purshianus (Fernald) M.

Strong—Pursh's bulrush.

Scirpus purshianus Fernald

Rare: Beck Lake area, Coniferous Research Forest.

Schoenoplectus validus (Vahl) Å. Löve & D.

Löve—Great bulrush.

Scirpus validus Vahl

Rare: WMATA Mitigation Area, East Farm.

Scirpus cyperinus (L.) Kunth—woolgrass sedge, cottongrass bulrush.

Occasional: wet places.

Scirpus georgianus Harper

Infrequent to occasional: wet places.

Scirpus polyphyllus Vahl—leafy bulrush.

Rare: wet places, Entomology Road area.

List of the flora
Class Liliopsida—Monocotyledons
Juncacaceae

Dioscoreaceae

Dioscorea oppositifolia L.—Chinese yam.
D. batatas Decne.
Rare: locally abundant at bridge over Beaver
Dam Creek, Central Farm.

Dioscorea quaternata J.F. Gmel.—wild yam.
Recorded in 1976; not seen in recent years.
Dioscorea villosa L. wild yam. Rare: forest along
Beaver Dam Creek swamp, Research Road,
Central Farm.

Hemerocallidaceae

Hemerocallis fulva (L.) L.—orange daylily.
Common: escape from cultivation.

Hypoxidaceae

Hypoxis hirsuta (L.) Coville—yellow stargrass.
Infrequent in fields, meadows.

Iridaceae

Iris versicolor L.—northern blue flag.
Rare: Beaver Dam Creek swamp at Research
Road, Central Farm.
Sisyrinchium angustifolium Mill.—blue-eyed-
grass.
Sisyrinchium graminoides E.P. Bicknell
Common: meadows and fields.

***Sisyrinchium bellum** S. Watson—blue-eyed-
grass.
Planted: National Agricultural Library meadow.

Juncaceae

Juncus acuminatus Michx.
Rare: Poultry Road Infield Meadow, Central
Farm; Wetland Research Forest.
Juncus brachycarpus Engelm.
Rare: Building 465 Meadow on Entomology
Road.

Juncus canadensis J. Gay ex Laharpe—Canadian
rush.
Infrequent: wet places, Entomology Road area;
Beck Lake area; Airport.

List of the flora

Class Liliopsida—Monocotyledons

Juncaceae

Juncus diffusissimus Buckley

Rare: Airport Meadow.

Juncus dudleyi Wiegand—Dudley's rush.

J. tenuis var. *dudleyi* (Wiegand) F.J. Herm.

Infrequent: forest near Entomology Road; entrance to the Airport; meadow near National Agricultural Library.

Juncus effusus L. var. **solutus** Fernald & Wiegand—soft rush.

Occasional: wet places; sometimes weedy.

Juncus marginatus Rostk.

Infrequent: Entomology Road; Powerline Meadow, Central Farm.

Juncus scirpoides Lam.

Infrequent: Powerline Meadow; Building 465 Meadow, Central Farm.

Juncus secundus P. Beauv. ex Poir.

Infrequent: wet places along Poultry Road and elsewhere, Central Farm.

Juncus subcaudatus (Engelm.) Coville & S. F. Blake

Infrequent: Powerline Meadow, Central Farm; Powerline bogs, Deciduous Research Forest; Airport.

Juncus tenuis Willd.—path rush.

Common: meadows and fields.

Luzula bulbosus (A.W. Wood) Smyth & L.C.R. Smyth—bulbous wood rush.

Infrequent: edges of forests and in meadows in the Central Farm.

Luzula multiflora (Ehrh.) Lej.—common wood rush.

Infrequent: Beck Lake forest; entrance to Airport; Oak Barren N Meadow; Beef Barren Savanna, Central Farm.

Lemnaceae

Lemna gibba L.—swollen duckweed.

Rare: pond, Central Farm.

Lemna minor L.—common duckweed.

Rare: pond near entrance to Airport, in waste-water complex.

Lemna perpusilla Torr.—minute duckweed.

Rare: waste-water complex, Central Farm.

Lemna turionifera Landolt—turion duckweed.

Common: most ponds.

Spirodela polyrhiza (L.) Schleid.—common duckmeat or greater duckweed.

Common: ponds.

Wolffia brasiliensis Wedd.—wolffia.

Common: most ponds.

Liliaceae

Convallaria majalis L.—lily of the valley.

Escaped from cultivation near entrance to the Airport.

Erythronium americanum Ker Gawl.—trout lily.

Occasional in rich forests.

Lilium superbum L.—turk's-cap lily.

Rare: formerly in Indian Creek swamp forest; seen in 1983. Not seen in recent years.

Liriope graminifolia (L.) Baker—grassy lily-turf.

Escaped from cultivation along Beaver Dam Road near the Plant Materials Center.

Liriope spicata (Thunb.) Lour.—spiked lily-turf.

Escaped from cultivation in forest north of Beck Lake.

List of the flora
Class Liliopsida—Monocotyledons
Orchidaceae

Maianthemum canadense Desf.—Canada
mayflower.

Infrequent: moist forests; Indian Creek swamp
forest.

Medeola virginiana L.—Indian cucumber root.
Occasional: rich forests.

Muscari botryoides (L.) Mill.—common grape-
hyacinth.

Occasional: lawns, fields, and meadows.

Narthecium americanum Kew Gawl.—bog-
asphodel.

Beltsville Bog: *E. H. Walker 1330*, 14 Sep 1930
(MARY); however, a note by Russell Brown
states that the species was probably planted
there. In Maryland this species is known only
from the Eastern Shore.

Ornithogalum umbellatum L.—star-of-
Bethlehem.

Occasional: lawns, meadows, spreading in
fields.

Polygonatum biflorum (Walter) Elliott—true
solomon's seal.

Infrequent to occasional: rich forests; Beaver
Dam Road; Entomology Road. Apparently

much eaten by deer; sometimes seen in
vegetative state only.

Smilacina racemosa (L.) Desf.—false solomon's
seal.

Maianthemum racemosum (L.) Link

Infrequent to occasional: rich forests;

Entomology Road; Beaver Dam Road.

Apparently much eaten by deer; sometimes
seen in vegetative state only.

Tofieldia racemosa (Walter) Britton, Sterns &
Poggenb.—coastal false asphodel.

Rare: Beltsville Bog (*E. H. Walker 99*, 5 Aug
1928, MARY). Extirpated long ago.

Uvularia perfoliata L.—perfoliate bellwort.

Rare: rich forests; Beaver Dam Road forest, seen
in 1983. Not seen in recent years.

Uvularia sessilifolia L.—sessile-leaved bellwort.

Rare or infrequent: Indian Creek swamp forest.

Veratrum viride Aiton—American false
hellebore.

Rare but locally frequent in Indian Creek swamp
forest.

Orchidaceae

Cypripedium acaule Aiton—pink or stemless
lady slipper.

Rare or infrequent: forests. Much less frequent
in recent years; perhaps eaten by deer. Not seen
anywhere in 1999.

Galearis spectabilis (L.) Raf.—showy orchis.
Orchis spectabilis L.

Rare: formerly in Deciduous Research Forest,
but not seen in recent years.

Goodyera pubescens (Willd.) R. Br. ex W.T.
Aiton—downy rattlesnake-plantain.

Infrequent: rich forests; Beaver Dam Road;
Entomology Road.

Isotria verticillata Raf.—whorled pogonia.

Rare: formerly (1976) in Deciduous Research
Forest, but not seen in recent years.

Platanthera flava (L.) Lindl. var. **herbiola** (R.

Br. ex W.T. Aiton) Luer—pale green orchid.

Habenaria flava (L.) R. Br.

Rare: powerline swamp, Deciduous Research
Forest.

Platanthera lacera (Michx.) G. Don—ragged
fringed orchid.

Habenaria lacera (Michx.) R. Br.

Rare: meadow near Poultry Road, Central Farm.

List of the flora
Class Liliopsida—Monocotyledons
Orchidaceae

Spiranthes praecox (Walter) S. Watson—ladies' tresses.

Rare: Secret Meadow, Poultry Road, Central Farm. Identification tentative; this and the following species are difficult to separate.

Spiranthes vernalis Engelm. & A. Gray—ladies' tresses.

Rare: meadow, Entomology Road. Identification tentative; see preceding species.

Tipularia discolor (Pursh) Nutt.—crane-fly orchid.

Infrequent: forests; Beaver Dam Road; Entomology Road.

Poaceae

Agrostis canina L.—velvet bent.

Rare: Poultry Road Outfield Meadow, Central Farm.

Agrostis capillaris L.—Rhode Island or colonial bent grass.

A. tenuis Sibth.

Occasional: meadows, fields, and lawns, especially near National Agricultural Library.

Agrostis gigantea Roth—redtop.

A. alba of authors

Common: fields and meadows.

Agrostis hyemalis (Walter) Britton, Sterns & Poggenb.—ticklegrass.

Rare: weedy area at Airport.

Agrostis perennans (Walter) Tuck.—upland bent grass.

Occasional: autumn grass in fields and meadows.

Agrostis scabra Willd.—rough bent.

Occasional: late summer and autumn grass in fields and meadows.

Agrostis stolonifera L.—creeping bent.

Occasional: moist or wet places in grassy places and open forests.

Aira caryophylla L.—silver hair grass.

Common: poorest soils of lawns and meadows.

Alopecurus aequalis Sobol.—short-awn alopecurus.

Infrequent: cornfield, South Farm; weedy area at Airport.

Andropogon virginicus L.—broomsedge.

Common: meadows, fields, roadsides.

Andropogon glomeratus (Walter) Britton, Sterns, & Poggenb.

A. virginicus L. var. *abbreviatus* (Hack.) Fernald & Griscom

Infrequent: open area, Deciduous Research Forest; ditch, Soil Conservation Road.

Anthoxanthum odoratum L.—sweet vernal grass.

Common and abundant: lawns, meadows, fields, roadsides.

Aristida dichotoma var. *curtissii* A. Gray ex S. Watson & J.M. Coult.—Curtiss's three-awn grass.

A. curtissii (A. Gray ex S. Watson & J.M. Coult.) Nash

Infrequent to occasional: meadows and fields, including Airport.

Aristida oligantha Michx.—prairie three-awn grass.

Occasional: fields; especially Airport.

Arrhenatherum elatius (L.) P. Beauv. ex J. Presl & C. Presl—tall oatgrass.

Formerly meadow, Soil Conservation Road; no present location known.

Arthraxon hispidus (Thunb.) Makino—small carp grass or arthraxon.

Common and locally abundant: invasive pernicious weed in moist or wet meadows, roadsides, and open forests.

List of the flora
Class Liliopsida—Monocotyledons
Poaceae

- Avena sativa** L.—oats.
Established around building at Dairy Barns,
Central Farm.
- Bromus catharticus** Vahl—rescue grass.
B. unioloides Kunth
Infrequent: meadows near National Agricultural
Library; around Building 182C, North Dairy
Road, Central Farm; cornfield, SCS Road.
- Bromus commutatus** Schrad.—hairy chess,
meadow brome.
Infrequent: weedy around buildings on North
Dairy Road, Central Farm, and elsewhere.
- Bromus hordeaceus** L.—soft chess or brome.
B. mollis L.
Infrequent: Airport and other weedy places.
- Bromus inermis** Leyss.—smooth brome.
Occasional: roadsides, meadows and fields;
planted in several locations on East Farm.
- Bromus japonicus** Thunb.—Japanese brome or
chess.
Occasional to common: weedy in fields and
waste places.
- Bromus racemosus** L.—smooth brome.
Occasional: roadsides and waste places.
- Bromus sterilis** L.—barren or poverty brome.
Occasional: roadsides and waste places.
- Bromus tectorum** L.—cheatgrass, downy chess.
Occasional: roadsides and waste places.
- Calamagrostis coarctata** (Torr.) Eaton—reed
bent grass.
C. cinnoides of authors
Infrequent: moist, shaded places, bogs, Beaver
Dam Road powerline, Deciduous Research
Forest powerline, Beck Lake area; powerline
bogs.
- Cenchrus longispinus** (Hack.) Fernald
Rare: locally abundant on roadside, Springfield
Road.
- ***Chasmanthium latifolium** (Michx.) H.O.
Yates—Indian wood oats.
Uniola latifolia Michx.
Planted: meadows.
- Chasmanthium laxum** (L.) H.O. Yates—slender
wood oats.
Uniola laxa L.
Occasional: moist meadows, edges, open forests,
under powerlines.
- Chloris verticillata** Nutt.—windmill grass.
Spreading in meadows near National
Agricultural Library; apparently adventive or
introduced.
- Cinna arundinacea** L.—sweet wood reed.
Common, sometimes locally abundant: lowland
forests, bottomlands, stream valleys.
- Cynodon dactylon** (L.) Pers.—bermuda grass.
Common: planted or escaped from cultivation in
lawns, meadows, roadsides, and fields;
- Dactylis glomerata** L.—orchard grass.
Common: lawns, meadows, and fields.
- Danthonia spicata** (L.) P. Beauv. ex Roem. &
Schult.—poverty grass.
Common: poor soil in meadows, fields, and open
forests. One collection from South Farm
resembles *D. compressa* Austin, but is less
extreme in morphology.
- Digitaria ciliaris** (Retz.) Koeler—southern
crabgrass.
Occasional: intergrading with *D. sanguinalis*.
- Digitaria ischaemum** (Schreb.) Schreb. ex
Muhl.—smooth crabgrass.
Common and abundant: weedy in lawns and
fields.
- Digitaria sanguinalis** (L.) Scop.—hairy
crabgrass.
Common and abundant: weedy in lawns and
fields.

List of the flora

Class Liliopsida—Monocotyledons

Poaceae

Echinochloa colona (L.) Link—awnless barnyard grass, jungle-rice.

Occasional: along railroad by Sunnyside Road; temporary pool in lawn, Poultry Road; ditch E of Building 011A; around a man-made pond near Springfield Road, Central Farm; waste-water treatment area, Central Farm. Species not included by Brown and Brown (1984).

Echinochloa crus-galli (L.) P. Beauv.—barnyard grass.

Common: open places and fields.

Echinochloa muricata (P. Beauv.) Fernald var. **muricata**—rough barnyard grass.

Rare: moist places; Deciduous Research Forest (collected only in 1976).

Echinochloa muricata var. **microstachya** Wiegand

Rare: border of Indian Creek swamp forest.

Eleusine indica (L.) Gaertn.—goose grass.

Common: weedy in lawns and fields.

Elymus repens (L.) Gould—quackgrass.

Agropyron repens (L.) P. Beauv.

Elytrigia repens (L.) Desv. ex Nevski

Common: lawns, fields and meadows; pernicious rhizomatous weed.

Elymus riparius Wiegand—riverbank wildrye.

Rare: bank of Little Paint Branch Creek, North Farm.

Eragrostis cilianensis (All.) Vignolo ex Janch.—stinkgrass.

Occasional: weedy in cultivated fields and waste places.

Eragrostis curvula (Schrud.) Nees—weeping lovegrass.

Planted for erosion control, occasionally adventive or persisting.

Eragrostis hirsuta (Michx.) Nees—big-top lovegrass.

Rare: meadows south of National Agricultural Library.

Eragrostis pectinacea (Michx.) Nees var. **pectinacea**—lovegrass.

Common: waste places, paved areas.

Eragrostis spectabilis (Pursh) Steud.—purple lovegrass.

Common: fields and meadows.

Festuca arundinacea Schreb.—tall fescue.

Common and abundant: widely planted, also escaped from cultivation; lawns, meadows, roadsides

Festuca filiformis Pourr.—hair fescue.

F. ovina var. *capillata* (Lam.) Mathieu

F. tenuifolia Sibth.

Rare: Poultry Road oak savanna, probably a remnant of cultivation.

***Festuca ovina** L.—sheep fescue.

Planted: meadows of North Farm and National Agricultural Library.

Festuca rubra L.—red fescue.

Occasional to common: meadows, lawns, pastures.

Festuca rubra var. **commutata** Gaudin—Chewings fescue.

Locally abundant in meadows near National Agricultural Library, probably elsewhere.

Festuca subverticillata (Pers.) E.B. Alexeev—nodding fescue.

F. obtusa Biehler

Infrequent: forest east of Entomology Road; Indian Creek forest.

Festuca trachyphylla (Hack.) Krajina—hard fescue.

Locally common in meadows adjacent to National Agricultural Library. Determined by Darbyshire.

Glyceria obtusa (Muhl.) Trin.—manna grass.

Infrequent: moist or wet places, bogs; Deciduous and Coniferous Research Forests.

List of the flora
Class Liliopsida—Monocotyledons
Poaceae

Glyceria striata (Lam.) Hitchc.—fowl meadow grass, fowl manna grass.

Occasional: ditches, wet forests, and other wet places.

Holcus lanatus L.—velvet grass.

Occasional: weedy in lawns, pastures, and meadows.

Hordeum jubatum L.—foxtail barley.

Rare: grassy areas at the Airport.

Hordeum pusillum Nutt.—little barley.

Occasional: weedy on roadsides and in waste places.

Leersia oryzoides (L.) Sw.—rice cut grass.

Common: ditches, marshes, and swamps.

Leersia virginica Willd.—white grass.

Common: wet and moist open or partly shaded places.

Leptoloma cognatum (Schult.) Chase—fall witch grass.

Rare, but locally abundant in meadows near National Agricultural Library.

Lolium multiflorum Lam.—annual ryegrass.

L. perenne L. subsp. *multiflorum* (Lam.) Husn.

Occasional: waste places, lawns, and fields; also planted.

Lolium perenne L.—perennial ryegrass.

Common: lawns and some meadows; also planted.

Microstegium vimineum (Trin.) A. Camus—

cover-all grass, stilt grass, Nepalese browntop.

Common and abundant: invasive pernicious weed densely covering the ground in shaded places, powerlines, roadsides, and open forests.

Miscanthus sinensis Andersson—Chinese silver grass, eulalia.

Planted: ornamental and persisting after cultivation.

Muhlenbergia schreberi J. G. Gmel.—nimblewill.

Common: weedy in lawns, roadsides, and meadows.

Panicum.

Includes subg. *Dichanthelium*. Treatment and most determinations by M. G. Lelong; see Lelong (1984).

Panicum acuminatum Sw. var. *fasciculatum* (Torr.) Beetle

P. huachucae Ashe

Occasional: meadows, fields.

Panicum acuminatum var. *implicatum* (Scribn.)

C. F. Reed

Rare: field at Airport.

Panicum acuminatum var. *lindheimeri* (Nash)

Lelong

P. lindheimeri Nash

Common: meadows, fields.

Panicum anceps Michx. var. *anceps*—beaked panic grass.

Occasional: meadows and roadsides.

Panicum boscii Poir.—Bosc's panic grass.

Rare: forest along Entomology Road.

Panicum capillare L.—common panic grass, witch grass.

Occasional: weedy in disturbed soil.

Panicum clandestinum L.—deer-tongue grass.

Dichanthelium clandestinum (L.) Gould

Common: meadows and fields.

Panicum commutatum Schult. var. *ashei*

(Pearson ex Ashe) Fernald—variable panic grass.

Rare: oak forest, South Farm.

Panicum depauperatum Muhl.—starved panic grass.

Dichanthelium depauperatum (Muhl.) Gould

Rare to infrequent: fields.

Panicum dichotomiflorum Michx.—fall panic grass.

Common and locally abundant: weedy in fields and disturbed soil.

List of the flora
Class Liliopsida—Monocotyledons
Poaceae

Panicum dichotomum L. var. **dichotomum**—bushy panic grass.

Dichanthelium dichotomum (L.) Gould

Rare: oak forest near Airport.

Panicum dichotomum var. **lucidum** (Ashe)

Lelong

P. lucidum Ashe

Infrequent: wet places, Deciduous Research Forest, East Farm.

Panicum dichotomum var. **ramulosum** (Torr.)

Lelong

P. microcarpon Muhl. ex Elliott

Common: meadows, fields, forests.

Panicum rigidulum Bosc ex Nees var.

elongatum (Pursh) Lelong

P. stipitatum Nash

Infrequent: Wetland SE of intersection of Beaver Dam Road and Research Road; Beaver Dam swamp.

Panicum rigidulum var. **rigidulum**

P. agrostoides Spreng., nom. illeg.

Infrequent: Building 465 Meadow, Central Farm; other meadows.

Panicum scoparium Lam.

Dichanthelium scoparium (Lam.) Gould

Occasional: fields and meadows.

Panicum sphaerocarpon Elliott var. **isophyllum**

(Scribn.) Angelo

P. polyanthes Schult.

Occasional to common: deciduous forests, meadows.

Panicum verrucosum Muhl.—warty panic grass.

Infrequent: poorly-drained places.

Panicum virgatum L.—switch grass.

Common: meadows, fields, edges; sometimes persisting from plantings on East Farm.

Paspalum dilatatum Poir.—dallis grass.

Infrequent: roadside, Entomology Road; Oak Barren; Center Meadow, Central Farm.

Paspalum laeve Michx.—smooth paspalum.

P. circulare Nash

Common: lawns, fields, meadows, roadsides.

Paspalum setaceum Michx. (sens. lat.)—slender paspalum.

P. ciliatifolium Michx.

P. pubescens Muhl. ex Willd.

Occasional: fields, meadows, roadsides, and lawns.

Phalaris arundinacea L.—reed canary grass.

Occasional: wet or moist meadows; planted in waste-water spray fields.

Phleum pratense L.—timothy.

Common: fields and meadows.

Phragmites australis (Cav.) Trin. ex Steud.—giant or common reed.

P. communis Trin.

Occasional: ditches and wet places.

Poa annua L.—annual bluegrass.

Common: weedy in lawns and cultivated fields.

Poa compressa L.—Canada bluegrass.

Common: meadows and open places.

Poa pratensis L. subsp. **angustifolia** (L.) Lej.—

narrow-leaved Kentucky bluegrass.

Rare or infrequent: Airport field.

Poa pratensis L. subsp. **pratensis**—Kentucky bluegrass.

Common and abundant: spreads aggressively in lawns, pastures, hayfields, and meadows.

Poa trivialis L.—rough-stemmed bluegrass.

Occasional: moist places.

Schizachyrium scoparium (Michx.) Nash—little bluestem.

Andropogon scoparius Michx.

Infrequent to occasional: older meadows;

established in meadows near National

Agricultural Library, where an important part of the meadow flora.

Secale cereale L.—rye.

Occasional: escape in cultivated fields and meadows.

List of the flora
Class Liliopsida—Monocotyledons
Potamogetonaceae

- Setaria faberi** R. Herm.—giant foxtail.
Common: weedy in cultivated fields.
- Setaria italica** (L.) P. Beauv.—foxtail millet.
Sown in 1997: roadside and forest border,
junction Springfield and Powder Mill Roads,
East Farm.
- Setaria parviflora** (Poir.) Kerguélen—knotroot
foxtail.
S. geniculata (Lam.) P. Beauv.
Infrequent: fields, Airport; waste-water
treatment area.
- Setaria pumila** (Poir.) Roem. & Schult.—yellow
foxtail.
S. glauca (L.) P. Beauv.
Common and abundant: weedy in lawns,
meadows, and cultivated fields.
- Setaria viridis** (L.) P. Beauv.—green foxtail.
Common and abundant: weedy in lawns,
meadows, and cultivated fields.
- Sorghastrum nutans** (L.) Nash—Indian grass.
Infrequent: meadows, roadsides and powerlines.
- Sphenopholis nitida** (Biehler) Scribn.—
wedgegrass.
Rare: formerly along Sellman Road, bordering
North Farm; not seen in recent years.

- Sporobolus vaginiflorus** (Torr. ex A. Gray) A.W.
Wood—poverty dropseed.
Infrequent: roadsides and waste places; Airport.
- Tridens flavus** (L.) Hitchc.—purpletop.
Common and abundant: fields, meadows and
roadsides.
- Tripsacum dactyloides** (L.) L.—gama grass.
Occasional: roadsides, fields; sometimes locally
abundant as at Airport.
- Triticum aestivum** L.—wheat.
Occasional: escape in cultivated fields and
meadows.
- Vulpia myuros** (L.) C.C. Gmel.—rat-tail six-
weeks grass.
Occasional: grassy places.
- Vulpia octoflora** (Walter) Rydb.—six-weeks
grass.
Infrequent to occasional: grassy places,
meadows, under powerlines
- Zoysia japonica** Steud.—zoysia grass.
Planted: sometimes spreading.

Pontederiaceae

- Pontederia cordata** L.—pickerel-weed.
Rare: swamp along Beaver Dam Creek, east of
Research Road, Central Farm.

Potamogetonaceae

- Potamogeton diversifolius** Raf.—variable
pondweed.
Beck Lake; Beaver Dam Creek at Soil
Conservation Road, East Farm.
- Potamogeton pusillus** L.—small pondweed.
Beck Lake.
- Zannichellia palustris** L.—horned pondweed.
Pond near Entomology Road.
-

List of the flora
Class Liliopsida—Monocotyledons
Smilacaceae

Smilacaceae

Smilax glauca Walter—sawbrier.

Occasional: forests. Usually only one or a few plants at a site.

Smilax herbacea L.—carrion flower.

Rare: forest near Beaver Dam Creek, Central Farm.

Smilax rotundifolia L.—horsebrier.

Common: forests and edges.

Sparganiaceae

Sparganium americanum Nutt.—American bur-reed.

Infrequent: Beck Lake; Beaver Dam Creek at Soil Conservation Road, East Farm.

Typhaceae

Typha angustifolia L.—narrowleaf cattail.

Rare: National Agricultural Library pond.

Typha latifolia L.—broad-leaf cattail.

Common: ditches and wet places.

Xyridaceae

Xyris difformis Chapm.—yellow-eyed grass.

Rare: powerline bogs, Deciduous Research Forest.

Xyris torta Sm.—slender yellow-eyed grass.

Infrequent: poorly-drained area under powerline, Deciduous Research Forest; formerly Airport bog.

Literature Cited

- Brown, R.G. and M.L. Brown. 1972. Woody plants of Maryland. Port City Press, Baltimore.
- Brown, M.L. and R.G. Brown. 1984. Herbaceous plants of Maryland. Port City Press, Baltimore.
- Brummitt, R.K. and C.E. Powell. 1992. Authors of plant names. Royal Botanic Gardens, Kew, England.
- CBE Style Manual Committee. 1983. CBE style manual. 5th edition. Council of Biological Editors, Inc., Bethesda, Maryland.
- Gleason, H.A. and A. Cronquist. 1991. Manual of vascular plants of northeastern United States and adjacent Canada. 2nd edition. The New York Botanical Garden, Bronx.
- Harvill, A.M., Jr., T.R. Bradley, C.E. Stevens, T.F. Wieboldt, D.M.E. Ware, D.W. Ogle, G.W. Ramsey, and G.P. Fleming. 1992. Atlas of the Virginia flora. III. Virginia Botanical Associates, Burkeville, Virginia.
- Hotchkiss, N. and R.E. Stewart. 1979. Vegetation and vertebrates of the Patuxent Wildlife Research Center: outline of ecology and annotated lists. Reprinted with supplements by Patuxent Wildlife Research Center, Laurel, Maryland. (Based on a paper in Amer. Midland Naturalist 38, 1947).
- Kartesz, J.T. 1994. A synonymized checklist of the vascular flora of the United States, Canada, and Greenland. ed. 2. 2 vols. Timber Press, Portland.
- Lelong, M.G. 1984. New combinations for *Panicum* subgenus *Panicum* and subgenus *Dichanthelium* (Poaceae) of the southeastern United States. Brittonia 36: 262–273.
- Luteyn, J.L., W.S. Judd, S.P. Vander Kloet, L.J. Dorr, G.D. Wallace, K.A. Kron, P.F. Stevens, and S.E. Clements. 1996. Ericaceae of the southeastern United States. Castanea 61: 101–144.
- Marye, W.B. 1950. The great Maryland barrens. Maryland Historical Mag. 50: 11–23; 120–142; 234–253.
- Nesom, G.L. 1994. Review of taxonomy of *Aster* sensu lato (Asteraceae: Astereae), emphasizing the New World species. Phytologia 77: 141–297.
- Oliver, J.D. 1996. Mile-a-minute weed (*Polygonum perforatum* L.), an invasive vine in natural and disturbed sites. Castanea 61: 244–251.
- Radford, A.E., H.E. Ahles, and C.R. Bell. 1968. Manual of the vascular flora of the Carolinas. University of North Carolina Press, Chapel Hill.
- Redman, D.E. 1995. Distribution and habitat types for Nepal Microstegium [*Microstegium vimineum* (Trin.) Camus] in Maryland and the District of Columbia. Castanea 60: 270–275.
- Voss, E.G. 1972; 1985. Michigan Flora. Parts I and II. Cranbrook Institute of Science, Bloomfield Hills, Michigan.
- Wiersema, J.H. and B. León. 1999. World economic plants: a standard reference. CRC Press, Boca Raton, Florida.
- Young, D.P. 1968. *Oxalis*. In T.G. Tutin, V.H. Heywood, N.A. Burges, D.M. Moore, D.H. Valentine, S.M. Walters, and D.A. Webb, Flora europaea, vol. 2, pp. 192–193. Cambridge University Press, Cambridge, England.

Accepted scientific names are in bold; synonymous scientific names are in italics; and common names are in regular font.

Abutilon theophrasti	40	Alopecurus aequalis	60
Acalypha gracilens	34	alopecurus, short-awn.....	60
Acalypha rhomboidea	34	amaranth, spiny.....	20
Acalypha virginica	34	Amaranthaceae	20
Acer negundo	20	amaranthus, purple.....	20
Acer rubrum	3, 6, 20	Amaranthus albus	20
Acer saccharinum	20	Amaranthus blitum	20
Aceraceae	20	Amaranthus hybridus	20
* Achillea filipendulina	22	<i>Amaranthus lividus</i>	20
Achillea millefolium	22	Amaranthus retroflexus	20
adder's-tongue, southeastern.....	17	Amaranthus spinosus	20
Adoxaceae	20	Amaryllidaceae	53
Agalinis purpurea	48	Amblystegium riparium	12
agalinis, purple.....	48	Amblystegium serpens	12
<i>Agropyron repens</i>	62	Amblystegium tenax	12
Agrostis alba	60	Amblystegium trichopodium	12
Agrostis canina	60	Amblystegium varium	12
Agrostis capillaris	60	Ambrosia artemisiifolia	22
Agrostis gigantea	60	Ambrosia trifida	22
Agrostis hyemalis	60	Amelanchier arborea	46
Agrostis perennans	60	Amelanchier canadensis	46
Agrostis scabra	60	* Amorpha canescens	34
Agrostis stolonifera	60	Amorpha fruticosa	34
<i>Agrostis tenuis</i>	60	Amphicarpaea bracteata	34
Ailanthus altissima	49	Anacardiaceae	21
Aira caryophyllea	60	Anagallis arvensis	45
Ajuga reptans	38	Andropogon glomeratus	60
Albizia julibrissin	34	<i>Andropogon scoparius</i>	64
alder.....	27	Andropogon virginicus	60
alfalfa.....	35	<i>Andropogon virginicus</i> var. <i>abbreviatus</i>	60
Alisma subcordatum	53	anemone, rue.....	45
Alismataceae	53	anemone, wood.....	45
Alliaceae	53	Anemone quinquefolia	45
<i>Alliaria officinalis</i>	28	<i>Anemonella thalictroides</i>	45
Alliaria petiolata	28	Angiosperms	20
Allium schoenoprasum	53	Anomodon attenuatus	12
Allium vineale	53	Antennaria neglecta var. <i>neodioica</i>	22
allspice, Carolina.....	29	Antennaria plantaginifolia	22
Alnus serrulata	27	Anthemis arvensis	22

Anthemis cotula	22
Anthoxanthum odoratum	60
Apiaceae	21
Apios americana	34
Apocynaceae	21
Apocynum cannabinum	21
Aquifoliaceae	22
Arabidopsis thaliana	28
Araceae	53
Aralia spinosa	22
Araliaceae	22
arbutus, trailing.....	33
Arctium minus	22
Arenaria serpyllifolia	30
Arisaema triphyllum	53
<i>Aristida curtissii</i>	60
Aristida dichotoma var. curtissii	60
Aristida oligantha	60
Aronia arbutifolia	46
Aronia melanocarpa	46
Arrhenatherum elatius	60
arrow-arum.....	53
arrowhead, broadleaf	53
arrowhead, Engelmann's.....	53
arrowhead, hairy broadleaf.....	53
arrow-wood.....	20
arrow-wood, linden.....	20
Artemisia annua	23
Artemisia vulgaris	23
arthraxon	60
Arthraxon hispidus	60
artichoke, Jerusalem.....	25
Asclepiadaceae	22
Asclepias incarnata	22
<i>Asclepias incarnata</i> var. <i>incarnata</i>	22
<i>Asclepias incarnata</i> var. <i>pulchra</i>	22
Asclepias syriaca	22
Asclepias tuberosa	22
Asclepias viridiflora	22
Ascomycophyta	12
<i>Ascyrum hypericoides</i>	31
ash, red	42
ash, white	41
Asparagaceae	54
asparagus.....	54
Asparagus officinalis	54
aspen, large toothed	48
asphodel, coastal false.....	59
Aspleniaceae	16
Asplenium platyneuron var. platyneuron	16

aster, calico	23
aster, late purple	23
aster, Maryland golden	23
aster, New England.....	23
aster, small-headed	23
aster, tall white	23
aster, white oldfield	23
Aster	23
Aster lanceolatus subsp. lanceolatus	23
Aster lateriflorus	23
*Aster novae-angliae	23
Aster patens var. patens	23
Aster pilosus var. pilosus	23
Aster puniceus	23
Aster racemosus	23
<i>Aster simplex</i>	23
<i>Aster vimineus</i>	23
Asteraceae	22
Athyrium filix-femina subsp. asplenoides ...	17
Atrichum angustatum	12
Atrichum crispum	12
Atriplex patula	31
Aulacomnium heterostichium	12
Aulacomnium palustre	12
Avena sativa	61
avens, white	46
azalea, swamp.....	33
azalea, wild	33
baby's breath, cushion	30
Balsaminaceae	27
Baptisia tinctoria	34
Barbarea verna	28
Barbarea vulgaris	28
barberry, Japanese	27
Barbula convoluta	12
Barbula fallax	12
barley, foxtail.....	63
barley, little.....	63
barnyard grass.....	62
barnyard grass, awnless.....	62
barnyard grass, rough	62
Bartonia paniculata	6, 10, 37
Bartonia virginica	8, 37
Bartramia pomiformis	12
basil, wild	38
beard-tongue, foxglove.....	49
bedstraw, Clayton's.....	47
bedstraw, sweet-scented	47
bedstraw, tiny-flowered.....	47
beebalm, lemon	39

beebalm, scarlet.....	39	bluegrass, rough-stemmed.....	64
beech, American	36	bluestem, little	64
beggars-ticks, common	23	bluets.....	47
beggars-ticks, small.....	23	Boehmeria cylindrica	50
beggars-ticks, three-lobed	23	bog-asphodel.....	59
beggars-ticks, tickseed	23	boneset.....	24
bellwort, perfoliate.....	59	Boraginaceae	27
bellwort, sessile-leaved	59	Botrychium dissectum	16
bent grass, colonial.....	60	Botrychium virginianum	16
bent grass, reed.....	61	bower, virgin's	45
bent grass, Rhode Island	60	Brachythecium laetum	13
bent grass, upland.....	60	Brasenia schreberi	28
bent, creeping.....	60	Brassicaceae	28
bent, rough	60	brome, barren.....	61
bent, velvet.....	60	brome, Japanese.....	61
Berberidaceae	27	brome, meadow	61
Berberis thunbergii	27	brome, poverty.....	61
Betula nigra	27	brome, smooth	61
Betulaceae	27	brome, soft.....	61
Bidens	46, 50	Bromus catharticus	61
Bidens bipinnata	23	Bromus commutatus	61
<i>Bidens comosa</i>	23	Bromus hordeaceus	61
<i>Bidens connata</i>	23	Bromus inermis	61
Bidens discoidea	23	Bromus japonicus	61
Bidens frondosa	23	<i>Bromus mollis</i>	61
Bidens polylepis	23	Bromus racemosus	61
Bidens tripartita	23	Bromus sterilis	61
Bignoniaceae	27	Bromus tectorum	61
bindweed, hedge	32	<i>Bromus unioloides</i>	61
birch, river	27	broomsedge.....	60
bittersweet, Oriental	30	Brotherella recurvans	13
blackberry, Allegheny	47	Bryhnia novae.-angliae	13
blackberry, Pennsylvania	47	Bryoandersonia illecebra	13
blackberry, southern.....	47	Bryophyta	12
black-eyed susan	26	Bryum argenteum	13
bladderwort, common	40	Bryum caespiticum	13
bladderwort, creeping	40	buckwheat, climbing false	44
bladderwort, zigzag	40	bugleweed, creeping	38
blanket-flower	25	Buglossoides arvensis	27
blazing star, grass-leaved	25	Bulbostylis capillaris	54
blazing star, thick-spiked	25	bulrush, cottongrass.....	56
Blechnaceae	16	bulrush, great	56
bloodroot.....	43	bulrush, leafy	56
blueberry, highbush.....	33	bulrush, Pursh's	56
blueberry, low	33	burdock, common	22
blue-eyed-grass	57	burnet, Canadian.....	47
bluegrass, annual.....	64	bur-reed, American.....	66
bluegrass, Canada	64	bush, indigo	34
bluegrass, Kentucky	64	bush, spice	39
bluegrass, narrow-leaved Kentucky	64	bush, strawberry	31

bush, sweet pepper.....	31
bush-clover, Chinese.....	35
bush-clover, creeping.....	35
bush-clover, hairy.....	35
bush-clover, slender.....	35
bush-clover, trailing.....	35
butter-and-eggs.....	49
buttercup, bristly.....	45
buttercup, bulbous.....	45
buttercup, cursed.....	45
buttercup, hairy.....	45
buttercup, kidney-leaf.....	45
buttonbush.....	47
buttonweed.....	47
Cabombaceae	28
<i>Calamagrostis cinnoides</i>	61
<i>Calamagrostis coarctata</i>	61
<i>Callicladium haldanianum</i>	13
Callitrichaceae	29
<i>Callitriche heterophylla</i>	29
<i>Callitriche stagnalis</i>	29
Calycanthaceae	29
<i>Calycanthus floridus</i> var. <i>glaucus</i>	29
<i>Calystegia sepium</i>	32
Campanulaceae	29
camphor-weed.....	25
campion, white.....	30
Campsis radicans	27
canary grass, reed.....	64
cancerwort, sharp-leaf.....	49
Cannabaceae	29
Caprifoliaceae	29
<i>Capsella bursa-pastoris</i>	28
<i>Cardamine concatenata</i>	28
<i>Cardamine hirsuta</i>	28
<i>Carduus nutans</i>	23
Carex	9
<i>Carex abscondita</i>	54
<i>Carex albicans</i>	54
<i>Carex albolutescens</i>	54
<i>Carex annectens</i>	54
<i>Carex aquatilis</i>	54
<i>Carex atlantica</i> var. <i>atlantica</i>	54
<i>Carex atlantica</i> var. <i>capillacea</i>	54
<i>Carex blanda</i>	54
<i>Carex cephalophora</i>	54
<i>Carex complanata</i> var. <i>complanata</i>	54
<i>Carex complanata</i> var. <i>hirsuta</i>	55
<i>Carex convoluta</i>	55
<i>Carex crinita</i>	54

<i>Carex debilis</i>	54
<i>Carex digitalis</i>	54
<i>Carex divisa</i>	54
Carex festucacea	54
Carex flaccosperma	54
<i>Carex flaccosperma</i> var. <i>glaucodea</i>	54
<i>Carex folliculata</i>	54
<i>Carex frankii</i>	54
<i>Carex glaucodea</i>	54
<i>Carex gracilescens</i>	55
<i>Carex hirsutella</i>	55
<i>Carex hormathodes</i>	55
<i>Carex howei</i>	54
<i>Carex incompta</i>	54
<i>Carex intumescens</i>	55
<i>Carex laevivaginata</i>	55
<i>Carex laxiculmis</i>	55
<i>Carex louisianica</i>	55
<i>Carex lupulina</i>	55
<i>Carex lurida</i>	55
<i>Carex normalis</i>	55
<i>Carex pennsylvanica</i>	55
<i>Carex projecta</i>	55
<i>Carex radiata</i>	55
<i>Carex rosea</i>	55
<i>Carex scoparia</i>	55
<i>Carex seorsa</i>	55
<i>Carex squarrosa</i>	55
<i>Carex stipata</i>	55
<i>Carex straminea</i>	55
<i>Carex stricta</i>	55
<i>Carex styloflexa</i>	55
<i>Carex swanii</i>	55
<i>Carex torta</i>	55
<i>Carex tribuloides</i> var. <i>reducta</i>	55
<i>Carex tribuloides</i> var. <i>tribuloides</i>	55
<i>Carex typhina</i>	55
<i>Carex virescens</i>	55
<i>Carex virescens</i> var. <i>swanii</i>	55
<i>Carex vulpinoidea</i>	55
<i>Carex vulpinoidea</i> var. <i>ambigua</i>	54
carp grass, small.....	60
carpetweed.....	41
Carpinus caroliniana	6, 27
<i>Carya alba</i>	38
<i>Carya glabra</i>	38
<i>Carya ovalis</i>	38
<i>Carya tomentosa</i>	38
Caryophyllaceae	30
<i>Cassia fasciculata</i>	34

<i>Cassia hebecarpa</i>	35	chestnut, American.....	36
Castanea dentata	36	chickweed.....	30
Castanea pumila	36	chickweed, clammy mouse-ear	30
cat's-ear.....	25	chickweed, giant.....	30
catalpa, southern	27	chickweed, mouse-ear	30
Catalpa bignonioides	27	chicory	23
catchfly, sleepy	30	Chimaphila maculata	45
catchfly, sweet william	30	Chimaphila umbellata	45
cattail, broad-leaf	66	chinquapin	36
cattail, narrowleaf	66	Chionanthus virginicus	41
Ceanothus americanus	46	chives.....	53
cedar, red.....	17	Chloris verticillata	61
Celastraceae	30	chokeberry, black	46
Celastrus orbiculatus	30	chokeberry, red	46
Cenchrus longispinus	61	Chondrilla juncea	23
* Centaurea cyanus	23	<i>Chrysanthemum leucanthemum</i>	25
Centaurea maculosa	23	<i>Chrysanthemum maximum</i>	25
Cephalanthus occidentalis	47	Chrysopsis mariana	23
Cerastium fontanum subsp. vulgare	30	chufa	55
Cerastium glomeratum	30	cicely, sweet	21
<i>Cerastium holosteoides</i>	30	Cichorium intybus	23
<i>Cerastium viscosum</i>	30	Cicuta maculata	21
<i>Cerastium vulgatum</i>	30	Cinna arundinacea	61
Ceratodon purpureus	13	cinquefoil, dwarf.....	46
Cercis canadensis	34	cinquefoil, oldfield	46
Chaenorrhinum minus	48	cinquefoil, rough.....	46
chain fern, netted.....	16	cinquefoil, silver-leaf.....	46
chain fern, Virginia.....	16	cinquefoil, upright	46
Chamaecrista fasciculata	34	Circaea lutetiana subsp. canadensis	42
Chamaecrista nictitans	34	Cirsium arvense	23
Chamaesyce maculata	34	Cirsium discolor	23
Chamaesyce nutans	34	Cirsium vulgare	24
chamomile, corn.....	22	Cistaceae	31
chamomile, stinking.....	22	Cladina subtenuis	12
* Chasmanthium latifolium	61	Cladonia caespiticia	12
Chasmanthium laxum	61	Cladonia chlorophaea	12
cheatgrass.....	61	Cladonia cristatella	12
cheeses	40	Cladonia incrassata	12
<i>Cheiranthus allionii</i>	28	Cladonia ochrochlora	12
Chelone glabra	49	Cladonia parasitica	12
Chenopodiaceae	31	Cladonia ramulosa	12
Chenopodium album	31	Cladonia squamosa	12
Chenopodium ambrosioides	31	Clasmatodon parvulus	13
Chenopodium leptophyllum	10, 31	Claytonia virginica	45
cherry, black.....	46	clearweed	50
chervil, wild	21	cleavers	47
chess, downy	61	Clematis virginiana	45
chess, hairy.....	61	Clethra	6
chess, Japanese.....	61	Clethra alnifolia	6, 31
chess, soft.....	61	Clethraceae	31

Clinopodium vulgare	38
clover, alsike	36
clover, crimson	36
clover, rabbit-foot	35
clover, red	36
clover, white	36
clover, zigzag	36
club-moss, appressed bog	15
club-moss, fan	15
club-moss, running	15
club-moss, tree	15
club-mosses	15
Clusiaceae	31
cocklebur	26
colt's-foot	26
Comandra umbellata	48
Commelina communis	54
Commelinaceae	54
coneflower, globular	26
coneflower, purple	24
Conoclinium coelestinum	24
Convallaria majalis	58
Convolvulaceae	32
Conyza canadensis	24
copal-tree	49
copperleaf, rhombic	34
copperleaf, short-stalk	34
coreopsis, lance-leaved	24
*Coreopsis lanceolata	24
*Coreopsis tinctoria	24
Coreopsis verticillata	24
Cornaceae	32
cornflower, garden	23
corn-salad, beaked	50
corn-salad, common	50
Cornus amomum	32
Cornus florida	6, 32
Coronilla varia	34
corydalis, pale	42
Corydalis flavula	42
Corylus americana	27
cosmos	24
*Cosmos bipinnatus	24
cottonwood	48
cowbane, stiff	21
cow-wheat, broad-leaf	49
crab-apple, Toringo	46
crabgrass, hairy	61
crabgrass, smooth	61
crabgrass, southern	61

cranesbill, Carolina	37
cranesbill, dove-foot	37
cranesbill, small-flower	37
Cratoneuron filicinum	13
creeper, trumpet	27
creeper, Virginia	51
<i>Crepis japonica</i>	26
cress, field	28
cress, hairy bitter	28
cress, mouse-ear	28
Crotalaria sagittalis	34
croton, tooth-leaved	34
Croton glandulosus	34
crowfoot, hooked	45
crowfoot, small-flowered	45
Cruciata pedemontana	10, 47
Cryptotaenia canadensis	21
cudweed, fragrant	25
cudweed, low	25
Cupressaceae	17
curls, blue	39
Cuscuta compacta	32
Cuscuta gronovii	32
Cuscutaceae	32
cut grass, rice	63
Cynodon dactylon	61
Cyperaceae	9, 54
cyperus, globose	55
<i>Cyperus brevifolioides</i>	56
Cyperus echinatus	55
Cyperus esculentus	55
<i>Cyperus filiculmis</i>	56
Cyperus iria	10, 55
Cyperus lancastris	10, 55
Cyperus lupulinus	56
<i>Cyperus ovularis</i>	55
Cyperus refractus	56
Cyperus retrorsus	56
Cyperus strigosus	56
cypress, bald	18
Cypripedium acaule	6, 10, 59
Dactylis glomerata	61
daffodil	53
daisy, oxeye	25
daisy, Shasta	25
*Dalea purpurea	35
dandelion	26
dandelion, dwarf	25
dandelion, potato	25
dangleberry	33

<i>Danthonia compressa</i>	61	dogbane, hemp	21
Danthonia spicata	61	dog-fennel	22
Datura stramonium	49	dogwood	32
Daucus carota	21	dogwood, knob-styled	32
dayflower	54	Draba verna	28
daylily, orange	57	dropseed, poverty	65
dead-nettle, purple	39	Dryopteridaceae	16
deerberry	33	Dryopteris carthusiana	16
Dennstaedtia punctilobula	16	Dryopteris cristata	16
Dennstaedtiaceae	16	Dryopteris intermedia	16
<i>Dentaria laciniata</i>	28	<i>Dryopteris noveboracensis</i>	17
Desmodium ciliare	35	<i>Dryopteris spinulosa</i>	16
Desmodium nudiflorum	35	<i>Dryopteris thelypteris</i>	17
Desmodium paniculatum	35	Duchesnea indica	46
devil, king	25	duckmeat, common	58
dewberry, bristly	47	duckweed, common	58
dewberry, northern	47	duckweed, greater	58
dewberry, southern	47	duckweed, minute	58
Dianthus armeria	30	duckweed, swollen	58
* Dianthus barbatus	30	duckweed, turion	58
<i>Dichanthelium clandestinum</i>	63	Dulichium arundinaceum	56
<i>Dichanthelium depauperatum</i>	63	Ebenaceae	33
<i>Dichanthelium dichotomum</i>	64	* Echinacea purpurea	24
<i>Dichanthelium scoparium</i>	64	Echinochloa colona	10, 62
dicotyledons	20	Echinochloa crus-galli	62
Dicranella heteromalla	13	Echinochloa muricata var. <i>microstachya</i>	62
Dicranum condensatum	13	Echinochloa muricata var. <i>muricata</i>	62
Dicranum flagellare	13	<i>Eclipta alba</i>	24
Dicranum flagellare var. <i>minutissimum</i>	13	Eclipta prostrata	24
Dicranum scoparium	13	Elaeagnaceae	33
Digitaria ciliaris	61	Elaeagnus angustifolia	33
Digitaria ischaemum	61	elder, box	20
<i>Digitaria sanguinalis</i>	61	elderberry, common	20
Diodia teres	47	Eleocharis acicularis	56
<i>Dioscorea batatas</i>	57	Eleocharis obtusa	56
Dioscorea oppositifolia	57	Eleocharis olivacea	56
Dioscorea quaternata	57	Eleocharis quadrangulata	56
Dioscorea villosa	57	Eleocharis tenuis	56
Dioscoreaceae	57	Elephantopus carolinianus	24
Diospyros virginiana	6, 33	elephant's foot, leafy	24
Diphasiastrum digitatum	15	Eleusine indica	62
Dipsacaceae	32	elm, American	50
Dipsacus fullonum subsp. <i>fullonum</i>	32	elm, English	50
Dipsacus fullonum subsp. <i>sylvestris</i>	32	elm, slippery	50
Ditrichum lineare	13	Elymus repens	62
dock, bitter	44	Elymus riparius	62
dock, curly	44	<i>Elytrigia repens</i>	62
dock, spatter	41	Entodon seductrix	13
dodder	32	epazote	31
dodder, compact	32	Epigaea repens	33

Epilobium coloratum	42
Equisetaceae	15
Equisetophyta	15
Equisetum arvense	15
Eragrostis	9, 24
Eragrostis cilianensis	62
Eragrostis curvula	62
Eragrostis hirsuta	10, 62
Eragrostis pectinacea var. pectinacea	62
Eragrostis spectabilis	8, 62
Erechtites hieraciifolia	24
Ericaceae	33
Erigeron annuus	24
Erigeron philadelphicus	24
Erigeron strigosus	24
Erodium cicutarium	37
Eruca sativa	28
Erysimum asperum	28
*Erysimum marshallii	28
Erythronium americanum	58
*Eschscholzia californica	42
eulalia	63
Euonymus alatus	30
Euonymus americanus	31
Euonymus europaeus	31
euonymus , winged.....	30
Eupatorium altissimum	24
<i>Eupatorium coelestinum</i>	24
Eupatorium dubium	24
Eupatorium fistulosum	24
Eupatorium hyssopifolium	24
Eupatorium maculatum	24
Eupatorium perfoliatum	24
Eupatorium pilosum	10, 24
Eupatorium purpureum	24
Eupatorium rotundifolium	24
Eupatorium serotinum	24
Euphorbia corollata	8, 34
Euphorbia ipecacuanhae	10, 34
<i>Euphorbia maculata</i>	34
<i>Euphorbia nutans</i>	34
<i>Euphorbia preslii</i>	34
<i>Euphorbia supina</i>	34
Euphorbiaceae	34
Eurhynchium pulchellum	13
Euthamia graminifolia	25
Fabaceae	34
Fagaceae	36
Fagus grandifolia	3, 36
fern , bracken.....	16

fern , Christmas.....	16
fern , cinnamon.....	17
fern , hay-scented.....	16
fern , marsh.....	17
fern , New York.....	17
fern , rattlesnake.....	16
fern , royal.....	17
fern , sensitive.....	17
fern , southern lady.....	17
ferns	16
fescue , Chewings.....	62
fescue , hair.....	62
fescue , hard.....	62
fescue , nodding.....	62
fescue , red.....	62
fescue , sheep.....	62
fescue , tall.....	62
Festuca arundinacea	62
Festuca filiformis	62
<i>Festuca obtusa</i>	62
*Festuca ovina	62
<i>Festuca ovina</i> var. <i>capillata</i>	62
Festuca rubra	62
Festuca rubra var. commutata	62
Festuca subverticillata	62
<i>Festuca tenuifolia</i>	62
Festuca trachyphylla	9, 10, 62
fetterbush	33
filaree	37
fireweed	24
flag , northern blue.....	57
Flavoparmelia caperata	12
flax , prairie.....	40
flax , ridged yellow.....	40
fleabane , annual.....	24
fleabane , Philadelphia.....	24
flower , cardinal.....	29
flower , carrion.....	66
foot , lion's.....	25
forget-me-not , woodland.....	27
foxtail , giant.....	65
foxtail , green.....	65
foxtail , knotroot.....	65
foxtail , yellow.....	65
Fragaria virginiana	46
Fraxinus americana	41
Fraxinus pennsylvanica	42
frostweed	31
*Gaillardia pulchella	25
Galearis spectabilis	59

galinsoga	25	grass, cover-all	63
Galinsoga parviflora	25	grass, dallis	64
Galium aparine	47	grass, deer-tongue	63
Galium circaeazans	47	grass, gama	65
<i>Galium pedemontanum</i>	47	grass, goose	62
Galium tinctorium	47	grass, Indian	65
Galium triflorum	47	grass, manna	62
gall of the earth	25	grass, orchard	61
garlic, wild	53	grass, poverty	61
Gaultheria procumbens	33	grass, rescue	61
Gaylussacia	6	grass, silver hair	60
Gaylussacia baccata	33	grass, switch	64
Gaylussacia dumosa	33	grass, velvet	63
Gaylussacia frondosa	33	grass, white	63
Gentianaceae	37	grass, windmill	61
Geraniaceae	37	grass, yellow-eyed	66
geranium, spotted	37	grass, zoysia	65
Geranium carolinianum var. <i>confertiflorum</i>	37	Grimmia apocarpa	13
Geranium maculatum	37	gromwell, corn	27
Geranium molle	37	Grossulariaceae	37
Geranium pusillum	37	ground-cherry, clammy	49
Geum canadense	46	groundnut	34
gill-over-the-ground	38	groundsel, common	26
ginseng, dwarf	22	gum, black	41
Glechoma hederacea	38	gum, sweet	38
glow, wild golden	26	gymnosperms	17
Glyceria obtusa	62	*Gypsophila muralis	30
Glyceria striata	63	<i>Habenaria flava</i>	59
Gnaphalium obtusifolium	25	<i>Habenaria lacera</i>	59
Gnaphalium uliginosum	25	Haloragaceae	38
goat's-beard, fistulous	26	Hamamelidaceae	38
goat's-beard, showy	26	Hamamelis virginiana	38
goat's-beard, yellow	26	Haplocladium microphyllum	13
goldenrod, axillary	26	Haplocladium virginianum	13
goldenrod, dusty	26	haw, black	20
goldenrod, early	26	hawkweed	25
goldenrod, flat-topped	25	hazelnut, American	27
goldenrod, gray	26	heal-all	39
goldenrod, tall	26	Hedeoma pulegioides	38
goldenrod, wrinkle-leaved	26	Hedera helix	22
Goodyera pubescens	59	Hedwigia ciliata	13
gooseberry, prickly	37	Helianthemum canadense	31
goosefoot, narrow-leaf	31	Helianthus tuberosus	25
gound-cherry, smooth	50	hellebore, American false	59
grape fern, lace-frond	16	Helodium paludosum	13
grape, fox	51	Hemerocallidaceae	57
grape, riverbank	51	Hemerocallis fulva	57
grape, winter	51	hemlock	18
grape-hyacinth, common	59	hempvine, climbing	25
grass, bermuda	61	henbit	39

Hercules'-club	22
*Hesperis matronalis	28
*Heterotheca subaxillaris	25
Hibiscus moscheutos	40
<i>Hibiscus palustris</i>	40
Hibiscus syriacus	40
hickory, mockernut	38
hickory, pignut	38
Hieracium caespitosum	25
Hieracium gronovii	25
<i>Hieracium pratense</i>	25
Hieracium venosum	25
Holcus lanatus	63
holly, American	22
honeysuckle, hairy-leaved	30
honeysuckle, Japanese	29
honeysuckle, Maack's	29
honeysuckle, Tartarian	30
hop	29
hop-clover, low	35, 36
Hordeum jubatum	63
Hordeum pusillum	63
hornbeam, American	27
horsebrier	66
horsemint	39
horsenettle	50
horsetail, field	15
horsetails	15
horseweed	24
houstonia, large	47
Houstonia caerulea	47
Houstonia purpurea var. purpurea	47
huckleberry, black	33
huckleberry, blue	33
huckleberry, dwarf	33
Humulus lupulus var. pubescens	29
Hydrangeaceae	38
Hydrocotyle americana	21
Hypericum canadense	31
Hypericum gentianoides	31
Hypericum hypericoides	31
Hypericum mutilum	32
Hypericum perforatum	32
Hypericum punctatum	32
<i>Hypericum virginicum</i>	32
Hypnum curvifolium	13
Hypnum imponens	13
Hypnum lindbergii	13
Hypnum pallescens	13
Hypochaeris radicata	25

Hypoxidaceae	57
Hypoxis hirsuta	57
Ilex laevigata	22
Ilex opaca	22
Ilex verticillata	22
<i>Impatiens biflora</i>	27
Impatiens capensis	27
indigo, false	34
ipecac, wild	34
Ipomoea coccinea	32
Ipomoea hederacea	32
Ipomoea lacunosa	32
Ipomoea pandurata	32
Iridaceae	57
Iris versicolor	3, 57
ironweed, New York	26
Isopterygium elegans	14
Isopterygium tenerum	14
Isotria verticillata	59
ivy, English	22
ivy, ground	38
ivy, poison	21
jack-in-the-pulpit	53
jewelweed	27
jimsonweed	49
joe-pye-weed, hollow-stemmed	24
joe-pye-weed, spotted	24
joe-pye-weed, sweet-scented	24
joe-pye-weed, three-nerved	24
Juglandaceae	38
Juglans nigra	38
jumpseed	44
Juncaceae	57
Juncus	9
Juncus acuminatus	57
Juncus brachycarpus	10, 57
Juncus canadensis	57
Juncus diffusissimus	10, 58
Juncus dudleyi	58
Juncus effusus var. solutus	58
Juncus marginatus	58
Juncus scirpoides	58
Juncus secundus	58
Juncus subcaudatus	58
Juncus tenuis	58
<i>Juncus tenuis</i> var. <i>dudleyi</i>	58
jungle-rice	62
Juniperus virginiana	17
Kalmia angustifolia	10, 33
Kalmia latifolia	33

Kickxia elatine	49	Lespedeza cuneata	35
knapweed, spotted.....	23	Lespedeza hirta	35
knawel.....	30	Lespedeza procumbens	35
knotweed, Japanese.....	44	Lespedeza repens	35
knotweed, narrowleaf.....	44	<i>Lespedeza stipulacea</i>	35
knotweed, oval-leaf.....	44	<i>Lespedeza striata</i>	35
knotweed, prostrate.....	44	Lespedeza virginica	35
Krigia dandelion	10, 25	lettuce, Florida blue.....	25
Krigia virginica	25	lettuce, lamb's.....	50
Kummerowia stipulacea	35	lettuce, prickly.....	25
Kummerowia striata	35	lettuce, tall.....	25
Kyllinga gracillima	56	lettuce, willow-leaf.....	25
Lactuca canadensis	25	*Leucanthemum maximum	25
Lactuca floridana	25	Leucanthemum vulgare	25
Lactuca saligna	25	Leucobryum albidum	14
<i>Lactuca scariola</i>	25	Leucobryum glaucum	14
Lactuca serriola	25	Leucothoe racemosa	33
lady slipper, pink.....	59	Liatris graminifolia	25
lady slipper, stemless.....	59	*Liatris pycnostachya	25
lamb's-quarter.....	31	lichens.....	12
Lamiaceae	38	licorice, wild.....	47
Lamium amplexicaule	39	Ligustrum obtusifolium	42
Lamium purpureum	39	Ligustrum quihoui	42
Lauraceae	39	Liliaceae	58
laurel, mountain.....	33	Liliopsida	53
laurel, sheep.....	33	Lilium superbum	58
lead-plant.....	34	lily of the valley.....	58
<i>Lechea leggettii</i>	31	lily, trout.....	58
Lechea minor	31	lily, turk's-cap.....	58
Lechea pulchella	31	lily-turf, grassy.....	58
Leersia oryzoides	63	lily-turf, spiked.....	58
Leersia virginica	63	Linaceae	40
Lemna	3	Linaria canadensis	49
Lemna gibba	58	Linaria vulgaris	49
Lemna minor	58	Lindera benzoin	3, 6, 39
Lemna perpusilla	58	Lindernia dubia	49
Lemna turionifera	58	*Linum lewisii	40
Lemnaceae	9, 58	Linum striatum	40
Lentibulariaceae	40	Liquidambar styraciflua	3, 6, 38
Leonurus cardiaca	39	Liriodendron tulipifera	3, 6, 40
Lepidium campestre	28	Liriope graminifolia	58
Lepidium virginicum	28	Liriope spicata	58
Leptoloma cognatum	63	<i>Lithospermum arvense</i>	27
Leskea gracilescens	14	lobelia, downy.....	29
Leskea polycarpa	14	lobelia, great blue.....	29
lespedeza, Japanese.....	35	Lobelia cardinalis	29
lespedeza, Korean.....	35	Lobelia inflata	29
lespedeza, sericea.....	35	Lobelia puberula	29
lespedeza, shrubby.....	35	*Lobelia siphilitica	29
Lespedeza bicolor	35	locust, black.....	35

Lolium multiflorum	63	Malva neglecta	40
Lolium perenne	63	Malvaceae	40
<i>Lolium perenne</i> subsp. <i>multiflorum</i>	63	manna grass, fowl	63
Lonicera fragrantissima	29	maple, red	20
Lonicera japonica	10, 29	maple, silver	20
Lonicera maackii	29	Matricaria matricarioides	25
Lonicera morrowii	30	may-apple	27
Lonicera tatarica	30	mayflower, Canada	59
looking-glass, Venus's	29	meadow beauty	40
loosestrife, whorled	45	meadow beauty, Maryland	40
Lotus corniculatus	35	meadow grass, fowl	63
lovegrass	62	meadow-rue, tall	45
lovegrass, big-top	62	Medeola virginiana	59
lovegrass, purple	62	Medicago sativa	35
lovegrass, weeping	62	Melampyrum lineare var. <i>latifolium</i>	49
Ludwigia alternifolia	42	Melastomataceae	40
Ludwigia palustris	42	Melilotus albus	35
lupine, wild	35	Melilotus officinalis	35
Lupinus perennis	35	Mentha × <i>citrata</i>	39
Luzula bulbosus	58	Mentha spicata	39
Luzula multiflora	58	Microstegium vimineum	3, 6, 9, 63
<i>Lychnis alba</i>	30	Mikania scandens	25
Lycopodiaceae	15	milkweed, common	22
Lycopodiella appressa	15	milkweed, green	22
Lycopodiophyta	15	milkweed, swamp	22
Lycopodium clavatum	15	milkwort, Curtiss's	43
<i>Lycopodium complanatum</i> var. <i>flabelliforme</i> ..	15	milkwort, Maryland	44
<i>Lycopodium digitatum</i>	15	milkwort, Nuttall's	44
<i>Lycopodium flabelliforme</i>	15	milkwort, orange	43
<i>Lycopodium inundatum</i> var. <i>bigelovii</i>	15	millet, foxtail	65
Lycopodium obscurum	15	mimosa	34
Lycopus uniflorus	39	Mimulus alatus	49
Lycopus virginicus	39	mint, lemon	39
Lyonia ligustrina	33	Miscanthus sinensis	63
Lyonia mariana	33	mistflower, blue	24
Lysimachia quadrifolia	45	Mitchella repens	47
Maclura pomifera	41	Molluginaceae	41
Magnolia acuminata	1, 40	Mollugo verticillata	41
Magnolia virginiana	40	*Monarda citriodora	39
magnolia, sweetbay	40	*Monarda didyma	39
Magnoliaceae	40	Monarda punctata	39
Magnoliophyta	20	monkey flower, sharp-wing	49
Magnoliopsida	20	monocotyledons	53
Maianthemum canadense	59	Monotropa hypopithys	41
<i>Maianthemum racemosum</i>	59	Monotropa uniflora	41
male-berry	33	Monotropaceae	41
mallow, common	40	Moraceae	41
mallow, rose	40	morning-glory, ivy-leaved	32
<i>Malus sieboldii</i>	46	morning-glory, white	32
Malus toringo	10, 46	Morus alba	41

Morus rubra	41	oak, southern red	36
mosses	12	oak, Spanish	36
motherwort, common	39	oak, swamp chestnut	36
mountain-mint, clustered	39	oak, swamp white	36
mountain-mint, narrow-leaved	39	oak, white	36
mugwort, common	23	oak, willow	37
Muhlenbergia schreberi	63	oaks	36
mulberry, red	41	oatgrass, tall	60
mulberry, white	41	oats	61
mullein, great	49	oats, Indian wood	61
mullein, moth	49	oats, slender wood	61
Muscari botryoides	59	Oenothera biennis var. biennis	42
mustard, garlic	28	Oenothera fruticosa	42
mustard, hedge	28	Oleaceae	41
Myosotis arvensis	27	oleaster	33
<i>Myosotis micrantha</i>	27	olive, Russian	33
Myosotis stricta	27	Onagraceae	42
* Myosotis sylvatica	27	Onoclea sensibilis	17
Myriophyllum aquaticum	38	Ophioglossaceae	16
nannyberry	20	Ophioglossum pycnostichum	10, 17
Narcissus pseudonarcissus	53	orach, halberdleaf	31
Narthecium americanum	59	orange, mock	38
needles, Spanish	23	orange, osage	41
Nepalese browntop	63	orchid, crane fly	60
nettle, false	50	orchid, pale green	59
nettle, slender stinging	50	orchid, ragged fringed	59
nightshade, black	50	Orchidaceae	59
nightshade, climbing	50	orchis, showy	59
nightshade, enchanter's	42	<i>Orchis spectabilis</i>	59
nimblewill	63	Ornithogalum umbellatum	59
ninebark	46	Osmorhiza longistylis	21
Nuphar	6, 9	Osmunda cinnamomea	17
Nuphar advena	3, 41	Osmunda regalis	17
nutsedge, yellow	55	Osmundaceae	17
<i>Nuttallanthus canadensis</i>	49	Oxalidaceae	42
Nymphaea	6, 9	Oxalis	42
Nymphaea odorata	41	<i>Oxalis dillenii</i>	42
Nymphaea odorata f. rubra	41	Oxalis europaea	42
Nymphaeaceae	41	Oxalis grandis	42
Nyssa sylvatica	6, 41	Oxalis stricta	42
Nyssaceae	41	Oxalis violacea	42
oak, black	37	Oxypolis rigidior	21
oak, blackjack	36	Panax trifolius	3, 11, 22
oak, chestnut	37	panic grass, beaked	63
oak, northern red	37	panic grass, Bosc's	63
oak, pin	37	panic grass, bushy	64
oak, post	37	panic grass, common	63
oak, saw-tooth	36	panic grass, fall	63
oak, scarlet	36	panic grass, starved	63
oak, shingle	36	panic grass, variable	63

panic grass, warty	64	peach.....	46
Panicum	9, 63	peanut, hog	34
Panicum subg. Dichanthelium	63	pear, Bradford.....	46
Panicum acuminatum var. fasciculatum	63	pellitory, Pennsylvania	50
Panicum acuminatum var. implicatum	63	Peltandra virginica	3, 53
Panicum acuminatum var. lindheimeri	63	pennycress, field.....	28
<i>Panicum agrostoides</i>	64	pennyroyal, American	38
Panicum anceps var. anceps	63	Penstemon digitalis	49
Panicum boscii	63	Penthorum sedoides	48
Panicum capillare	63	peppergrass, poor-man's	28
Panicum clandestinum	63	perilla.....	39
Panicum commutatum var. ashei	63	Perilla frutescens	39
Panicum depauperatum	63	periwinkle, common.....	21
Panicum dichotomiflorum	63	persimmon	33
Panicum dichotomum var. dichotomum	64	<i>Petalostemon purpureus</i>	35
Panicum dichotomum var. lucidum	64	Phalaris arundinacea	64
Panicum dichotomum var. ramulosum	64	Philadelphus coronarius	38
<i>Panicum huachucae</i>	63	Phleum pratense	64
<i>Panicum lindheimeri</i>	63	phlox, meadow	43
<i>Panicum lucidum</i>	64	*Phlox maculata	43
<i>Panicum microcarpon</i>	64	Phlox paniculata	43
<i>Panicum polyanthes</i>	64	Phragmites australis	64
Panicum rigidulum var. elongatum	64	<i>Phragmites communis</i>	64
Panicum rigidulum var. rigidulum	64	Phyllanthus caroliniensis	34
Panicum scoparium	64	Physalis heterophylla	49
Panicum sphaerocarpon var. isophyllum	64	Physalis longifolia var. subglabrata	50
<i>Panicum stipitatum</i>	64	<i>Physalis subglabrata</i>	50
Panicum verrucosum	64	Physcia dimidiata	12
Panicum virgatum	6, 64	Physcia millegrana	12
pansy, European field	51	Physocarpus opulifolius	46
pansy, field.....	51	Phytolacca americana	43
pansy, Rafinesque's wild.....	51	Phytolaccaceae	43
*Papaver nudicaule	42	pickerel-weed	65
*Papaver rhoeas	43	pignut, sweet.....	38
Papaveraceae	42	pigweed, redroot.....	20
Parietaria pensylvanica	50	pigweed, smooth.....	20
parrot's feather	38	Pilea pumila	50
Parthenocissus quinquefolia	51	pimpernel, false	49
partridgeberry.....	47	pimpernel, scarlet	45
partridge-pea, large-flowered.....	34	Pinaceae	17
partridge-pea, small-flowered	34	pine, loblolly.....	17
paspalum, slender.....	64	pine, pitch	17
paspalum, smooth	64	pine, Virginia.....	18
<i>Paspalum ciliatifolium</i>	64	pine, yellow	17
<i>Paspalum circulare</i>	64	pinemap.....	41
Paspalum dilatatum	64	pineweed.....	31
Paspalum laeve	64	pink, Deptford	30
<i>Paspalum pubescens</i>	64	pink, marsh	37
Paspalum setaceum	64	Pinophyta	17
Paulownia tomentosa	49	Pinus echinata	17

Pinus rigida	17
Pinus taeda	6, 17
Pinus virginiana	6, 18
pinweed, Leggett's	31
pinweed, thyme-leaf.....	31
pinxter-flower	33
pipe, Indian	41
pipsissewa	45
Plagiomnium cuspidatum	14
Plagiothecium cavifolium	14
plant, pitcher	48
Plantaginaceae	43
Plantago aristata	43
Plantago lanceolata	43
Plantago major	43
Plantago rugelii	43
Plantago virginica	43
plantain, bracted.....	43
plantain, buck.....	43
plantain, common.....	43
plantain, hoary.....	43
plantain, Rugel's.....	43
Platanaceae	43
Platanthera flava var. herbiola	59
Platanthera lacera	59
Platanus occidentalis	43
Platygyrium repens	14
× Pleuriditrichum marylandicum	14
Pleuridium subulatum	14
Poa	9
Poa annua	64
Poa compressa	64
Poa pratensis subsp. angustifolia	10, 64
Poa pratensis subsp. pratensis	64
Poa trivialis	64
Poaceae	9, 60
Podophyllum peltatum	27
Pogonatum pensilvanicum	14
pogonia, whorled.....	59
Pohlia nutans	14
pokeweed	43
Polemoniaceae	43
Polygala curtissii	43
Polygala lutea	8, 43
Polygala mariana	44
Polygala nuttallii	44
Polygalaceae	43
Polygonaceae	44
Polygonatum biflorum	59
Polygonum arenastrum	44

Polygonum arifolium	3, 44
Polygonum aviculare	44
Polygonum bellardii	44
Polygonum cespitosum	44
Polygonum cuspidatum	44
Polygonum hydropiper	44
Polygonum hydropiperoides	44
Polygonum lapathifolium	44
<i>Polygonum neglectum</i>	44
Polygonum pensylvanicum	44
Polygonum perfoliatum	44
Polygonum perforatum	9
Polygonum persicaria	44
Polygonum punctatum	44
Polygonum sagittatum	44
Polygonum scandens	44
Polygonum virginianum	44
Polypodiophyta	16
Polystichum acrostichoides	16
Polytrichastrum ohioense	14
Polytrichum commune	14
Polytrichum juniperinum	14
Polytrichum piliferum	14
pond-lily, yellow.....	41
pondweed, horned.....	65
pondweed, small	65
pondweed, variable.....	65
Pontederia cordata	65
Pontederiaceae	65
poplar, silverleaf.....	48
poplar, white	48
poppy, California.....	42
poppy, corn	43
poppy, Iceland	42
Populus alba	48
Populus deltoides	48
Populus grandidentata	48
Portulaca oleracea	45
Portulacaceae	45
possum-haw.....	20
Potamogeton diversifolius	65
Potamogeton pusillus	65
Potamogetonaceae	65
potato-vine, wild.....	32
Potentilla argentea	46
Potentilla canadensis	46
<i>Potentilla monspeliensis</i>	46
Potentilla norvegica var. hirsuta	46
Potentilla recta	46
Potentilla simplex	46

prairie-clover, purple	35
Prenanthes serpentaria	25
primrose, evening.....	42
Primulaceae	45
privet, border.....	42
Prunella vulgaris	39
Prunus persica	46
Prunus serotina	6, 46
Pteridium aquilinum	16
Punctelia rudecta	12
purpletop	65
purse, shepherd's	28
purslane	45
purslane, water	42
pussy-toes, field	22
pussy-toes, plantain-leaved	22
*Pycnanthemum muticum	39
Pycnanthemum tenuifolium	39
Pylaisiella polyantha	14
Pyrolaceae	45
<i>Pyrus arbutifolia</i>	46
Pyrus calleryana Decne	46
<i>Pyrus sieboldii</i>	46
quackgrass.....	62
Queen Anne's lace.....	21
Quercus	36
Quercus acutissima	36
Quercus alba	3, 6, 36
Quercus bicolor	36
Quercus coccinea	36
Quercus falcata	6, 36
Quercus imbricaria	36
Quercus lyrata	36
Quercus marilandica	6, 36
Quercus michauxii	36
Quercus montana	6, 8, 37
Quercus palustris	3, 6, 37
Quercus phellos	3, 6, 37
<i>Quercus prinus</i>	37
Quercus rubra	6, 37
Quercus stellata	36, 37
Quercus velutina	6, 37
ragweed, common.....	22
ragweed, great.....	22
ragwort, Small's	26
Ranunculaceae	45
Ranunculus abortivus	45
Ranunculus bulbosus	45
Ranunculus hispidus	45
Ranunculus recurvatus	45

Ranunculus sardous	45
Ranunculus sceleratus	45
raspberry, black	47
*Ratibida pinnata	26
rattlebox.....	34
rattlesnake-plantain, downy.....	59
rattlesnake-weed.....	25
redbud.....	34
redstar	32
redtop.....	60
reed, common	64
reed, giant	64
Rhamnaceae	46
Rhamnus cathartica	46
Rhexia mariana	40
Rhexia virginica	40
<i>Rhododendron nudiflorum</i>	33
Rhododendron periclymenoides	33
Rhododendron viscosum	33
Rhus copallina	21
Rhus glabra	21
<i>Rhus hirta</i>	21
<i>Rhus radicans</i>	21
Rhus typhina	21
<i>Rhus vernix</i>	21
Rhynchospora capitellata	56
Rhynchospora gracilentia	6, 56
Rhynchospora microcephala	6, 10, 56
Ribes cynosbati	37
richweed	50
Robinia pseudoacacia	35
robin's plantain, poor	25
rocket, dame's	28
rocket, garden	28
rocket, yellow	28
root, Indian cucumber.....	59
<i>Rorippa islandica</i>	28
Rorippa palustris subsp. palustris	28
Rosa multiflora	47
Rosa virginiana	47
Rosaceae	46
rose, multiflora	47
rose, pasture.....	47
rose of Sharon.....	40
Rubiaceae	47
Rubus allegheniensis	47
Rubus argutus	47
Rubus enslenii	47
Rubus flagellaris	47
Rubus hispidus	47

Rubus occidentalis	47	Schoenoplectus validus	56
Rubus pensilvanicus	47	Scirpus cyperinus	56
Rubus phoenicolasius	47	Scirpus georgianus	56
Rudbeckia hirta	26	Scirpus polyphyllus	56
Rudbeckia laciniata	26	<i>Scirpus pungens</i>	56
rue, goat's.....	35	<i>Scirpus purshianus</i>	56
Rumex acetosella	44	<i>Scirpus validus</i>	56
Rumex crispus	44	Scleranthus annuus	30
Rumex obtusifolius	44	scorpion-grass, blue	27
rush, bulbous wood	58	scorpion-grass, mouse-ear	27
rush, Canadian.....	57	screwstem	37
rush, common wood.....	58	screwstem, yellow	37
rush, Dudley's.....	58	Scrophulariaceae	48
rush, path.....	58	Scutellaria elliptica	39
rush, soft.....	58	Scutellaria integrifolia	39
rye	64	Scutellaria lateriflora	39
ryegrass, annual.....	63	Secale cereale	64
ryegrass, perennial	63	sedge, cat-tail	55
Sabatia angularis	37	sedge, fescue.....	54
sage, lyre-leaf.....	39	sedge, fox.....	55
Sagittaria engelmanniana	53	sedge, Frank's	54
Sagittaria latifolia var. <i>latifolia</i>	53	sedge, hop.....	55
Sagittaria latifolia var. <i>pubescens</i>	53	sedge, Louisiana	55
St. Andrew's cross.....	31	sedge, Pennsylvania.....	55
St. Johnswort, common.....	32	sedge, squarrose.....	55
St. Johnswort, dwarf	32	sedge, three-square	56
St. Johnswort, marsh.....	32	sedge, woolgrass.....	56
St. Johnswort, spotted	32	seedbox	42
Salicaceae	48	Selaginella apoda	15
Salix babylonica	48	Selaginellaceae	15
Salix nigra	48	selfheal	39
Salvia lyrata	39	Sematophyllum adnatum	14
Sambucus canadensis	20	Sematophyllum demissum	14
sand-spurrey	30	Senecio anonymus	26
sandwort, broad-leaf	30	<i>Senecio smallii</i>	26
Sanguinaria canadensis	43	Senecio vulgaris	26
Sanguisorba canadensis	47	Senna hebecarpa	35
Sanicula canadensis	21	senna, wild	35
Santalaceae	48	serviceberry	46
Saponaria officinalis	30	Setaria faberi	65
Sarracenia purpurea	6, 10, 48	<i>Setaria geniculata</i>	65
Sarraceniaceae	48	<i>Setaria glauca</i>	65
sassafras	39	Setaria italica	65
Sassafras albidum	6, 39	Setaria parviflora	65
<i>Satureja vulgaris</i>	38	Setaria pumila	65
sawbrier.....	66	Setaria viridis	65
Saxifragaceae	48	shadbush, serviceberry	46
Schizachyrium scoparium	8, 64	sheep-sorrel, common.....	44
Schoenoplectus pungens	56	shield, water.....	28
Schoenoplectus purshianus	56	Silene antirrhina	30

*Silene armeria	30
Silene latifolia subsp. alba	30
silk-tree.....	34
silver grass, Chinese	63
Simaroubaceae	49
Sisymbrium officinale	28
Sisyrinchium angustifolium	57
*Sisyrinchium bellum	57
<i>Sisyrinchium graminoides</i>	57
six-weeks grass	65
six-weeks grass, rat-tail.....	65
skeleton-weed	23
skullcap, blue	39
skullcap, hairy	39
skullcap, large	39
skunk-cabbage	53
smartweed, dotted	44
smartweed, Pennsylvania.....	44
smartweed, swamp.....	44
Smilacaceae	66
Smilacina racemosa	10, 59
Smilax glauca	66
Smilax herbacea	66
Smilax rotundifolia	66
snakeroot, black	21
snapdragon, dwarf.....	48
soapwort.....	30
Solanaceae	49
Solanum carolinense	50
Solanum dulcamara	50
Solanum nigrum	50
<i>Solidago altissima</i>	26
Solidago caesia	26
Solidago canadensis var. scabra	26
<i>Solidago elliotii</i>	26
Solidago erecta	26
<i>Solidago graminifolia</i>	25
Solidago juncea	8, 26
Solidago latissimifolia	10, 26
Solidago nemoralis	26
Solidago puberula	26
Solidago rugosa	26
Solidago rugosa subsp. aspera	26
solomon's seal, false.....	59
solomon's seal, true.....	59
Sonchus asper	26
Sorghastrum nutans	65
sow-thistle, spiny-leaved	26
Sparganiaceae	66
Sparganium americanum	66

spearmint	39
spearscale.....	31
<i>Specularia perfoliata</i>	29
speedwell, bird's-eye	49
speedwell, common.....	49
speedwell, corn.....	49
speedwell, field.....	49
speedwell, gray field.....	49
speedwell, ivy-leaf.....	49
speedwell, purslane	49
speedwell, thyme-leaf.....	49
Spergula arvensis	30
Spergularia rubra	30
Sphagnum capillifolium	14
Sphagnum compactum	14
Sphagnum imbricatum	14
Sphagnum palustre	14
Sphagnum recurvum	14
Sphagnum secundum	14
Sphagnum subsecundum	14
Sphenopholis nitida	65
spiderwort, Virginia.....	54
spike-moss, meadow	15
spike-mosses.....	15
spikerush, blunt	56
spikerush, needle	56
spikerush, olive.....	56
spikerush, slender	56
spikerush, square-stem	56
spindle-tree, European.....	31
Spiranthes praecox	60
Spiranthes vernalis	60
Spirodela polyrhiza	58
spleenwort, ebony.....	16
Sporobolus vaginiflorus	65
spring-beauty	45
spurge, flowering.....	34
spurge, spotted.....	34
spurrey, corn.....	30
staggerbush.....	33
stargrass, yellow	57
star-of-Bethlehem.....	59
Steerecleus serrulatus	14
Stellaria aquatica	30
Stellaria graminea	30
Stellaria media	30
stilt grass.....	63
stinkgrass.....	62
stitchwort, common	30
stonecrop, ditch	48

strawberry, Indian	46	thumb, Oriental lady's.....	44
strawberry, Virginia	46	thumb, spotted lady's.....	44
strawberry, wild	46	ticklegrass	60
Strophostyles helvula	35	tickseed, golden	24
succory, gum	23	tickseed, longstalk	24
sumac, dwarf	21	tickseed, whorled	24
sumac, poison.....	21	tick-trefoil, hairy small-leaved	35
sumac, smooth.....	21	tick-trefoil, naked-flowered	35
sumac, staghorn.....	21	tick-trefoil, paniced	35
sundrops, narrow-leaved	42	timothy.....	64
sweet-clover, white	35	Tipularia discolor	60
sweet-clover, yellow	35	toadflax, bastard	48
sycamore	43	toadflax, blue	49
<i>Symphyotrichum lanceolatum</i>	23	tobacco, Indian	29
<i>Symphyotrichum lateriflorum</i>	23	Tofieldia racemosa	59
<i>Symphyotrichum novae-angliae</i>	23	toothwort, cut-leaved	28
<i>Symphyotrichum patens</i>	23	Tortella humilus	15
<i>Symphyotrichum pilosum</i>	23	Toxicodendron radicans	21
<i>Symphyotrichum puniceum</i>	23	Toxicodendron vernix	21
<i>Symphyotrichum racemosum</i>	23	Tradescantia virginiana	54
Symplocarpus foetidus	53	Tragopogon dubius	26
Taraxacum officinale	26	<i>Tragopogon major</i>	26
Taxodiaceae	18	Tragopogon pratensis	26
Taxodium distichum	6, 18	tree, cucumber	40
tea, New Jersey	46	tree, empress	49
tearthumb, arrow-leaved	44	tree, fringe.....	41
tearthumb, halberd-leaved.....	44	tree, imperial.....	49
teasel	32	tree, tulip.....	40
teasel, Fuller's.....	32	tree-of-heaven.....	49
Tephrosia virginiana	35	trefoil, bird's-foot.....	35
Thalictrum pubescens	45	tresses, ladies'	60
Thalictrum thalictroides	45	Triadenum virginicum	32
Thelypteridaceae	17	Trichostema dichotomum	39
Thelypteris noveboracensis	17	Tridens flavus	8, 65
Thelypteris palustris var. pubescens	17	Trifolium arvense	35
thistle, bull.....	24	Trifolium campestre	35
thistle, Canada.....	23	Trifolium dubium	36
thistle, field	23	Trifolium hybridum	36
thistle, musk	23	Trifolium incarnatum	36
Thlaspi arvense	28	Trifolium medium	36
thoroughwort, hyssop-leaved	24	Trifolium pratense	36
thoroughwort, late-flowering	24	Trifolium repens	36
thoroughwort, round-leaved.....	24	Triodanis perfoliata	29
thoroughwort, vervain.....	24	Tripsacum dactyloides	65
three-awn grass, Curtiss's.....	60	Triticum aestivum	65
three-awn grass, prairie	60	Tsuga canadensis	18
three-seed-mercury, Virginia	34	tumble-weed	20
Thuidium allenii	14	turtlehead	49
<i>Thuidium delicatulum</i>	15	Tussilago farfara	26
Thuidium erectum	15	Typha angustifolia	66

Typha latifolia	66
Typhaceae	66
Ulmaceae	50
Ulmus americana	50
<i>Ulmus procera</i>	50
Ulmus rubra	50
Ulmus viminalis	50
<i>Uniola latifolia</i>	61
<i>Uniola laxa</i>	61
Urtica dioica var. procera	50
<i>Urtica gracilis</i>	50
Urticaceae	50
Utricularia gibba	40
Utricularia subulata	6, 10, 40
Utricularia vulgaris	40
Uvularia perfoliata	59
Uvularia sessilifolia	3, 59
Vaccinium	6
<i>Vaccinium atrococcum</i>	33
Vaccinium corymbosum	33
<i>Vaccinium fuscatum</i>	33
Vaccinium pallidum	33
Vaccinium stamineum	33
<i>Vaccinium vacillans</i>	33
Valerianaceae	50
Valerianella locusta	50
Valerianella radiata	50
velvetleaf	40
Venus'-pride	47
Veratrum viride	3, 10, 59
Verbascum blattaria	49
Verbascum thapsus	49
Verbena hastata	51
Verbena urticifolia	51
Verbenaceae	51
Verbesina alternifolia	26
vernal grass, sweet	60
Vernonia noveboracensis	26
Veronica agrestis	49
Veronica arvensis	49
Veronica hederifolia	49
Veronica officinalis	49
Veronica peregrina	49
Veronica persica	49
Veronica polita	49
Veronica serpyllifolia	49
vervain, blue	51
vetch, bigflower	36
vetch, crown	34
vetch, four-seeded	36

vetch, hairy	36
vetch, hairy-fruit winter	36
vetch, narrow-leaved	36
Viburnum dentatum var. dentatum	20
Viburnum dentatum var. lucidum	20
Viburnum dilatatum	10, 20
Viburnum lentago	20
Viburnum nudum	20
Viburnum prunifolium	20
<i>Viburnum recognitum</i>	20
<i>Vicia angustifolia</i>	36
<i>Vicia dasycarpa</i>	36
Vicia grandiflora	36
Vicia sativa subsp. nigra	36
Vicia tetrasperma	36
Vicia villosa	36
Vicia villosa subsp. varia	36
Vinca minor	21
Viola arvensis Murray	51
Viola brittoniana	10, 51
Viola cucullata	51
Viola lanceolata	51
<i>Viola lanceolata</i>	51
Viola palmata var. palmata	51
<i>Viola papilionacea</i>	51
Viola primulifolia	51
Viola rafinesquii	51
Viola sagittata	51
Viola sororia	51
Violaceae	51
violet, arrow-leaf	51
violet, blue marsh	51
violet, Britton's	51
violet, dooryard	51
violet, early blue	51
violet, hooded	51
violet, lance-leaved	51
violet, primrose-leaf	51
Vitaceae	51
Vitis aestivalis	51
Vitis labrusca	51
Vitis riparia	51
Vitis vulpina	51
Vulpia myuros	65
Vulpia octoflora	65
wallflower, plains	28
walnut, black	38
water pennywort, American	21
water-hemlock	21
water-horehound	39

water-horehound, northern.....	39	wood fern, crested	16
water-lily, fragrant	41	wood fern, intermediate	16
water-plantain, American.....	53	wood fern, spinulose.....	16
water-starwort, greater	29	wood reed, sweet	61
water-starwort, pond	29	Woodsia	17
wedgegrass.....	65	wood-sorrel	42
weed, butterfly	22	wood-sorrel, great yellow.....	42
weed, mile-a-minute	44	wood-sorrel, upright	42
weed, pineapple.....	25	wood-sorrel, violet.....	42
wheat	65	Woodwardia areolata	16
whitetop.....	24	Woodwardia virginica	10, 16
whitlow-grass.....	28	woolly-bean, annual	35
wildrye, riverbank	62	wormseed.....	31
william, sweet	30	wormwood	23
willow, black.....	48	wormwood, annual	23
willow, weeping.....	48	Xanthium strumarium	26
willow-herb, eastern.....	42	Xyridaceae	66
wineberry	47	Xyris difformis	10, 66
wingstem	26	Xyris torta	66
winterberry	22	yam, Chinese	57
winterberry, smooth	22	yam, wild	57
wintercress	28	yarrow.....	22
wintercress, early	28	yarrow, fern-leaf.....	22
wintergreen	33	yarrow, golden.....	22
wintergreen, spotted.....	45	yellow-cress, common.....	28
witch grass	63	yellow-eyed grass, slender.....	66
witch grass, fall	63	yerba-de-tajo.....	24
witch-hazel.....	38	Youngia japonica	26
withe-rod	20	Zannichellia palustris	65
wolffia.....	58	Zoysia japonica	65
Wolffia brasiliensis	58		