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Stephen A. Walker
The Nature Conservancy

Julian Campbell
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A Floristic Survey And Annotated Checklist of The Pine Bluff Arsenal

Stephen A. Walker and Julian Campbell

The Nature Conservancy
601 North University Ave.
Little Rock, AR 72205

Abstract

We conducted a floristic survey of the Pine Bluff Arsenal during the spring, summer, and fall of 1996. In total, 622 taxa representing 113 families and 351 genera were identified and compiled into an annotated checklist. The largest families were Asteraceae (79 genera), Poaceae (73 genera), Fabaceae (41 genera), and Cyperaceae (38 genera). Exotic species composed only 8.5% of the flora. Fifty-five of the specimens represent new records for Jefferson County.

Introduction

The Arkansas Field Office of The Nature Conservancy was contracted to compile an annotated floral checklist and conduct a threatened and endangered plant species and natural areas inventory of the U. S. Army Pine Bluff Arsenal (PBA) in Jefferson County, Arkansas. PBA is located on the west bank of the Arkansas River. It is approximately 51.6 km southeast of Little Rock, AR and 4.8 km northwest of Pine Bluff, AR. Currently the arsenal covers 6050.2 ha with 4392.7 ha in forest. The remaining acres consist of lawns, buildings, roads, railroads, lakes and streams, wildlife food plots, and open fields (Becker, 1992). Most of PBA lies within the West Gulf Coastal Plain physiographic province. However, a small portion, the Arkansas River floodplain around Yellow Lake and Eastwood Bayou, lies within the Mississippi Alluvial Plain physiographic province.

The arsenal topography is generally flat with poor drainage. The northernmost portion is characterized by rolling hills and numerous streams. The area within the Mississippi Alluvial Plain physiographic region is about 13.7 meters lower in elevation than the rest of the arsenal. Drainage is generally toward the Arkansas River. Topographic elevations range between 59.6 to 103.7 meters above mean sea level (msl) sloping west to east with the normal pool of the Arkansas River, which flows just to the east of PBA, positioned at about 59.6 meters above msl. Adjacent to the Arkansas River, elevations increase abruptly at the existing bluffline to about 73.2 meters above msl. Slopes increase more gradually westward toward the maximum elevation in the northwest corner of the arsenal (Bennett et al., 1990).

The area in and around PBA has been subjected to a large amount of disturbance. Before the establishment of PBA in 1941, a large portion of the area was used for agricultural purposes (Bennett et al., 1990). When PBA was established, activities included loading incendiary bombs,

manufacture of war gases, filling of bombs with chemicals, incendiary and smoke munitions, chemical agents and chemical filled munitions, and storage of these munitions (Becker, 1992).

Current activities at PBA include the manufacture of incendiary and smoke munitions and storage of these, chemical agents and toxic compounds. Timber management includes selective cutting of timber in prescribed areas. Recreational activities such as hunting and fishing also occur at PBA. Lakes and ponds are manipulated to improve fishing and wildlife plots have been established to improve hunting (Becker, 1992).

Materials and Methods

Weekly collections were made during spring, summer, and fall seasons of 1996. The entire arsenal, with the exception of the small area where chemical agents are stored, was surveyed.

Plants which could not be identified in the field were collected, pressed, dried, and stored for identification through use of taxonomic keys, particularly Smith (1994). Specimens of difficult to identify groups were sent to specialists and/or compared to herbarium collections. Philip E. Hyatt assisted with *Carex*, and Dr. Edwin Smith and George P. Johnson confirmed various specimens.

All collected specimens were sent to either the University of Arkansas herbarium in Fayetteville, Arkansas; Arkansas Tech University herbarium; or were kept at the office of The Nature Conservancy, Little Rock, Arkansas.

Plant nomenclature follows Smith (1994). The determination of a plant being exotic was made primarily by using Gleason and Cronquist (1991), but Godfrey and Wooten (1979) and Burns and Honkala (1990) were also used. County records were determined by using Smith (1988) and by sending specimens to Dr. Edwin B. Smith,

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University of Arkansas, Fayetteville.

Results

We have compiled a checklist of 622 taxa representing 113 families and 351 genera. The largest families were Asteraceae (79 genera), Poaceae (73 genera), Fabaceae (41 genera), and Cyperaceae (38 genera). The largest genera were *Carex* (15 taxa), *Panicum* (15 taxa), *Quercus* (12 taxa), *Juncus* (11 taxa), *Eupatorium* (9 taxa), *Solidago* (8 taxa), and *Ludwigia* (8 taxa). Fifty-five of the taxa represent new records for Jefferson County. Interestingly, even though PBA has been subjected to a large amount of disturbance, only 8.5% of the flora (53 taxa) was composed of exotics.

No federally listed threatened or endangered plant species were located at PBA. However, seven species listed by the Arkansas Natural Heritage Commission as plants of special concern were found. They were *Carex atlantica* subsp. *capillacea*, *Chamaelirium luteum*, *Eleocharis flavescens*, *Eleocharis microcarpa*, *Eupatorium hyssopifolium* var. *hyssopifolium*, and *Scleria pauciflora*.

Annotated Checklist

The checklist is arranged alphabetically according to family, genus, species, subspecies, and/or variety. Family concepts follow Cronquist (1988) and nomenclature follows Smith (1994). Entries have the following format: taxon name, author, if the taxa represents a new county record for Jefferson County (R), and if it is an exotic (E).

Acanthaceae

Justicia ovata (Walt.) Lindau var. *lanceolata* (Chapm.) R. W. Long
Ruellia humilis Nutt. var. *humilis*

Aceraceae

Acer negundo L.
Acer rubrum L. var. *drummodi* (H & A) Sarg.
Acer rubrum L. var. *rubrum*
Acer saccharinum L.

Alismataceae

Alisma subcordatum Raf. ;(R)
Echinodorus cordifolius (L.) Griseb.
Sagittaria montevidensis Cham. & Schul. subsp. *calycina* (Engelm.) Bogin

Amaranthaceae

Alternanthera philoxeroides (Mart.) Griseb. ;(E)
Amaranthus rudis Sauer

Amaryllidaceae

Agave virginica L.
Hymenocallis liriosme (Raf.) Shinnars

Anacardiaceae

Rhus copallina L.
Rhus glabra L.
Toxicodendron radicans (L.) Kuntze

Annonaceae

Asimina triloba (L.) Dunal

Apiaceae

Chaerophyllum procumbens (L.) Crantz. var. *procumbens* ;(R)
Cicuta maculata L.
Daucus pusillus Michx.
Eryngium prostratum Nutt.
Eryngium yuccifolium Michx.
Hydrocotyle ranunculoides L. f.
Ptilimnium nuttallii (DC.) Britt.
Sanicula canadensis L.
Spermolepis divaricata (Walt.) Britt.
Trepocarpus aethusae Nutt.

Apocynaceae

Apocynum cannabinum L.
Trachelospermum difforme (Walt.) Gray

Aquifoliaceae

Ilex decidua Walt.
Ilex opaca Ait.

Araceae

Arisaema dracontium (L.) Schott

Araliaceae

Aralia spinosa L.
Hedera helix L. ;(E)

Aristolochiaceae

Aristolochia serpentaria L.
Aristolochia tomentosa Sims ;(R)

Asclepiadaceae

Asclepias longifolia Michx. subsp. *hirtella* (Pennell) Farmer & Bell
Asclepias tuberosa L.
Gonolobus gonocarpos (Walt.) Perry

Asteraceae

Ambrosia artemisifolia L.
Ambrosia trifida L.
Aster lanceolatus Willd.
Aster lateriflorus (L.) Britt.

- Aster paludosus* Ait. subsp. *hemisphericus* (Alex.) Cronq.
Aster umbellatus Mill.
Baccharis halimifolia L.
Bidens aristosa (Michx.) Britt.
Bidens discoidea (T. & G.) Britt.
Bidens laevis (L.) BSP. ;(R)
Boltonia diffusa Ell.
Chrysopsis pilosa Nutt.
Cirsium altissimum (L.) Spreng.
Cirsium carolinianum (Walt.) Fern.
Conyza canadensis (L.) Cron. var. *canadensis*
Coreopsis lanceolata L.
Coreopsis tinctoria Nutt. var. *tinctoria*
Coreopsis tripteris L.
Croptilon divaricatum (Nutt.) Raf.
Echinacea pallida (Nutt.) Nutt.
Eclipta prostrata (L.) L.
Elephantopus carolinianus Raeusch.
Elephantopus tomentosa L.
Erechtites hieraciifolia (L.) Raf. ex DC. var. *hieraciifolia*
Erigeron philadelphicus L.
Erigeron strigosus Muhl. ex Willd.
Erigeron tenuis T. & G.
Eupatorium album L.
Eupatorium capillifolium (Lam.) Small
Eupatorium coelestinum L.
Eupatorium hyssopifolium L. var. *hyssopifolium*
Eupatorium perfoliatum L. var. *perfoliatum*
Eupatorium rotundifolium L.
Eupatorium semiserratum DC.
Eupatorium serotinum Michx.
Euthamia leptcephala (T. & G.) Greene
Gnaphalium purpureum L. var. *purpureum*
Helianthus angustifolius L.
Helianthus hirsutus Raf.
Helianthus mollis Lam.
Helenium amarum (Raf.) Rock
Helenium flexuosum Raf.
Heterotheca graminifolia (Michx.) Shinnery
Hieracium gronovii L.
Krigia cespitosa (Raf.) K. L. Chambers
Krigia dandelion (L.) Nutt.
Krigia virginica (L.) Willd.
Lactuca canadensis L.
Lactuca floridana (L.) Gaertn. var. *floridana*
Liatris aspera Michx.
Liatris pycnostachya Michx.
Liatris squarrosa (L.) Michx. var. *hirsuta* (Rydb.) Gaiser
Mikania scandens Willd.
Pluchea camphorata (L.) DC.
Pluchea foetida (L.) DC. ;(R)
Polymnia uralia (L.) L.
Prenanthes altissima L.
Pyrrhopappus carolinianus (Walt.) DC
- Rudbeckia grandiflora* (Sweet) DC. var. *alismaefolia* (T. & G.) Cronq.
Rudbeckia hirta L.
Senecio glabellus Poir.
Senecio tomentosus Michx.
Silphium integrifolium Michx.
Solidago canadensis L.
Solidago hispida Muhl. ex Willd.
Solidago nemoralis Ait.
Solidago odora Ait.
Solidago petiolaris Ait.
Solidago radula Nutt.
Solidago rugosa Mill.
Solidago ulmifolia Muhl. var. *palmeri* Cronq. ,(R)
Sonchus asper (L.) Hill ;(E)
Taraxacum officinale Wiggers ;(E)
Verbesina helianthoides Michx.
Vernonia missurica Raf.
Vernonia missurica x *texana*
Vernonia texana (Gray) Small
Xanthium strumarium L.
- Azollaceae
Azolla mexicana Presl
- Balsaminaceae
Impatiens capensis Meerb.
- Berberidaceae
Podophyllum peltatum L.
- Betulaceae
Alnus serrulata (Ait.) Willd.
Betula nigra L.
Carpinus caroliniana Walt.
Corylus americana Walt.
Ostrya virginiana (P. Mill.) K. Koch
- Bignoniaceae
Bignonia capreolata L.
Campsis radicans (L.) Seem.
Catalpa speciosa Warder
- Boraginaceae
Cynoglossum virginiana L.
Heliotropium indicum L. ;(R);(E)
Myosotis verna Nutt.
- Brassicaceae
Cardamine hirsuta L.
Cardamine pennsylvanica Muhl. ex Willd.
Descurainia pinnata (Walt.) Britt.
Erysimum repandum L. ;(R);(E)
Lepidium virginicum L. var. *medium* (Greene) Hitchc. ;(R)

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- Lepidium virginicum* L. var. *virginicum*
Rorippa palustris (L.) Besser subsp. *fernaldiana* (Butt. & Abbe) Jonsell
Sibara virginica (L.) Rollins
- Callitrichaceae
Callitriche heterophylla Pursh emend. Darby var. *heterophylla* ;(R)
- Campanulaceae
Lobelia appendiculata A. DC.
Lobelia cardinalis L.
Lobelia puberula Michx.
Lobelia spicata Lam.
- Caprifoliaceae
Lonicera japonica Thunb. ;(E)
Lonicera sempervirens Ait.
Sambucus canadensis L.
Viburnum rufidulum Raf.
- Caryophyllaceae
Cerastium glomeratum Thuill. ;(E)
Cerastium vulgatum L. ;(E)
Sagina decumbens (Ell.) T. & G.
Scleranthus annuus L. ;(E)
Stellaria media (L.) Villars ;(E)
- Celastraceae
Euonymus americanus L.
- Ceratophyllaceae
Ceratophyllum demersum L.
- Cistaceae
Lechea mucronata Raf.
Lechea tenuifolia Michx.
- Commelinaceae
Commelina communis L. var. *communis* ;(E)
Commelina diffusa Burm. F. ;(E)
Commelina virginica L.
Tradescantia hirsutiflora Bush
Tradescantia occidentalis (Britt.) Smyth
- Convolvulaceae
Cuscuta pentagona Engelm.
Ipomoea pandurata (L.) Mey.
- Cornaceae
Cornus drummondii Meyer
Cornus florida L.
Cornus foemina P. Mill. subsp. *foemina*
- Cupressaceae
Juniperus virginiana L.
- Cucurbitaceae
Melothria pendula L.
- Cyperaceae
Carex atlantica Bailey subsp. *capillaceae* (Bailey) Reznicek ;(R)
Carex annectens Bickn. var. *annectens*
Carex complanata Torr. & Hook.
Carex crinita Lam. ;(R)
Carex crus-corvi Shuttlew. ex Kuntze
Carex debilis Michx. var. *pubera* Gray ;(R)
Carex flaccosperma Dewey
Carex frankii Kunth
Carex hyalinolepis Steud.
Carex intumescens Rudge
Carex jorii Bailey ;(R)
Carex louisianica Bailey
Carex lupulina Willd.
Carex tribuloides Wahlenb.
Carex typhina Michx. ;(R)
Cyperus echinatus (L.) Wood
Cyperus erythrorhizos Muhl.
Cyperus esculentus L.
Cyperus flavescens L. var. *poiformis* (Pursh) Fern.
Cyperus pseudovegetus Steud. var. *pseudovegetus*
Cyperus strigosus L.
Eleocharis flavescens (Poir.) Urban ;(R)
Eleocharis lanceolata Fern. ;(R)
Eleocharis microcarpa Torr. ;(R)
Eleocharis obtusa (Willd.) Schultes
Eleocharis quadrangulata (Michx.) R. & S. ;(R)
Fimbristylis autumnalis (L.) R. & S.
Fimbristylis miliacea Vahl. ;(R)
Rhynchospora corniculata (Lam.) Gray
Rhynchospora globularis (Chapm.) Small
Rhynchospora glomerata (L.) Vahl.
Scirpus cyperinus (L.) Kunth
Scirpus koilolepis (Steud.) Gl.
Scirpus pungens Vahl.
Scleria ciliata Michx. var. *ciliata* ;(R)
Scleria oligantha Michx. ;(R)
Scleria pauciflora Muhl. ex Willd. ;(R)
Websteria confervoides (Poir.) Hooper ;(R)
- Dioscoreaceae
Dioscorea quaternata J. F. Gmel.
- Droseraceae
Drosera brevifolia Pursh
- Ebenaceae

Diospyros virginiana L.

Ericaceae

Lyonia ligustrina (L.) DC.
Lyonia mariana (L.) D. Don
Rhododendron viscosum (L.) Torr.
Vaccinium arboreum Marsh.
Vaccinium elliottii Chapm.
Vaccinium fuscatum Ait.
Vaccinium pallidum Ait.
Vaccinium virgatum Ait.

Euphorbiaceae

Acalypha gracilens Gray var. *gracilens*
Acalypha rhomboidea Raf.
Acalypha virginica L.
Croton capitatus Michx.
Croton glandulosus L. var. *septentrionalis* Muell. Arg.
Crotonopsis elliptica Willd.
Euphorbia corollata L.
Euphorbia maculata L.
Euphorbia serpens H. B. K.
Euphorbia spathulata Lam.

Fabaceae

Albizia julibrissin Durazz ;(E)
Amorpha fruticosa L.
Amphicarpea bracteata (L.) Fern. var. *bracteata*
Apios americana Medic.
Baptisia alba (L.) Vent. var. *macrophylla* (Larisey) Isely
Centrosema virginianum (L.) Benth.
Cercis canadensis L.
Chamaecrista fasciculata (Michx.) Greene
Chamaecrista nictitans (L.) Moench var. *nictitans*
Crotalaria sagittalis L.
Desmanthus illinoensis (Michx.) MacM. ex Rob. & Fern.
Desmodium ciliare (Muhl. ex Willd.) DC.
Desmodium paniculatum (L.) DC. var. *dillenii* (Darl.) Isely
Desmodium paniculatum (L.) DC. var. *paniculatum*
Desmodium pauciflorum (Nutt.) DC. ;(R)
Desmodium viridiflorum (L.) DC. ;(R)
Galactia mohlenbrockii Maxwell
Gleditsia triacanthos L.
Gymnocladus dioica (L.) Koch
Lespedeza capitata Michx.
Lespedeza cuneata (Dumont) G. Don. ;(E)
Lespedeza hirta (L.) Hornem. var. *hirta*
Lespedeza intermedia (L.) Britt. ;(R)
Lespedeza repens (L.) Bart.
Lespedeza striata (Thunb.) H. & A. ;(E)
Lespedeza virginica (L.) Britt.
Medicago lupulina L. ;(E)
Potentilla simplex Michx.
Psoralea psoraloides (Walt.) Cory var. *eglandulosa* (Ell.)

Freeman

Rhynchosia latifolia Nutt. ex T. & G.
Robinia pseudo-acacia L.
Senna marilandica (L.) Link
Sesbania macrocarpa Muhl.
Strophostyles helvula (L.) Ell.
Strophostyles leiosperma (T. & G.) Piper
Tephrosia onobrychoides Nutt.
Tephrosia virginiana (L.) Pers.
Trifolium repens L. ;(E)
Trifolium resupinatum L. ;(E)
Wisteria frutescens (L.) Poir.
Vicia sativa L. ;(E)

Fagaceae

Castanea pumila (L.) Mill. var. *pumila*
Fagus grandifolia Ehrh.
Quercus alba L.
Quercus falcata Michx. var. *falcata*
Quercus falcata Michx. var. *pagodifolia* Ell.
Quercus lyrata Walt.
Quercus marilandica Muench.
Quercus michauxii Nutt.
Quercus nigra L.
Quercus phellos L.
Quercus shumardii Buckl.
Quercus stellata Wang. var. *paludosa* Sarg.
Quercus stellata Wang. var. *stellata*
Quercus velutina Lam.

Geraniaceae

Geranium carolinianum L.
Geranium dissectum L. ;(E)

Hamamelidaceae

Hamamelis virginiana L.
Liquidambar styraciflua L.

Hippocastanaceae

Aesculus pavia L.

Hydrocharitaceae

Limnobium spongia (Bosc.) Steud.

Hydrophyllaceae

Hydrolea uniflora Raf.

Hypericaceae

Hypericum densiflorum Pursh var. *lobocarpum* (Gatt.) Svenson
Hypericum drummondii (Grev. & Hook.) T. & G.
Hypericum gentianoides (L.) B. S. P. ;(R)
Hypericum hypericoides (L.) Crantz.
Hypericum mutilum L.
Hypericum stans (Michx.) Adams & Robson

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- Triadenum walteri* (Gmel.) Gl.
- Iridaceae
Iris cristata Ait.
Sisyrinchium angustifolium P. Mill.
Sisyrinchium langloisii Greene
Sisyrinchium rosulatum Bickn.
- Juglandaceae
Carya cordiformis (Wang.) K. Koch
Carya illinoensis (Wang.) K. Koch
Carya laciniosa (Michx. f.) Loud. ;(R)
Carya texana Buckl.
Carya tomentosa (Poir.) Nutt.
Juglans nigra L.
- Juncaceae
Juncus acuminatus Michx.
Juncus brachycarpus Engelm.
Juncus coriaceus Mack. ;(R)
Juncus diffusissimus Buckl.
Juncus effusus L.
Juncus marginatus Rostk.
Juncus nodatus Coville
Juncus repens Michx. ;(R)
Juncus scirpoides Lam.
Juncus tenuis Willd.
Juncus validus Coville
Luzula echinata (Small) Herm. ;(R)
- Lamiaceae
Cunila origanoides (L.) Britt.
Hedeoma hispidum Pursh
Lamium amplexicaule L.
Lamium purpureum L.
Lycopus virginicus L.
Monarda fistulosa L.
Monarda punctata L.
Perilla frutescens (L.) Britt. ;(E)
Prunella vulgaris L.
Pycnanthemum albescens T. & G.
Pycnanthemum muticum (Michx.) Pers.
Pycnanthemum pilosum Nutt. ;(R)
Pycnanthemum tenuifolium Schrad.
Salvia lyrata L.
Scutellaria integrifolia L.
Stachys tenuifolia Willd. var. *tenuifolia*
Teucrium canadense L.
- Lauraceae
Lindera benzoin (L.) Blume
Sassafras albidum (Nutt.) Nees
- Lemnaceae
- Lemna obscura* (Austin) Daubs
Spirodela polyrhiza (L.) Schleid.
Spirodela punctata (G. F. W. Meyer) Thompson ;(E)
Wolffia brasiliensis Weddell
- Lentibulariaceae
Utricularia gibba L.
Utricularia radiata Small ;(R)
- Liliaceae
Aletris farinosa L.
Allium canadense L.
Allium vineale L. ;(E)
Chamaelirium luteum (L.) Gray
Hemerocallis fulva L. ;(E)
Maianthemum paniculatum (Mart. & Gal.) Lafr.
Polygonatum biflorum (Walt.) Ell. ;(R)
Smilax bona-nox L.
Smilax glauca Walt.
Smilax rotundifolia L.
Smilax smallii Morong
Trillium recurvatum Beck
Uvularia sessilifolia L.
- Linaceae
Linum medium (Planch.) Britt. var. *texanum* (Planch.) Fern.
- Loganiaceae
Gelsemium sempervirens (L.) Jaume St.-Hil.
- Loranthaceae
Phoradendron serotinum (Raf.) Johnston
- Lycopiaceae
Lycopodium appressum (Chapm.) Lloyd & Underw. ;(R)
- Lythraceae
Ammannia x coccinea Rottb.
Lythrum alatum Pursh. var. *lanceolatum* (Ell.) T. & G. ex Rothrock
Rotala ramosior (L.) Koehne
- Magnoliaceae
Magnolia grandiflora L. ;(E)
- Malvaceae
Hibiscus laevis Allioni
Hibiscus lasiocarpus Cav.
Sida spinosa L.
- Melastomataceae
Rhexia mariana L. var. *mariana*
Rhexia virginica L.

Meliaceae

Melia azedarach L. ;(E)

Menispermaceae

Cocculus carolinus (L.) DC.

Moraceae

Morus rubra L.

Myricaceae

Myrica cerifera L.

Najadaceae

Najas guadalupensis (Spreng.) Magnus ;(R)*Potamogeton diversifolius* Raf.*Potamogeton pusillus* L. ;(R)

Nymphaeaceae

Brasenia schreberi J. F. Gmel.*Nelumbo lutea* (Willd.) Pers.

Nyssaceae

Nyssa sylvatica Marsh. var. *sylvatica*

Oleaceae

Chionanthus virginicus L.*Forestiera acuminata* (Michx.) Poir.*Fraxinus americana* L.*Fraxinus pennsylvanica* Marsh.*Ligustrum sinense* Lour. ;(E)

Onagraceae

Ludwigia alternifolia L.*Ludwigia decurrens* Walt.*Ludwigia glandulosa* Walt.*Ludwigia hirtella* Raf.*Ludwigia leptocarpa* (Nutt.) Hara*Ludwigia linearis* Walt.*Ludwigia palustris* (L.) Ell. ;(R)*Ludwigia peploides* (H. B. K.) Raven subsp. *glabrescens* (Kuntze) Raven*Oenothera lanciniata* Hill. var. *lanciniata**Oenothera linifolia* Nutt.*Oenothera speciosa* Nutt.*Oenothera villosa* Thunb.

Ophioglossaceae

Botrychium dissectum Spreng. var. *obliquum* Muhl.*Botrychium virginianum* (L.) Sw.*Ophioglossum vulgatum* L. var. *pycnostichum* Fern.

Orchidaceae

Isotria verticillata (Muhl. ex Willd.) Raf.*Listera australis* Lindley*Plantanthera ciliaris* (L.) Lindley*Spiranthes lacera* (Raf.) Raf. var. *gracilis* (Bigelow) Luer ;(R)*Spiranthes vernalis* Engelm. & Gray*Tipularia discolor* (Pursh) Nutt.

Osmundaceae

Osmunda cinnamomea L.*Osmunda regalis* L. var. *spectabilis* (Willd.) Gray

Oxalidaceae

Oxalis dillenii Jacq.*Oxalis violacea* L.

Passifloraceae

Passiflora incarnata L.*Passiflora lutea* L.

Phrymaceae

Phryma leptostachya L.

Phytolaccaceae

Phytolacca americana L.

Pinaceae

Pinus echinata Mill.*Pinus taeda* L.

Plantaginaceae

Plantago lanceolata L. ;(E)*Plantago virginica* L.

Platanaceae

Platanus occidentalis L.

Poaceae

Agrostis elliotiana Schultes ;(R)*Agrostis hiemalis* (Walt.) B. S. P.*Agrostis perennans* (Walt.) Tuckerm.*Aira elegans* Willd. ex Gaudin ;(E)*Andropogon gerardii* Vitman*Andropogon glomeratus* (Walt.) B. S. P.*Andropogon scoparius* Michx.*Andropogon virginicus* L. var. *virginicus**Aristida longisoica* Poir.*Aristida oligantha* Michx.*Aristida purpurascens* Poir.*Arundinaria gigantea* (Walt.) Muhl.*Brachyelytrum erectum* (Schreb.) Beauv. ;(R)*Bromus secalinus* L. ;(E)*Cenchrus incertus* M. A. Curtis*Chasmanthium latifolium* (Michx.) Yates*Chasmanthium laxum* (L.) Yates*Chasmanthium sessiliflorum* (Poir.) Yates*Cynodon dactylon* (L.) Pers. ;(E)

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- Digitaria ciliaris* (Retz.) Koel.
Digitaria ischaemum (Schreb. ex Schweigg.) Schreb. ex Muhl. ;(E)
Echinochloa crusgalli (L.) Beauv. ;(E)
Echinochloa muricata (Beauv.) Fern.
Elymus virginicus L.
Eragrostis hirsuta (Michx.) Nees
Eragrostis pectinacea (Michx.) Nees
Eragrostis pilosa (L.) Beauv.
Eragrostis spectabilis (Pursh) Steud.
Erianthus contortus Ell.
Erianthus strictus Baldw. ;(R)
Festuca arundinacea Schreb. ;(E)
Glyceria septentrionalis Hitch. var. *arkansana* (Fern.) Steyerf. & Kucera
Gymnopogon brevifolius Trin.
Hordeum pusillum
Leersia lenticularis Michx.
Leersia oryzoides (L.) Swartz
Leersia virginica Willd.
Lolium perenne L. (E)
Manisuris cylindrica (Michx.) Kuntze ;(R)
Panicum acuminatum Swartz
Panicum anceps Michx.
Panicum angustifolium Ell.
Panicum boscii Poir.
Panicum brachyanthum Steud. ;(R)
Panicum clandestinum L.
Panicum commutatum Schult.
Panicum dichotomiflorum Michx.
Panicum dichotomum L.
Panicum hians Ell.
Panicum laxiflorum Lam.
Panicum polyanthes Schult.
Panicum rigidulum Bosc. ex Nees
Panicum scoparium Lam.
Panicum verrucosum Muhl. ;(R)
Paspalum dilatatum Poir. ;(E)
Paspalum floridanum Michx.
Paspalum laeve Michx.
Paspalum setaceum Michx.
Phalaris caroliniana Walt.
Poa annua L. ;(E)
Setaria faberi Herrm ;(E)
Setaria geniculata (Lam.) Beauv.
Setaria glauca (L.) Beauv.
Sorghastrum nutans (L.) Nash
Sorghum halepense (L.) Pers. ;(E)
Tridens flavus (L.) Hitchc. var. *flavus*
Tridens strictus (Nutt.) Nash
Tripsacum dactyloides (L.) L.
Vulpia bromoides (L.) S. F. Gray ;(E)
Vulpia octoflora (Walt.) Rydb.
Zizaniopsis miliacea (Michx.) Doell & Asch.
- Polemoniaceae
Phlox divaricata L. subsp. *laphamii* (Wood) Wherry ;(R)
Phlox glaberrima L.
Phlox pilosa L. subsp. *pilosa*
- Polygalaceae
Polygala incarnata L.
Polygala mariana Mill. ;(R)
Polygala sanguinea L.
Polygala verticillata L.
- Polygonaceae
Brunnichia ovata (Walt.) Shinnors
Polygonum aviculare L.
Polygonum bicorne Raf.
Polygonum hydropiperoides Michx.
Polygonum punctatum Ell.
Polygonum ramosissimum Michx.
Polygonum virginianum L.
Rumex crispus L. ;(E)
Rumex hastatulus Baldw. ex Ell.
- Polypodiaceae
Asplenium platyneuron (L.) Oakes ex D. C. Eat.
Athyrium filix-femina (L.) Roth var. *asplenioides* (Michx.) Farw.
Lorinseria areolata (L.) Presl.
Onoclea sensibilis L.
Phegopteris hexagonoptera (Michx.) Fee
Polypodium polypodioides (L.) Watt var. *michauxianum* Weatherby
Polystichum acrostichoides (Michx.) Schott
Pteridium aquilinum (L.) Kuhn in Decken
Woodsia obtusa (Spreng.) Torr.
- Pontederiaceae
Heteranthera limosa (Sw.) Willd. ;(R)
- Portulacaceae
Claytonia virginica L.
Portulaca oleracea L. ;(E)
- Primulaceae
Lysimachia lanceolata Walt. var. *lanceolata*
Lysimachia radicans Hook.
- Ranunculaceae
Anemone virginiana L.
Clematis crispa L.
Clematis virginiana L.
Myosurus minimus L.
Ranunculus hispidus Michx. var. *hispidus*
Ranunculus parviflorus L. ;(E)
Ranunculus pusillus Poir.
Ranunculus sardous Crantz. ;(E)

- Ranunculus sceleratus* L. var. *sceleratus*
Thalictrum thalictroides (L.) Eames & Boivin
- Rhamnaceae
Berchemia scandens (Hill) K. Koch
Ceanothus americanus L.
Rhamnus caroliniana Walt.
- Rosaceae
Agrimonia rostellata Wallr.
Amelanchier arborea (Michx. f.) Fern.
Crataegus intricata Lange ;(R)
Crataegus marshallii Egglest.
Crataegus spathulata Michx. ;(R)
Geum canadense Jacq.
Porteranthus stipulatus (Muhl. ex Willd.) Britt.
Prunus angustifolia Marsh.
Prunus mexicana S. Wats.
Prunus serotina Ehrh.
Prunus umbellata Ell.
Rosa carolina L.
Rubus argutus Link
Rubus flagellaris Willd.
Rubus trivialis Michx.
- Rubiaceae
Cephalanthus occidentalis L.
Diodia teres Walt.
Diodia virginiana L.
Galium aparine L.
Galium circaeazans Michx.
Galium obtusum Bigel. subsp. *obtusum*
Galium tinctorium L.
Hedyotis australis Lewis & Moore
Hedyotis caerulea (L.) Hook.
Hedyotis crassifolia Raf.
Hedyotis purpurea (L.) T. & G.
Mitchella repens L.
Sherardia arvensis L. ;(E)
- Salicaceae
Populus deltoides Marsh. subsp. *deltoides*
Salix humilis Marsh.
Salix nigra Marsh.
- Sapindaceae
Cardiospermum halicababum L. ;(E)
- Saururaceae
Saururus cernuus L.
- Saxifragaceae
Itea virginica L.
Hydrangea arborescens L.
- Penthorum sedoides* L.
- Scrophulariaceae
Agalinis aspera (Dougl.) Britt.
Agalinis fasciculata (Ell.) Raf.
Agalinis viridis (Small) Pennell
Aureolaria flava (L.) Farwell
Aureolaria grandiflora (Benth.) Pennell ;(R)
Gratiola neglecta Torr.
Linaria canadensis (L.) Dumont
Lindernia dubia (L.) Pennell
Mimulus alatus Ait.
Pedicularis canadensis L.
Verbascum blattaria L. ;(E)
Verbascum thapsus L. ;(E)
Veronica arvensis L. ;(E)
Veronica peregrina L.
- Solanaceae
Physalis mollis Nutt. var. *mollis*
Physalis longifolia Nutt.
Solanum carolinense L.
- Steracaceae
Styrax americana Lam.
Styrax grandifolia Ait. ;(R)
- Symplocaceae
Symplocos tinctoria (L.) L'Her.
- Taxodiaceae
Taxodium distichum (L.) Rich.
- Tiliaceae
Tilia americana L.
- Typhaceae
Typha domingensis Pers.
Typha latifolia L.
- Ulmaceae
Celtis laevigata Willd.
Planera aquatica (Walt.) Gmelin
Ulmus alata Michx.
Ulmus americana L.
Ulmus rubra Muhl.
- Urticaceae
Boehmeria cylindrica (L.) Sw.
Pilea pumila (L.) A. Gray ;(R)
Urtica chamaedryoides Pursh
- Valerianaceae
Valerianella radiata (L.) Duf.

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Verbenaceae

- Callicarpa americana* L.
Phyla lanceolata (Michx.) Greene
Verbena brasiliensis Vell. ;(E)
Verbena officinalis L. subsp. *halei* (Small) Barber
Verbena urticifolia L.

Violaceae

- Viola rafinesquii* Greene
Viola sagittata Ait.
Viola sororia Willd. var. *missouriensis* (Greene) McKinney ;(R)
Viola sororia Willd. var. *sororia*

Vitaceae

- Ampelopsis arborea* (L.) Koehne
Ampelopsis cordata Michx.
Parthenocissus quinquefolia (L.) Planchon
Vitis aestivalis Michx.
Vitis cinerea (Engelm. in Gray) Engelm. ex Millard var. *cinerea*
Vitis riparia Michx. ;(R)
Vitis rotundifolia Michx. var. *rotundifolia*
Vitis vulpina L.

Xyridaceae

- Xyris torta* Sm.

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