

THE VASCULAR FLORA OF GREENWOOD COUNTY

A Thesis

Submitted to

The Department of Biology

Emporia Kansas State College, Emporia, Kansas

In Partial Fulfillment

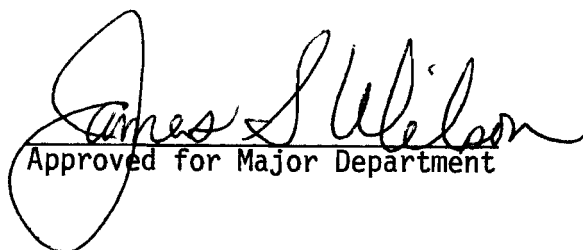
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INTRODUCTION

Greenwood County is located in the south-central portion of the eastern third of Kansas. It is bordered on the north by Lyon County, on the south by Elk County, on the west by Butler County, and on the east by Coffey, Woodson, and Wilson Counties.

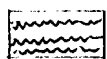
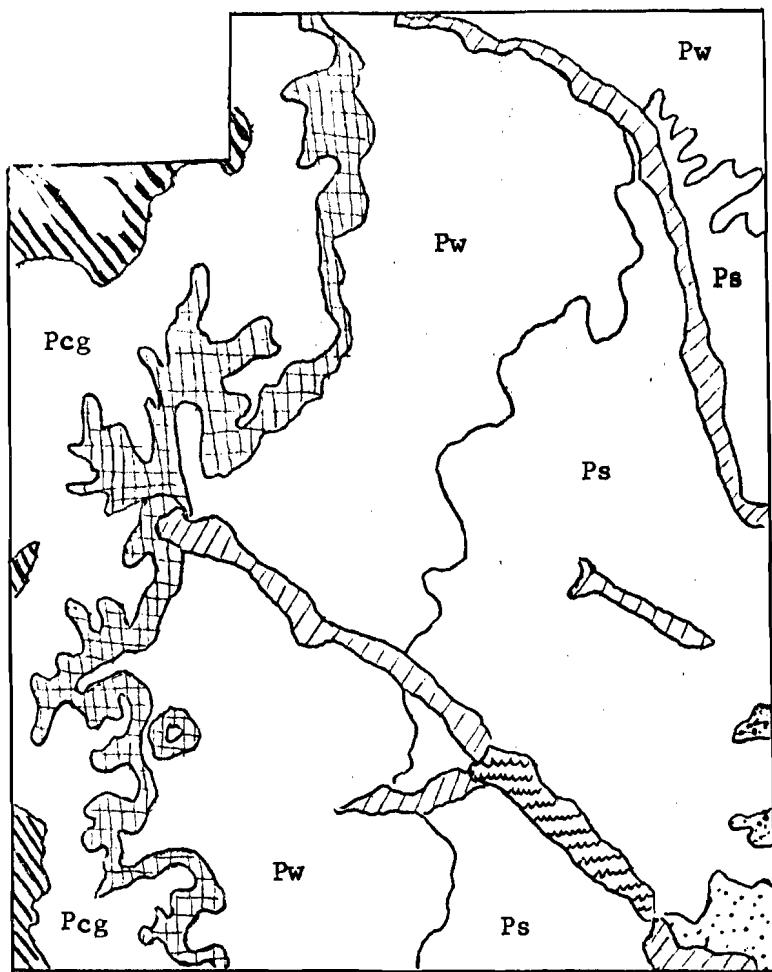
The flora of the county was studied from April, 1973 thru April, 1975 and, during this time, over 1600 collections were made. The purpose of this research was to establish a checklist of the vascular plants of Greenwood County, Kansas, and to identify, ecologically, the major habitats that occur there.

Physiographic Description

Greenwood County is divided into three physiographic areas: the Osage Cuestas, the Flint Hills, and the Chautauqua Hills (Fig. 1).

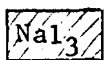
Most of the county lies within the Osage Cuestas uplands which have a short, steep descent, or escarpment, on one side and a long, gentle slope on the other. Alternating hard and soft Pennsylvanian formations of limestone and shale make up the underlying strata (Schoewe 1949). In some eastern areas abundant in sandstones, the terrain of the Osage Cuestas is rugged and distinctive.

The western side of the county is highly dissected by eastfacing escarpments with terraced rocky slopes that separate the Flint Hills Upland from the lower Osage Cuestas (Fig. 2).



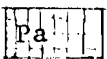
Fall River Reservoir

Cenozoic - Pleistocene

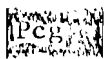


Alluvium Below floodplains and in stream terraces

Permian System



Admire Group Limestone and shale

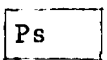


Council Grove Group Limestone and shale

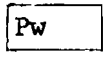


Chase Group Limestone and shale

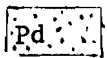
Pennsylvanian System



Shawnee Group Limestone and shale



Wabaunsee Group Limestone and shale



Douglas Group Sandstone and shale

Figure 2 Geological Map of Greenwood County, Kansas (State Geological Survey of Kansas)

As in the Osage Cuestas, the underlying strata consists of alternating hard and soft limestone and shale. The Flint Hills differ, however, in that these Pennsylvanian deposits are capped by flint-bearing Permian strata which accounts for the cherty nature of the soil (Schoewe 1949).

The Chautauqua Hills enter the county only in the southeastern corner. They are chiefly thick sandstones of the Douglas group which have been eroded into distinct sandstone-capped hills.

Vegetation

Greenwood County is predominately bluestem prairie except along the riverbottoms and on the sandy soils of the southeast corner which are covered by woody vegetation. The prairie areas may be divided into the drier uplands and the wetter lowlands. Characteristic grasses of the upland prairies are little bluestem (Schizachyrium scoparium), side-oats grama (Bouteloua curtipendula), Junegrass (Koeleria pyramidata), and prairie dropseed (Sporobolus asper). The principle forbs here are lead plant (Amorpha canescens), various sunflowers (Helianthus), wreath aster (Aster ericoides), Missouri goldenrod (Solidago missouriensis), and scurfy pea (Psoralea tenuiflora). Characteristic lowland grasses are big bluestem (Andropogon gerardi), indian grass (Sorghastrum avenaceum), switch grass (Panicum virgatum), Canada rye (Elymus canadensis), and an introduced species, Kentucky bluegrass (Poa Pratensis). In the marshy areas, slough grass (Spartina pectinata) easily

dominates. The principle forbs are wild blue indigo (Baptisia australis), wild strawberry (Fragaria virginiana), tall golden-rod (Solidago altissima), compassplant (Silphium laciniatum), several species of sunflowers (Helianthus), and asters (Aster). Each species has established itself in a particular plant community because of certain adaptations that have enabled it to successfully compete for light, moisture, and growing space. It should be noted, however, that a certain amount of inter-mixing of communities almost always occurs (Weaver 1954).

The woody vegetation of the southeast corner and the river bottoms is predominately that of the Eastern Deciduous Forest. The species dominating the lowland areas are elm (Ulmus), cottonwood (Populus deltoides), sycamore (Platanus occidentalis), and willow (Salix). The southeast corner, however, is dominated by the southern oak savannah. Common species occurring here are blackjack oak (Quercus marilandica), post oak (Q. stelata), and black oak (Q. velutina). The understory in these woods is characteristically made up of buckbrush (Symphoricarpos orbiculatus), winged sumac (Rhus copallina), dewberry (Rubus flagellaris), Muhlenbergia racemosa, little bluestem (Schizachyrum scoparium), and dropseed grass (Sporobolus asper) (Lathrop 1958).

Much of the county's natural vegetation has been disturbed or completely destroyed. The woodlands, where cultivation is possible, have been cut, and many weedy species have invaded these as well as the overgrazed areas. In overgrazed areas three-awn grass (Aristida oligantha), Japanese brome grass (Bromus japonicus), buffalo grass (Buchloe dactyloides), and

windmill grass (Chloris verticillata) have become prominent. Common dicots include croton (Croton monanthogynus), broomweed (Gutierrezia dracunculoides), plantain (Plantage aristata), and horse nettle (Solanum carolinense). In addition, many weedy species are associated with an urban environment. These include such species as knotweeds (Polygonum), smartweeds (Polygonum), spurges (Euphorbia), crab grasses (Digitaria), foxtails (Setaria), chickweed (Stellaria), henbit (Lamium), and corn gromwell (Lithospermum).

Soils

The soils of the county are mostly calcareous in nature. The largest group, which is calcareous, contains Sogn, Summit, Florence, and Idana soils. These soils are limestone, shale, and loess in origin and cover all but the northeast and southeast corners. They are mostly thin, rocky soils that are best adapted to native pastures. In areas where alluvial soils are found, wheat, corn, sorghum, and legumes are often cultivated. A second group (Summit, Woodson, Labette, and Bates), of the northeast corner are calcareous and sandstone in nature and are usually acid, residual soils. This is a general farming area and the soils respond to fertilization and good land management. The true sandstone type soils (Darnell, Stephenville, Dennis and Boone groups) of the southeast corner are highly susceptible to drought and probably an extension of the Oklahoma "cross timbers" (Bidwell 1956).

Climate

The climate of this area is often described as one of extremes. It is dominated by unreliable and unpredictable precipitation, and by sudden changes of temperature (Kuchler 1968). Most of the precipitation (75% of the 32-36 inches) falls between April and September, although not with any definite pattern. The prevailing winds are primarily from the south from April to December and from the north from January to March. The average growing season is 188 days, ranging from April 15 (average last killing frost in the spring) to October 20 (average first killing frost in the fall). Average temperatures range from a low of 68⁰ to a high of 93⁰ F in July and from 22⁰ to 42⁰ F in January (Flora 1945).

Major Collecting Areas

Selected collection sites throughout the county were visited periodically during the study. They represent common habitat types of the area. In addition, other collections were made for species which seemed to be unique to other areas. The selected habitats and their locations are given below (Fig. 3).

- A. Verdigris River bottom area - rich woodland, flood plains, and sand bars
- B. Madison area - disturbed urban areas, upland and lowland prairie areas
- C. Hamilton area - disturbed areas
- D. Roadside rest area - disturbed, mowed area and upland prairie
- E. Fall River Reservoir area - disturbed and mowed prairie, and wet habitat
- F. Black-jack, post oak wooded area - moist and dry woodland and rocky ledges
- G. Fall City area - lowland prairie
- H. Otter Creek area - creek bank and wooded areas
- I. Eureka area - disturbed areas and ornamentals
- J. Eureka Lake and Caltalpa Grove area - disturbed areas, lowland prairie, and wet areas
- K. Walnut Creek area - creek bank and lowland prairie

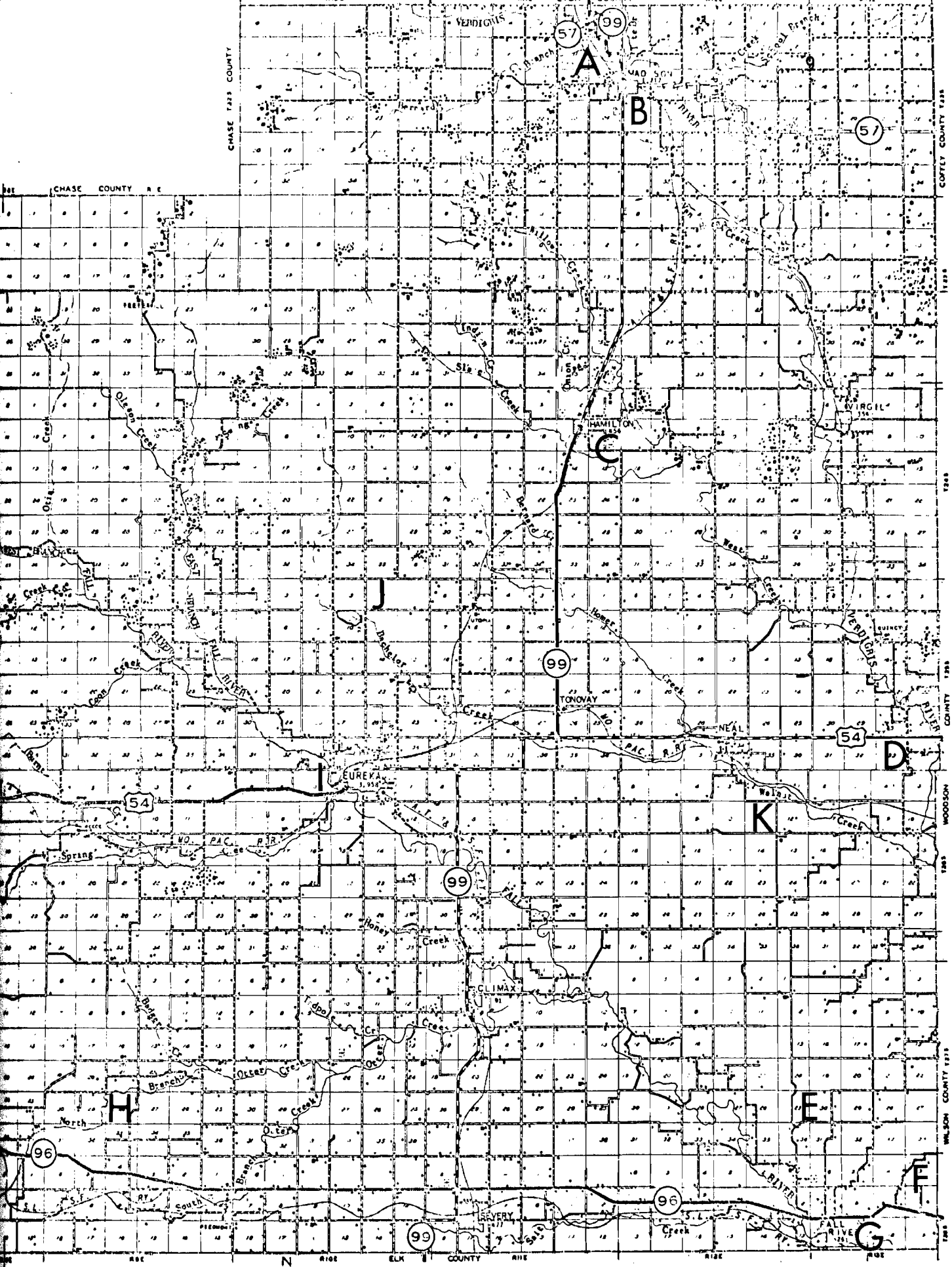


Figure 3 Greenwood county map with major collection sites.

Explanation of the Checklist and References Used

Ecological data and common names were recorded for each species collected and these specimens are housed in the Emporia Kansas State College Herbarium. Information listed under each species is as follows: synonyms, when appropriate, are in parenthesis; growth type; habitats; restricted locations in county (widespread if not listed); frequency in the county; flower color; and flowering times. Nomenclature for the county follows that of the Checklist of the Vascular Plants of the Great Plains (McGregor et al. 1975). Manuals used in plant identification were: Flora of Missouri (Steyermark 1964), Manual of Vascular Plants (Gleason 1963), Gray's Manual of Botany (Fernald 1950), Manual of the grasses of North America (Hitchcock 1950), A manual of the flowering plants of Kansas (Barkley 1968), Manual of the vascular plants of Texas (Correll 1970), The New Britton and Brown Illustrated Flora of the Northeastern U.S. and adj. Canada (Gleason 1952), Woody Plants of the North Central Plains (Stevens 1973), Keys to the Flora of Oklahoma (Waterfall 1969), and A field guide to trees and shrubs (Petrides 1972). In addition, the following monographs and revisions were used in identifying species from difficult groups: A revision of Echinochloa in the United States (Gould 1972), The grass genus Andropogon in the United States (Gould 1967), The genus Euphorbia of the high plains and prairie plains of Kansas, Nebraska, South and North Dakota (Richardson 1968), Violets (Viola) of central and

eastern United States: An introductory survey (Russel 1965),
and Variation of three taxonomic complexes of the genus Cornus
(Wilson 1964).

SUMMARY

In this study of the vascular plants of Greenwood County 91 families, 410 genera, and 729 species were identified. The number of families, genera, and species of each of the divisions are shown in Table I. The number of species in the twelve largest families are shown in Table II. The number of species of the twenty largest genera are shown in Table III.

Table I. Number of families, genera, and species in each plant division.

Division	Species	Genera	Families
Arthrophyta	1	1	1
Microphyllrophyta	1	1	1
Pterophyta	17	13	3
Coniferophyta	1	1	1
Anthophyta			
Monocotyledoneae	17	7	12
Dicotyledoneae	<u>530</u>	<u>318</u>	<u>73</u>
Total	729	410	91

Table II. Number of species in the twelve largest families

Family	Species	Family	Species
Compositae	111	Euphorbiaceae	21
Gramineae	106	Polygonaceae	19
Leguminosae	47	Labiatae	19
Cyperaceae	36	Scrophulariaceae	16
Cruciferae	22	Umbelliferae	16
Rosaceae	21	Polypodiaceae	15

Table III. Number of species of the twenty largest genera

Genus	Species	Genus	Species
<u>Carex</u>	15	<u>Asclepias</u>	8
<u>Polygonum</u>	14	<u>Plantago</u>	8
<u>Panicum</u>	12	<u>Eragrostis</u>	7
<u>Euphorbia</u>	12	<u>Muhlenbergia</u>	7
<u>Aster</u>	11	<u>Verbena</u>	7
<u>Quercus</u>	10	<u>Eleocharis</u>	6
<u>Helianthus</u>	8	<u>Bromus</u>	6
<u>Solidago</u>	8	<u>Amaranthus</u>	6
<u>Cyperus</u>	8	<u>Prunus</u>	6
<u>Oenothera</u>	8	<u>Lespedeza</u>	6

Vascular Plants of Greenwood County

Division ARTHROPHYTA

EQUISETACEAE (Horsetail Family)

Equisetum hyemale L. Scouring Rush. Perennial; evergreen; stream banks; southeast; infrequent; spores March-August.

Division MICROPHYLLOPHYTA

SELAGINELLACEAE (Spikemoss Family)

Selaginella rupestris (L.) Spring Spikemoss. Perennial; dry rocky, sandstone soils; southeast; infrequent; spores July-October.

Division PTEROPHYTA

OPHIOGLOSSACEAE (Adder's tongue Family)

Botrychium virginianum (L.) Sx. Rattlesnake Fern. Perennial; oak-hickory woodland; southeast; infrequent; spores May-July.

POLYPODIACEAE (Fern Family)

Asplenium platyneuron (L.) Oaks Ebony Spleenwort. Perennial; sandstone and chert outcrops of wooded areas; southeast; common; spores mature May-September.

Asplenium resiliens Kunze Little Ebony Spleenwort. Perennial; sandstone outcrops in wooded areas; southeast; infrequent; spores mature May-October.

Asplenium trichomanes L. Maidenhair Spleenwort. Perennial; stone outcrops in wooded areas; southeast; common; spores mature July-September.

Camptosorus rhizophyllus (L.) Link Walking Fern. Perennial; sandstone outcrops in wooded areas; southeast; infrequent; spores mature May-October.

Cheilanthes lanosa D.C. Harry Lip-Fern. Perennial; evergreen; dry sandstone outcrops; southeast; infrequent; spores mature June-September.

Cystopteris protusa (Weath.) Blasdell Fragile Fern. Perennial; moist woodlands; southeast; infrequent; spores mature June-September.

Cystopteris tennesseensis Shaver Tennessee Fragile Fern. Perennial; moist woodlands; southeast; infrequent; spores mature June-September.

Dryopteris marginalis (L.) A. Gray Marginal Shield Fern. Perennial; rocky woodlands; southeast; common; spores mature June-October.

Notholaena dealbata (Pursh.) Kunze Cloak-Fern. Perennial; dry limestone ledges; infrequent; spores mature June-October.

Onoclea sensibilis L. Sensitive Fern. Perennial; moist woodlands and low open areas; southeast; common; spores mature June-November.

Pellaea atropurpurea (L.) Link Purple Cliffbrake. Perennial; dry limestone cliffs; east central; infrequent; spores mature June-September.

Pellaea glabella Mett. ex. Kuhn var glabella Smooth Cliffbrake. Perennial; Limestone outcroppings; east central; infrequent; spores mature April-October.

Polystichum acrostichoides (Michx.) Schott Christmas Fern. Perennial; evergreen; rocky woodlands; southeast; infrequent; spores mature June-October.

Thelypteris palustris Schott Marsh Fern. Perennial; moist woods or meadows; southeast; infrequent; spores mature June-October.

Woodsia obtusa (Spreng.) Torr. Common woodsia. Perennial; occasionally evergreen; dry or moist, rocky woods; southeast; abundant; spores mature May-October.

MARSILEACEAE (Pepperwort Family)

Marsilea vestita Hook & Grev. Water Clover. Perennial; shallow water; infrequent; spores mature August-September.

Division CONIFEROPHYTA

PINACEAE (Pine Family)

Juniperus virginiana L. Red Cedar. Tree; dioecious; pastures, fence rows, and open woods; abundant; flowers April, cone September.

Division ANTHOPHYTA

ALISMATACEAE (Water Plantain Family)

Sagittaria latifolia Willd. Common Arrowhead. Perennial; edges of ponds, sloughs, and marsh areas; infrequent; flowers white June-October.

POTAMOGETONACEAE (Pondweed Family)

Potamogeton diversifolius Raf. Pondweed. Annual; ponds, sloughs and streams; common; flowers late May-October.

JUNCACEAE (Rush Family)

Juncus interior Wieg. Rush. Perennial, prairies, sloughs, and marsh areas; common; flowers May-August.

Juncus tenuis Willd. Path Rush. Perennial; marshy areas, sloughs and roadsides; common; flowers May-September.

Juncus torreyi Coville Rush. Perennial; marshy areas, roadsides, sloughs and edge of ponds; common; flowers July-October.

Luzula campestris (L.) DC. var. bulbosa Wood. Wood Rush.
[L. bulbosa (Wood) Rydb.] Perennial; wooded sandy soils; southeast; infrequent; flowers April-June.

CYPERACEAE (Sedge Family)

Carex aggregata Mackenz. Perennial; prairies, roadsides, and wet meadows; infrequent; flowers May-July.

Carex amphibola Steud. var. turgida Fern. Perennial; wet, low woodlands; common; flowers late April-July.

Carex annectens Bickn. var. xanthocarpa (Bickn.) Wieg. Perennial; dry and wet prairies; common; flowers.

Carex brevior (Dewey) Mackenz. Perennial; low, wet meadows, pastures, and roadsides; common; flowers May-June.

Carex Bushii Mackenz. Perennial; prairies and pastures; common; flowers May-June.

Carex frankii Kunth. Perennial; prairies, marshy areas, and sloughs; infrequent; flowers May-September.

Carex gravida Bailey. Perennial; prairies, pastures, and roadsides; common; flowers May-June.

Carex leavenworthii Dewey. Perennial; moist or dry woodland and prairie; infrequent; flowers April-June.

Carex meadii Dew. Perennial; prairies; roadsides, and pastures, common; flowers March-June.

Carex microdonta Torr. & Hook. Perennial; moist prairies; common; flowers May-August.

Carex molesta Mack. Perennial; moist or dry woodland and prairie; abundant; flowers May-early July.

Carex muhlenbergii Schk. var. australis Olney. Perennial; prairies; roadside ditches and open woods; abundant; flowers May-July.

Carex normalis Mackenz. Perennial; moist or dry woodland and prairie; infrequent to common; flowers early May-July.

Carex oligocarpa Schk. Perennial; woodland slopes and ravines; infrequent to common; flowers late April-July.

Carex vulpinoidea Michx. Perennial; marshy areas, sloughs and roadside ditches; abundant; flowers June-August.

Cyperus acuminatus Torr. & Hook. Annual; margins of ponds, creeks, and open moist areas; common; flowers late June-October.

Cyperus aristatus Rottb. Annual; moist sand and mud bars along streams and moist prairies; southeast; infrequent; flowers late May-October.

Cyperus esculentus L. Perennial; wet roadsides and marshy areas; common; flowers June-October.

Cyperus ferruginescens Boeckl. Annual; low wet prairies, and marsh areas; common; flowers August-October.

Cyperus filiculmis Vahl. Perennial; prairies, pastures and roadsides; common; flowers May-October.

Cyperus ovularis (Michx.) Torr. Hedgehog Club Rush. Perennial; sloughs, roadsides and dry open woods; common; flowers June-September.

- Cyperus setigerus Torr. & Hook. Perennial; prairies, pastures, and roadsides; common; flowers June-September.
- Cyperus strigosus L. Perennial; marshy areas, sloughs, and roadsides; common; flowers June-October.
- Eleocharis compressa Sulliv. Spike rush. Perennial; edges of ponds, marsh areas, sloughs; common; flowers May-July.
- Eleocharis erythropoda Steud. Spike rush. (E. calva Torr.) Perennial; edges of ponds, marshy areas, and sloughs; common; flowers June-September.
- Eleocharis macrostachya Britt. Spike rush. Perennial; edges of ponds, sloughs, and marshy areas; common; flowers May-August.
- Eleocharis obtusa (Willd.) Schult. Spike rush. Perennial; edges of ponds, sloughs, and marshy areas; common; flowers May-October.
- Eleocharis smallii Britt. Spike rush. Perennial; marshy areas, edges of ponds, and sloughs; common; flowers June-September.
- Fimbristylis autumnalis (L.) R. & S. Annual; moist prairies and sandy, open ground along streams; common; flowers June-October.
- Fimbristylis puberula (Michx.) Vahl. var. puberula F. caroliniana (Lam.) Fern. Perennial; prairies, pastures and roadsides; common; flowers May-July.
- Hemicarpha micrantha (Vahl.) Pax. Annual; sandbars along streams, ponds, and sloughs; infrequent; flowers July-October.
- Scirpus atrovirens Willd. var. atrovirens. Common Bullrush. Perennial; marshy areas, sloughs, and roadsides, common; flowers May-September.
- Scirpus pendulus Muhl. (S. lineatus Michx.) Perennial; marshy areas, sloughs, edges of ponds, and roadsides; abundant; flowers May-August.
- Scirpus validus Vahl. Great Bullrush. Perennial; marshy areas, edges of ponds, and sloughs; common; flowers May-September.
- Scleria triglomerata Michx. Tall Nut Grass. Perennial; upland prairies; infrequent; flowers May-September.

GRAMINEAE (Grass Family)

Aegilops cylindrica Host. Goat Grass. Annual; dry open areas and waste places; common; flowers May-August.

Agropyron smithii Rydb. Western Wheat Grass. Perennial; prairie areas, and roadsides; common; flowers May-August.

Agrostis hyemalis (Walt.) B.S.P. var. hyemalis. Winter Bent Grass. Annual; disturbed areas, and roadside ditches; common; flowers June-August.

Agrostis stolonifera L. Redtop. (A. alba L.) Perennial; prairies, and pastures, common; flowers June-August.

Andropogon gerardi Vitman. Big Bluestem. Perennial; prairie meadows, pastures, and roadsides; abundant; flowers June-September.

Andropogon saccharoides Sw. see Bothriochloa saccharoides (Swartz) Rydb.

Andropogon scoparius Michx. see Schizachyrium scoparium (Michx.) Nash.

Andropogon virginicus L. Broom Sedge. Perennial; prairies and sandstone glades; common; flowers August-November.

Aristida dichotoma Michx. var. dichotoma. Poverty Grass. Annual; rocky prairies, open uplandwoods, and roadsides; common; flowers August-October.

Aristida oligantha Michx. Prairie Three-awn Grass. Annual; dry, clay soils; abundant; flowers August-October.

Aristida purpurascens Poir. Arrowfeather. Perennial; dry open oak woods; southeast; infrequent to common; flowers August-October.

Avena sativa L. Oats. Annual; roadsides, and edges of fields; common; flowers May-June.

Bothriochloa saccharoides (Swartz) Ryds. Silver Beardgrass. (Andropogon saccharoides Swartz.) Perennial; prairies, pastures, and roadsides; common; flowers July-October.

Bouteloua curtipendula (Michx.) Torr. Sideoats Grama. Perennial; prairies, pastures, and roadsides; common; flowers July-September.

Bouteloua gracilis (H.B.K.) Griffiths Blue Grama. Perennial; prairies; common; flowers July-September.

Bouteloua hirsuta Lag. Hairy Gramma. Perennial; sandy plains; common; flowers July-September.

Bromus inermis Leyss. ssp. inermis. Smooth Brome. Perennial; pastures, roadsides, and waste areas; common; flowers May-August.

Bromus japonicus Thunb. Japanese Brome. Annual; overgrazed pastures, roadsides, and disturbed areas; abundant; flowers May-July.

Bromus pubescens Willd. Canada Brome Grass. (B. purgans L.) Perennial; moist woods and rocky slopes; infrequent to common; flowers June-early August.

Bromus racemosus L. Annual; waste places; rare; flowers May-July.

Bromus secalinus L. Chess. Annual; fields and waste places; infrequent; flowers June-September.

Bromus tectorum L. Downy Chess. Annual; overgrazed pastures, roadsides, and waste areas; abundant; flowers April-June.

Buchloe dactyloides (Nutt.) Engelm. Buffalo Grass. Perennial; pastures, dry areas, and roadsides; common; flowers May-August.

Cenchrus longispinus (Hack.) Fern. Sandbur. Annual; sandy fields; common; flowers late May-October.

Chloris verticillata Nutt. Windmill Grass. Perennial; prairies, pastures, and roadsides; common; flowers May-October.

Chloris virgata Sw. Feather Finger Grass. Annual; fields and along railroads; infrequent; flowers July-October.

Cynodon dactylon (L.) Pers. Bermuda Grass. Perennial; open fields, waste and cultivated areas; common; flowers June-October.

Dactylis glomerata L. Orchard Grass. Perennial; roadsides; pastures, and edges of woods; common; flowers May-August.

Diarrhena americana Beauv. var. obovata Gl. Perennial; wooded areas; infrequent to common; flowers July-September.

Digitaria adscendens (H.B.K.) Hen. Southern Crabgrass. Annual; roadsides and fields; infrequent; flowers July-September.

- Digitaria filiformis (L.) Koel. Slender Crab Grass. Annual; waste and disturbed areas, and roadsides; infrequent; flowers August-October.
- Digitaria ischaemum (Schreb.) Muhl. Swell Crab Grass. Annual; waste and disturbed areas, and lawns; abundant; flowers July-November.
- Digitaria sanguinalis (L.) Scop. Common Crab Grass. Annual; waste and disturbed areas, and roadsides; abundant; flowers July-November.
- Echinochloa crusgalli (L.) Beauv. Barnyard Grass. Annual; disturbed, moist areas; common; flowers June-November.
- Echinochloa muricata (P. Beauv.) Fern. var. muricata Barnyard Grass. Annual; disturbed wet areas; common; flowers June-November.
- Echinochloa muricata (Beauv.) Fern var. microstachya Weigard. Barnyard Grass. Annual; disturbed wet areas; abundant; flowers June-November.
- Eleusine indica (L.) Gaertn. Goose Grass. Annual; waste and disturbed areas; abundant; flowers July-October.
- Elymus canadensis L. Canada Wild Rye. Perennial; waste and disturbed areas, and roadsides; abundant; flowers June-October.
- Elymus virginicus L. var. minor. Wild Rye. Perennial; prairies, pastures, and roadside; common; flowers May-September.
- Elymus virginicus L. var. virginicus. Perennial; prairies, pastures, and roadsides; common; flowers May-September.
- Eragrostis capillaris (L.) Nees. Lace Grass. Annual; dry sand, soils; southeast; common; flowers July-October.
- Eragrostis cilianensis (All.) E. Mesher. Stink Grass. Annual; waste and disturbed areas, roadsides; common; flowers June-October.
- Eragrostis frankii C.A. May. Annual; sandbars, river banks, and moist open ground; common; flowers August-October.
- Eragrostis intermedia. Hitchc. Plains Love Grass. Perennial; dry sandy prairies; infrequent; flowers June-October.
- Eragrostis pectinacea (Michx.) Nees. Annual; rock prairies, dry open areas and waste areas; common; flowers July-October.

- Eragrostis spectabilis (Pursh.) Steud. Purple Love Grass.
Perennial; prairies, pastures, and roadsides; abundant;
flowers July-October.
- Eragrostis trichodes (Nutt.) Wood. Sand Love Grass. Perennial;
sand soils and open woods; infrequent to common; flowers
July-October.
- Eriochloa contracta Hitchc. Prairie Cup Grass. Annual;
prairies, pastures, and waste areas; common; flowers
July-October.
- Festuca obtusa Biehler. Nodding Fescue. Perennial; wooded
areas; common; flowers June-July.
- Festuca octoflora Walt. Six-weeks Fescue. Annual; roadsides
and pastures; infrequent to common; flowers April-June.
- Festuca paradoxa Desv. Perennial; prairies and low open ground;
infrequent; flowers May-July.
- Festuca pratensis Huds. Meadow Fescue. (F. elatior L.)
Perennial; prairies, pastures, and roadsides; abundant;
flowers June-August.
- Gymnopogon ambiguus (Michx.) B.S.P. Beard Grass. Perennial;
oak-hickory woodland; southeast; common; flowers July-
September.
- Hordeum jubatum L. Foxtail Barley. Perennial; prairies,
pastures, and roadsides; common; flowers May-October.
- Hordeum pusillum Nutt. Little Barley. Annual; prairies,
pastures, and roadsides; common; flowers April-June.
- Koeleria pyramidata (Lam.) Beauv. June Grass. (K. cristata
Pers.) Perennial; prairies, pastures, and roadsides;
common; flowers April-May.
- Leersia oryzoides (L.) Sw. Ricecut Grass. Perennial; borders
of sloughs and ponds, and wet meadows; common; flowers
June-October.
- Leersia virginica Willd. White Grass. Perennial; low woodland;
common; flowers June-October.
- Leptochloa fascicularis (Lam.) Gray Salt Meadow Grass. Annual;
marsh, areas, sloughs, and edges of ponds; infrequent to
common; flowers July-October.

- Leptochloa filiformis (Lam.) Beauv. Red Sprangle Top.
Annual; alluvial banks, flood plains, and moist grounds;
infrequent to common; flowers July-October.
- Leptoloma cognatum (Schult.) Chase Fall Witch Grass. Perennial;
prairies, pastures, and roadsides; common; flowers June-
October.
- Lolium perenne L. Perennial Rye Grass. Perennial; fields,
meadows, and waste grounds; infrequent to common; flowers
May-August.
- Melica nitens (Scribn.) Nutt. Melic Grass. Perennial; open
rocky woods, rare; flowers April-July.
- Muhlenbergia bushii Pohl. (*M. brachyphylla* Bush.) Perennial;
open rocky woods; infrequent to common; flowers August-
October.
- Muhlenbergia capillaris (Lam.) Trin. Hair Grass. Perennial;
open woods; southeast; infrequent; flowers September-
October.
- Muhlenbergia cuspidata (Torr.) Rydb. Plains Muhly. Perennial;
prairies; infrequent; flowers July-October.
- Muhlenbergia frondosa (Poir.) Fern. Satin Grass. Perennial;
prairies, pastures, and roadsides; common; flowers
August-November.
- Muhlenbergia racemosa (Michx.) B.S.P. Perennial; wooded areas
and dry prairies; common; flowers August-October.
- Muhlenbergia sobolifera (Muhl.) Trin. Perennial; rocky woods;
infrequent; flowers July-October.
- Muhlenbergia sylvatica Torr. Perennial; moist woods and thickets;
infrequent; flowers July-October.
- Panicum capillare L. Witch Grass. Annual; prairies, pastures, and
roadsides; common; flowers July-October.
- Panicum clandestinum L. Perennial; open upland woods and along
railroads; infrequent to common; flowers May-September
(vernal), July-November (autumnal).
- Panicum dichotomiflorum Michx. Fall Panicum. Annual; prairies,
pastures, roadsides, and disturbed areas; abundant;
flowers July-October.
- Panicum lanuginosum Ell. Perennial; prairies, pastures, and
edges of woods; common; flowers May-September.

- Panicum linearifolium Scribn. Perennial; prairies and pastures; infrequent; flowers May-July (vernal), July-October (autumnal).
- Panicum oligosanthos Schultes. var. scribnerianum (Nash.) Fern. Perennial; prairies, pastures, and roadsides; common; May-July (vernal), June-November (autumnal).
- Panicum philadelphicum Bernh. Annual; sandy, gravelly soil; southeast; infrequent; flowers July-October.
- Panicum praecocius Hitchc. & Chase. Perennial; dry open woods and prairies; infrequent; flowers May-July (vernal), June-September (autumnal).
- Panicum rigidulum Nees. (P. agrostoides) Perennial; wet open areas; common; flowers July-October.
- Panicum sphaerocarpon Ell. Perennial; prairies, pastures, and roadsides; common; flowers May & September (vernal), July-November (autumnal).
- Panicum virgatum L. Switch Grass. Perennial; prairies, pastures, and roadsides; abundant; flowers July-September.
- Panicum wilcoxianum Vasey. Perennial; prairies; west; infrequent; flowers May-July (vernal), June-September (autumnal).
- Paspalum pubiflorum Rupr. var. glabrum Vasey. Perennial; prairies, pastures, and roadsides; common; flowers June-September.
- Paspalum setaceum Michx. var. Muhlenbergii (Nash) D. Banks. (P. ciliatifolium var. Muhlenbergii (Nash) Fern. Perennial; prairies, pastures, and roadsides; common; flowers May-October.
- Paspalum setaceum Michx. var. stramineum (Nash) D. Banks. (P. ciliatifolium var. stramineum (Nash) Fern.) Perennial; prairies, pastures, and roadsides; common; flowers May-October.
- Phalaris caroliniana Walt. Canary Grass. Annual; prairies, roadsides; infrequent; flowers June-October.
- Phleum pratense L. Timothy Grass. Perennial; prairies, pastures, and roadsides; infrequent; flowers May-August.
- Poa compressa L. Canada Blue Grass. Perennial; prairies, pastures, roadsides, and lawns; common; flowers May-August.

- Poa pratensis L. Kentucky Blue Grass. Perennial; prairies, pastures, roadsides, and lawns; abundant; flowers May-July.
- Schedonnardus paniculatus (Nutt.) Trel. Tumble Grass. Perennial; waste and disturbed areas and roadsides; infrequent; flowers May-October.
- Schizachyrium scoparium (Michx.) Nash. Little Bluestem. (Andropogon scoparius Michx.) Perennial; prairies, pastures, and roadsides; abundant; flowers August-October.
- Setaria faberii Herrm. Nodding Foxtail. Annual; disturbed areas, roadsides, and edges of fields; common; flowers July-October.
- Setaria geniculata (Lam.) Beauv. Prairie Foxtail. Perennial; prairies and along railroads; infrequent to common; flowers July to October.
- Setaria glauca (L.) Beauv. Yellow Foxtail. (S. lutescens (Wieg.) Hubb Annual; prairies; pastures, roadsides, and disturbed areas; abundant; flowers June-October.
- Setaria viridis (L.) Beauv. Green Foxtail. Annual; waste and disturbed areas, and roadsides; abundant; flowers June-October.
- Sorghastrum avenaceum (Michx.) Nash. Indian Grass. (S. nutans (L.) Nash) Perennial; prairies, pastures, and roadsides; abundant; flowers August-September.
- Sorghum halepense (L.) Pers. Johnson Grass. Perennial; waste and disturbed areas, roadsides, and pastures; abundant; flowers July-September.
- Sorghum vulgare Pers. Sorghum. Annual; disturbed and waste areas, and roadsides; common; flowers June-October.
- Spartina pectinata Link. Slough Grass. Perennial; marshy areas, roadsides, and sloughs; common; flowers June-September.
- Sphenopholis obtusata (Michx.) Scribn. var. obtusata. Prairie Wedgegrass. Perennial; prairies and pastures; common; flowers May-July.
- Sporobolus asper (Michx.) Kunth. var. asper Dropseed. Perennial; pastures, and roadsides; abundant; flowers August-October.

- Sporobolus asper (Michx.) Kunth. var. clandestinus (Biehler) Shinners. Perennial; prairies and pastures and roadsides; common; flowers August-October.
- Sporobolus drummondii (Trin.) Vasey Wire Grass. (S. asper (Michx.) Kunth. var. Hookeri (Trin.) Vasey. Perennial; prairies, pastures, and roadsides; abundant; flowers August-October.
- Sporobolus cryptandrus (Torr.) Gray Sand Dropseed. Perennial; upland prairies; common; flowers June-October.
- Sporobolus vaginiflorus (Torr.) Wood. var. vaginiflorus Poverty Grass. Annual; dry open sterile soil; infrequent to common; flowers August-November.
- Sporobolus vaginiflorus (Torr.) Wood. var. neglectus (Nash) Scribn. Poverty Grass. Annual; dry open sterile soil; infrequent to common; flowers August-November.
- Stipa spartea Trin. Porcupine Grass. Perennial; dry, rocky prairies and roadsides; infrequent; flowers May-June.
- Tridens flavus (L.) Hitchc. Purpletop. Perennial; prairies, pastures, and roadsides; abundant; flowers July-August.
- Tridens muticus Slim Tridens. T. elongatus (Buckl.) Nash Perennial; dry rocky ledges of limestone; infrequent; flowers June-October.
- Tripsacum dactyloides L. Gamagrass. Perennial; prairies, pastures, and roadsides; common; flowers May-September.
- Triticum aestivum L. Wheat. Annual; waste areas and roadsides; common; flowers May-July.
- Uniola latifolia Michx. Spike Grass. Perennial, wooded areas; southeast; common; flowers June-October.

TYPHACEAE (Cat-tail Family)

- Typha angustifolia L. Narrow-leaved Cat-tail. Perennial; edges of calcareous ponds; infrequent; flowers late May-July.
- Typha latifolia L. Common Cat-tail. Perennial; edges of ponds, lakes, streams, and marshy areas; abundant; flowers May-July.

ARACEAE (Arum Family)

Arisaema dracontium (L.) Schott. Green Dragon. Perennial; rich, wooded areas; infrequent; flowers yellow-green April-June.

COMMELINACEAE (Spiderwort Family)

Commelina communis L. Dayflower. Annual; cultivated and waste ground, and low woods; common; flowers blue and white May-October.

Commelina erecta L. var. erecta. Dayflower. Perennial; stream banks, roadsides, and woods; common; flowers Blue and white May-October.

Commelina erecta L. var. angustifolia (Michx.) Fern. Dayflower. Perennial; stream banks, roadsides, and woods; common to abundant; flowers blue and white May-October.

Commelina virginica L. Dayflower. Annual; wet, low woodland, and sloughs; infrequent; flowers blue and white July-September.

Tradescantia bracteata Small. Spiderwort. Perennial; prairies, pastures, and roadsides; flowers blue May-July.

Tradescantia ohiensis Raf. Spiderwort. Perennial; prairies, pastures, and roadsides; common; flowers blue May-July.

LILIACEAE (Lily Family)

Allium canadense L. var. canadense. Wild Garlic. Perennial; prairies, pastures, and roadsides; common; flowers white May-July. (A. mutabile Michx.)

Allium canadense L. var. lavendulare (Bates) Ownbey & Aase. Wild Garlic. Perennial; prairies, pastures, and roadsides; common; flowers white May-July.

Allium stellatum Ker. Prairie Onion. Perennial; limestone glades; common; flowers pink July-November.

Asparagus officinalis L. Asparagus. Perennial; roadsides, pastures, and fence rows; common; flowers yellow-green May-June.

Camassia scilloides (Raf.) Cory. Wild Hyacinth. Perennial; prairies and open woods; infrequent; flowers lavender April-May.

Erythronium albidum Nutt. White Fawn Lily. Perennial; wooded areas; common; flowers white March-May.

Erythronium mesochoreum Knerr. Prairie Dogtooth Violet. Perennial; prairies, pastures, and roadsides; common; flowers white March-May.

Hemerocallis fulva L. Day Lily. Perennial; roadsides and fence rows; infrequent to common; flowers orange May-August.

Northocordum bivalve (L.) Britt. False Garlic. Perennial; roadsides, pastures, and prairies; common; flowers white March-May.

Polygonatum biflorum (Walt.) Ell. Solomons Seal. Perennial; rich low woods; common; flowers green May-June.

Smilax herbacea L. Carrion-flower Greenbrier. Perennial; richer rocky wood; common; flowers green May-June.

Smilax hispida Muhl. Bristly Greenbrier. Perennial; low wooded areas; common; flowers green May-June.

Yucca smalliana Fern. Spanish Bayonet. Perennial; roadsides, open woods, and along railroads; infrequent; flowers white May-August.

Zigadenus Nuttallii S. Wats. Death Camas. Perennial; prairies and hillsides; infrequent; flowers yellowish-white May.

AMARYLLIDACEAE (Amaryllis Family)

Hypoxis hirsuta (L.) Cov. Yellow Star Grass. Perennial; prairies, pastures, and roadsides; infrequent to common; flower yellow April-June.

IRIDACEAE (Iris Family)

Nemastylis geminiflora Nutt. Celestial Lily. Perennial; limestone glades and prairies; infrequent; flowers lilac-blue April-May.

Sisyrinchium campestre Bickn. var. campestre Blue-eye Grass. Perennial; prairies, pastures, and roadsides; common; flowers blue April-June.

Sisyrinchium campestre Bickn. var. kansanum Bickn. Blue-eye Grass. Perennial; prairies, pastures, and roadsides; common; flower blue April-June.

ORCHIDACEAE (Orchid Family)

Spiranthes cernua (L.) Rich. Common Ladies' Tresses.
Perennial; prairies and open rocky wood; common;
flowers white August-November.

Spiranthes lacera (Raf.) Raf. Northern Slender Ladies'
Tresses. Perennial; moist meadows and fields; infrequent;
flowers white.

Spiranthes tuberosa Raf. Little Ladies' Tresses. Perennial;
dry, rocky upland oak-hickory woodland; southeast;
common; flowers white August-October.

Spiranthes vernalis Engle. & Gray. Ladies' Tresses.
Perennial; prairies; infrequent; flowers white June-
August.

Dicotyledoneae

SALICACEAE (Willow Family)

Populus alba L. White poplar. Tree; roadsides and fence
rows; common; flowers March-May.

Populus deltoides Marsh. var. deltoides Eastern Cottonwood.
Tree; roadsides, river flood plains, moist disturbed
areas; abundant; flowers March-May.

Populus deltoides Marsh. var. occidentalis Rydb. Plains
Cottonwood. Tree; roadsides, river flood plains, moist
disturbed areas; infrequent to common; flowers March-
May.

Salix amygdaloides Anderss. Peach-leaved Willow. Tree; low
woods and stream banks; infrequent to common; flowers
April-June.

Salix caroliniana Michx. Ward's Willow. Tree; gravel bars
and rock banks of streams; common; flowers April-May.

Salix exigua Nutt. ssp. interior (Rowlee) Cronq. var. interior
Sandbar Willow. Tree; sand bars and alluvial banks of
streams; common; flowers May-June.

Salix humilis Marsh. Prairie willow. Tree; prairies, open
woods and rocky draws; common; flowers March-May.

Salix nigra Marsh. Black Willow. Tree; edges of streams and
ponds and roadsides; abundant; flowers April-May.

JUGLANDACEAE (Walnut Family)

Carya cordiformis (Wang.) K. Koch. Bitternut Hickory. Tree; low woods and river bottoms; abundant; flowers April-May.

Juglans nigra L. Black Walnut. Tree; oak-hickory woodland; common; flowers April-May.

FAGACEAE (Beech Family)

Quercus borealis Michx. f. var. maxima (Marsh) Ashe Red Oak. Tree; upland and lowland woods; common; flowers April-May.

Quercus imbricaria Michx. Shingle Oak. Tree; woodlands and borders of prairies; infrequent; flowers April-May.

Quercus macrocarpa Michx. Bur Oak. Tree; woodlands and along streams; abundant; flowers April-May.

Quercus marilandica Muenchh. Black-Jack Oak. Tree; dry sandy, open woodlands; southeast; abundant; flowers April-May.

Quercus muehlenbergii Engelm. Chestnut Oak. Tree; rocky stream banks, hillsides, and borders of woods; common; flowers April-May.

Quercus palustris Muench. Pin Oak. Tree; woodlands, flood plains and sloughs; abundant; flowers April-May.

Quercus prinoides Willd. Dwarf Chestnut Oak. Tree; dry rocky hills, pastures and borders of woods; common; flowers April-May.

Quercus shumardii Buckl. Shumards Oak. Tree; rich moist soils, stream banks, woodlands and open areas; common; flowers April-May.

Quercus stellata Wang. Post Oak. Tree; dry rocky or sandy soils; southeast; common; flowers April-May.

Quercus velutina Lam. Black Oak. Tree; dry uplands; common to abundant; flowers April-May.

ULMACEAE (Elm Family)

Celtis occidentalis L. Hackberry. Tree; low woods along streams and upland slopes; abundant; flowers April-May.

Ulmus americana L. American Elm. Tree; along streams and low moist ground; abundant; flowers February-April.

Ulmus pumila L. Siberian Elm. Tree; escaped from cultivation; common; flowers March.

Ulmus rubra Muhl. Slippery Elm. Tree; dry upland, rocky woods and along streams; abundant; flowers February-April.

MORACEAE (Mulberry Family)

Cannabis sativa L. Marijuana. Annual; river flood plains and open, waste ground; rare; flowers June-October.

Humulus lupulus L. Hops. Perennial vine; wooded areas and roadsides; common; flowers greenish-white July-August.

Maclura pomifera (Raf.) Schneid. Osage Orange. Tree; fence rows and overgrazed pastures; abundant; flowers May-June.

Morus alba L. White Mulberry. Tree; low, wet ground, pastures, and escaped from cultivation; common; flowers April-May.

Morus rubra L. Red Mulberry. Tree; rich woods and open, rocky areas; common; flowers April-May.

URTICACEAE (Nettle Family)

Laportea canadensis (L.) Gand. Wood Nettle. Perennial; low woodlands; common; flowers green May-August.

Parietaria pensylvanica Muhl. Pellitory. Annual; open, rock areas; common; flowers green May-October.

Pilea pumila (L.) Gray. Clearweed. Annual; rich, low woodlands; infrequent to common; flowers green July-October.

Urtica dioica L. ssp. gracilis (Ait.) Selander. Tall Nettle. Perennial; river bottoms and flood plains; common; flowers green May-October.

POLYGONACEAE (Buckwheat Family)

Fagopyrum esculentum Moench. Buckwheat. (F. sagittatum Gilib.) Annual; escaped into fields and along railroads; infrequent; flowers May-September.

Polygonum arenastrum Jord ex Bor. Knotweed. (P. aviculare L.) Annual; disturbed areas along buildings and pastures; abundant; flowers white May-November.

Polygonum bicornes Raf. Pink Smartweed (P. longistylum Small) Annual; roadsides, wet areas, and fields; common; flowers pink July-October.

Polygonum coccineum Muhl. Water Smartweed. Perennial; wet ditches and marshy areas; common; flowers rosy-pink June-October.

- Polygonum convolvulus L. Black Bindweed. Annual; roadsides and waste areas; flowers greenish-white May-November.
- Polygonum hydropiper L. Water Pepper. Annual; fields, pastures and wet areas; infrequent to common; flowers green May-November.
- Polygonum hydropiperoides Michx. Wild Water Pepper. Annual or perennial; around ponds, streams, and low woodlands; common; flowers white to pink June-November.
- Polygonum lapathifolium L. Smartweed. Annual; marshy areas, roadside ditches, and sloughs; abundant; flowers white June-October.
- Polygonum pensylvanicum L. Pinkweed. Annual; marshy areas, roadside ditches, and sloughs; abundant; flowers white to pink June-October.
- Polygonum persicaria L. Lady's Thumb. Annual; marshy areas, roadsides and sloughs; common; flowers pink to white May-October.
- Polygonum punctatum Ell. Water Smartweed. Perennial; marshy areas, sloughs, and roadsides; abundant; flowers white July-October.
- Polygonum ramosissimum Michx. Bushy Knotweed. Annual; marshy areas, roadsides and pastures; common; flowers white July-October.
- Polygonum scandens L. False Buckwheat. Perennial; roadsides and wet areas; common; flowers green July-November.
- Polygonum tenue Michx. Annual; disturbed areas and roadsides; infrequent; flowers white June-October.
- Polygonum virginianum L. Virginia Knotweed. Perennial; wooded areas; common; flowers white July-October.
- Rumex acetosella L. Field Sorrel. Perennial, dioecious; fields and roadsides; infrequent to common; flowers reddish May-September.
- Rumex altissimus Wood. Smooth Dock. Perennial; pastures, roadsides, and waste areas; abundant; flowers green April-May.
- Rumex crispus L. Curly Dock. Perennial; pastures, roadsides, and waste areas; abundant; flowers green April-May.

Rumex venosus Pursh. Wild Hydrangea. Perennial; roadsides and along railroads in sandy soils; infrequent; flowers reddish-green May-July.

CHENOPODIACEAE (Goosefoot Family)

Chenopodium album L. Lamb's Quarters. Annual; waste and disturbed areas; common; flowers green May-October.

Chenopodium ambrosioides L. Mexican Tea. Annual or Perennial; waste grounds and along railroads; infrequent to common; flowers green August-November.

Chenopodium hybridum L. Maple-leaved Goosefoot. (C. gigantospermum Adlen.) Annual; wooded areas; flowers green July-October.

Chenopodium missouriense Aellen. Annual; waste ground and along railroads; infrequent to common; flowers green September-October.

Chenopodium Standleyenum Aellen. Annual; waste areas, fields, and woodlands; common; flowers green June-October.

Kochia scoparia (L.) Schrad. Fire Bush. Annual; waste areas, roadsides, and fields; common; flowers green July-October.

AMARANTHACEAE (Amaranth Family)

Amaranthus albus L. Tumbleweed. Annual; waste ground and along railroads; infrequent to common; flowers green July-October.

Amaranthus graecizans L. Spreading Pigweed. Annual; waste areas, roadsides, and along railroads; common; flowers green June-October.

Amaranthus hybridus L. Slender Pigweed. Annual; waste areas, roadsides, and along railroads; common; flowers green August-October.

Amaranthus retroflexus L. Redroot Pigweed. Annual; waste areas, roadsides, and along railroads; common; flowers green July-October.

Amaranthus spinosus L. Spiny Pigweed. Annual; waste areas; infrequent to common; flowers green June-October.

Amaranthus tamariscinus Nutt. Water Hemp. Annual; along streams, sloughs and waste areas; common; flowers green July-October.

Froelichia gracilis (Hook.) Mog. Cottonweed. Annual; sandy open ground and along railroads; infrequent; flowers white to pink May-September.

NYCTAGINACEAE (Four-o'clock Family)

Mirabilis albida (Walt.) Heimerl. Pale Four-o'clock. Perennial; prairies and roadsides; infrequent; flowers lavender to cream May-October.

Mirabilis linearis (Pursh.) Heimerl. Narrow-leaved Four-o'clock. Perennial; prairies and roadsides; infrequent to common; flowers lavender May-October.

Mirabilis nyctaginea (Michx.) MacM. Wild Four-o'clock. Perennial; prairies, waste areas and roadsides; common; flowers violet May-October.

PHYTOLACCACEAE (Pokeweed Family)

Phytolacca americana L. Pokeweed. Perennial; wooded areas and roadsides; common; flowers white to pink May-October.

AIZOACEAE (Carpet-weed Family)

Mollugo verticillata L. Carpet-weed. Annual; waste areas and along railroads; infrequent; flowers white May-September.

PORTULACACEAE (Purslane Family)

Claytonia virginica L. Spring Beauty. Perennial; prairies, pastures, and woodlands; abundant; flowers pink and white February-May.

Portulaca mundula Johnston. Pursland. Annual; sandstone and limestone glades and bluffs; infrequent to common; flowers pink May-October.

Portulaca oleracea L. Pursland. Annual; cultivated and waste areas; infrequent to common; flowers yellow June-November.

CARYOPHYLLACEAE (Pink Family)

Agrostemma githago L. Corn Cackle. Annual; fields and waste places; infrequent; flowers white March-May.

Arenaria patula L. Sandwort. Annual; rocky prairies; southeast; common; flowers green April-June.

Arenaria serpyllifolia L. Thyme-leaved Sandwort. Annual; fields, yards, and roadsides; flowers green April-August.

Cerastium brachypodium (Engelm.) Robins. Short-stalked Chickweed. Annual; pastures, roadsides, and disturbed areas; common; flowers white March-June.

Dianthus armeria L. Carnation. Annual or biennial; rich moist prairies, and roadsides; infrequent to common; flowers pink May-October.

Holosteum umbellatum L. Jagged Chickweed. Annual; roadsides, pastures, and waste areas; common; flowers white March-May.

Paronychia canadensis (L.) Wood. Forked Chickweed. Annual; dry, open woods; infrequent; flowers May-October.

Paronychia fastigiata (Raf.) Fern. Forked Chickweed. Annual; dry open woods; infrequent; flowers May-October.

Saponaria officinalis L. Bouncing Bet. Perennial; roadsides, streams, and along railroads; common; flowers pink June-October.

Silene antirrhina L. Sleepy catchfly. Annual or biennial; roadsides, pastures, and along railroads; common; flowers white May-September.

Silene stellata (L.) Ait. Starry Campion. Perennial; woodland; common; flowers white June-September.

Stellaria media (L.) Cyr. Chickweed. Annual; roadsides, lawns, and waste areas; abundant; flowers green January-December.

NYMPHAEACEAE (Water Lily Family)

Nelumbo lutea (Willd.) Pers. American Lotus. Perennial; shallow areas of ponds and lakes; infrequent to common; flowers yellow June-September.

ANNONACEAE (Custard Apple Family)

Asimina triloba (L.) Dun. Pawpaw. Tree; woodland; common; flowers brown March-May.

RANUNCULACEAE (Buttercup Family)

Anemone caroliniana Walt. Prairie Anemone. Perennial; prairies, infrequent; flowers white or blue March-May.

Aquilegia canadensis L. Columbine. Perennial; rich woods and limestone bluffs; infrequent; flowers yellow April-July.

Clematis pitcheri T&G Leather Flower. Perennial vine; rocky woodlands; infrequent to common; flowers blue May-September.

Delphinium virescens Nutt. Prairie Larkspur. Perennial; prairies and pastures; abundant; flowers white May-July.

Isopyrum biternatum (Raf.) T.&G. False Rue Anemone. Perennial; woodlands; infrequent; flowers white March-May.

Ranunculus abortivus L. Small-flowered Buttercup. Annual; along stream ponds and wet roadsides; common; flowers yellow March-June.

Thalictrum dasycarpum Fishch., Mey., & Avenhall. Purple Meadow Rue. Perennial; woodlands; infrequent to common; flowers white May-July.

MENISPERMACEAE (Moonseed Family)

Cocculus carolinus (L.) DC. Carolina Moonseed. Perennial vine; open woods, fence rows, and roadsides; infrequent to common; flowers green July-August.

Menispermum canadense L. Moonseed. Perennial vine; low moist woods; common; flowers green May-July.

FUMARIACEAE (Fumitory Family)

Corydalis micrantha (Englem.) Gray Corydalis. Annual; disturbed areas along railroads; common; flowers yellow April-June.

Dicentra cucullaria (L.) Bernh. Dutchman's Breeches. Perennial; woodlands; infrequent to common; flowers pink March-May.

CRUCIFERAE (Mustard Family)

Arabis canadensis L. Sickie-pod. Biennial or perennial; woodlands; infrequent; flowers white April-June.

Arabis virginica (L.) Poir. Rock Cress. (Sibara virginica (L.) Rollins) Annual or biennial; roadsides and disturbed areas; infrequent; flowers white March-May.

Barbarea vulgaris R.Br. Yellow Rocket. Biennial; disturbed and waste areas; flowers yellow April-June.

Brassica campestris L. Field Mustard. (B. rapa L.) Annual; fields and waste areas; infrequent; flowers yellow April-September.

Brassica nigra (L.) Koch. Black Mustard. Annual or biennial; roadsides and waste areas; common; flowers yellow April-November.

Capsella bursa-pastoris (L.) Medic. Shepard's Purse. Annual; waste areas, pastures and roadsides; abundant; flowers white March-May.

Cardamine parviflora L. var. arenicola (Britt.) Schultz. Bitter Cress. Annual or biennial; disturbed and waste areas; flowers white March-July.

- Dentaria laciniata Muhl. Toothwort. Perennial; woodlands; infrequent to common; flowers pink March-May.
- Descurainia pinnata (Walt.) Britt. var. brachycarpa. (Richards) Fern. Tansy Mustard. Annual or biennial; roadsides and disturbed areas; common; flowers yellow March-May.
- Draba brachycarpa Nutt. Whitlow Grass. Annual or biennial; pastures and disturbed areas; common; flowers white March-April.
- Draba cuneifolia Nutt. Whitlow Grass. Annual; roadsides and disturbed areas; common; flowers white February-May.
- Draba reptans (Lam.) Fern. Whitlow Grass. Annual or biennial; roadsides and fields; infrequent to common; flowers white February-May.
- Erysimum repandum L. Wall-flower. Biennial; roadsides and disturbed areas; common; flowers yellow April-June.
- Hesperis matronalis L. Dame's Rocket. Biennial; roadsides and disturbed areas; common; flowers lavender May-June.
- Lepidium campestre (L.) R. Br. Field Cress. Annual or biennial; fields, roadsides and waste areas; infrequent; flowers white April-June.
- Lepidium densiflorum Schrad. Pepper Grass. Annual or biennial; roadsides, pastures, and waste areas; common; flowers white April-November.
- Lepidium virginicum L. Pepper Grass. Annual or biennial; pastures, prairies, and rocky outcrops; common; flowers white February-November.
- Lesquerella gracilis (Hook.) Wats. ssp. nuttallii (T.G.) Rollins & Shrew. Bladder-pod. Annual; fields, roadsides, and along railroads; infrequent to common; flowers yellow April-June.
- Nasturtium officinale R. Br. Water Cress. Perennial; found in springs and spring fed streams; infrequent to common; flowers white April-October.
- Raphanus sativus L. Radish. Annual or biennial; disturbed areas; infrequent; flowers white to pink May-August.
- Sibara virginica (L.) Rollins (see Arabis virginica (L.) Poir)
- Sisymbrium officinale (L.) Scop. Hedge Mustard. Annual or biennial; roadsides and waste areas; infrequent to common; flowers white May-October.

Thlaspi arvense L. Field Penny Cress. Annual; roadsides and disturbed areas; abundant; common; flowers white April-June.

CRASSULACEAE (Stonecrop Family)

Sedum pulchellum Michx. Widow's Cross. Annual or biennial; limestone or sandstone outcrops; southeast; infrequent; flowers white or pink May-July.

SAXIFRAGACEAE (Saxifrage Family)

Heuchera hirsuticaulis (Wheel.) Rydb. Alum Root. (H. americana L. and H. Richardsonii R.Br.) Perennial; rocky woodlands; southeast; common; flowers cream April-June.

Ribes missouriense Nutt. Missouri Gooseberry. Perennial; rocky or dry open woodlands; abundant; flowers green April-May.

Ribes ordoratum Wendland. Golden Currant. Perennial; roadsides and fence rows; common; flowers yellow April-June.

PLATANACEAE (Plane Tree Family)

Platanus occidentalis L. Sycamore. Tree; river bottoms and woodlands; common; flowers April-June.

ROSACEAE (Rose Family)

Agrimonia parviflora Ait. Agrimony. Perennial; woodlands and wet prairies; southeast; common; flowers August-September.

Agrimonia pubescens Wallr. Agrimony. Perennial; woodlands; southeast; common; flowers yellow July-September.

Amelanchier arborea (Michx. f.) Fern. Juneberry. Shrub; open rocky woods and stream banks; southeast; common; flowers white April.

Amelanchier sanguinea (Purch.) DC. Dwarf Juneberry. (A. humilis Wieg.) Shrub; open rocky woods and creekbanks; infrequent; flowers white May.

Crataegus mollis (T.&G.) Scheele Hawthorne. Trees; wooded areas; common; flowers white April.

Fragaria virginiana Duchn. var. illinoensis (Prince) Gray Wild Strawberry. Perennial; prairies and roadsides; common; flowers white April-May.

- Geum canadense Jacq. Avens. Perennial; roadsides and wooded areas; abundant; flowers white May-October.
- Potentilla recta L. Cinquefoil. Perennial; roadsides and prairies; common; flowers yellow May-August.
- Potentilla simplex Mich. Cinquefoil. Perennial; rocky, open woods and prairies; common; flowers yellow April-June.
- Prunus americana Marsh. Wild Plum. Shrub; woodlands and pastures; common; flowers white April-May.
- Prunus angustifolia Marsh. Chickasaw Plum. Shrub; pastures, roadsides, and along streams; common; flowers white March-April.
- Prunus mexicana Wats. Big Tree Plum. Tree; open woods and prairie hillsides; hillsides; common; flowers white late April.
- Prunus munsoniana Wight. & Hedr. Wild goose plum. Tree; rich bottomlands and prairies; common; flowers white early April.
- Prunus serotina Ehrh. Black Cherry. Tree; rich bottomlands and woodlands; common; flowers white April-May.
- Prunus virginiana L. Choke Cherry. Tree; rich soils; roadsides, and borders of woods; common; flowers white late April.
- Rosa arkansana Porter. Wild Rose. Shrub; prairies and roadsides; common; flowers pink May-July.
- Rosa carolina L. Pasture Rose. Shrub; prairies, pastures, and roadsides; common; flowers pink May-June.
- Rubus allegheniensis Porter. Highbush blackberry. Shrub; pastures, prairies and roadsides; infrequent to common; flowers white May-June.
- Rubus flagellaris Willd. Dewberry. Perennial Vine; rocky, open woods, roadsides and prairies; common; flowers white May.
- Rubus occidentalis L. Black raspberry. Shrub; open woods, thickets, and pastures; common; flowers white May.
- Rubus ostryifolius Rydb. Highbush blackberry. Shrub; fence rows, pastures and prairies; common; flowers white May-June.
- Rubus pensilvanicus Poir. Highbush blackberry. Shrub; open woods and prairie; infrequent to common; flowers white late May.

LEGUMINOSAE (Legume Family)

- Desmanthus illinoensis (Michx.) MacM. Illinois Bundle Flower. Shrub; prairies and roadsides; common; flowers white June-August.
- Schrankia nuttallii (DC.) Standl. Sensitive Brier. (S. uncinata Willd.) Perennial; prairies and roadsides; common; flowers pink May-September.
- Cassia fasciculata Michx. Partridge Pea. Annual; prairies and roadsides; abundant; flowers yellow June-October.
- Cassia marilandica L. Wild Senn. Perennial; woodlands and roadsides; common; flowers yellow July-August.
- Cassia nictitans L. Sensitive Pea. Annual; rock, open woods and prairies; infrequent to common; flowers yellow July-September.
- Cercis canadensis L. Redbud. Tree; along streams; common; flowers red April.
- Gleditsia triacanthos L. Honey Locust. Tree; wooded areas, fence rows, and pastures; flowers green May-June.
- Gymnocladus dioica (L.) K.Koch. Kentucky Coffee Tree. Tree; wooded areas; common; flowers green May-June.
- Amorpha canescens Pursh. Lead Plant. Shrub; prairies and roadsides; common; flowers purple May-August.
- Amorpha fruticosa L. False Indigo. Shrub; roadsides, marshy areas and edges of ponds; flowers purple May-June.
- Astragalus crassicaarpus Nutt. var. crassicaarpus Ground Plum. (A. caryocarpus Ker.) Perennial; prairies and pastures; common; flowers red-violet April-May.
- Baptisia australis (L.) Br. var. minor (Lehm.) Fern. Wild Blue Indigo. Perennial; prairies, pastures, and roadsides; common; flowers blue May-June.
- Baptisia leucantha T. & G. White Wild Indigo. Perennial; prairies, pastures, and roadsides; flowers white April-June.
- Coronilla varia L. Crown Vetch. Perennial; roadsides and waste areas; common; flowers rose colored May-August.
- Crotalaria sagittalis L. Rattlebox. Annual; prairies and rocky open woods; infrequent to common; flowers yellow May-September.

Desmodium canescens (L.) DC. Beggar's Lice. Perennial; prairies and roadsides; common; flowers lavender-pink July-September.

Desmodium glutinosum (Muhl.) Wood. Tick Trefoil. Perennial; woodlands; common; flowers lavender June-August.

Desmodium illinoense Gray. Tick Trefoil. Perennial; prairies and roadsides; common; flowers lavender June-September.

Desmodium paniculatum (L.) DC. var. paniculatum. Tick Trefoil. Perennial; woodlands; infrequent to common; flowers lavender July-September.

Desmodium sessilifolium (Torr.) T. & G. Tick Trefoil. Perennial; prairies and roadsides; common; flowers pink-lavender July-September.

Lathyrus latifolius L. Everlasting Pea. Perennial vine; roadsides and railroads; infrequent to common; flowers lavender-pink May-September.

Lespedeza capitata Michx. Bush Clover. Perennial; roadsides and prairies; common; flowers creamy yellow July-September.

Lespedeza intermedia (Wats.) Britt. Perennial; rock open woods; infrequent; flowers pink July-September.

Lespedeza stipulacea Maxim. Korean Clover. Annual, roadsides and along railroads; infrequent to common; flowers pink July-October.

Lespedeza stuevei Nutt. Tall Bush Clover. Perennial; dry open woods and prairies; southeast; infrequent to common; flowers purple July-September.

Lespedeza violacea (L.) Pers. Prairie Clover. Perennial; dry, rocky woods and prairies; common; flowers purple July-September.

Lespedeza virginica (L.) Britt. Slender Bush Clover. Perennial; dry, rocky woods and prairies; infrequent to common; flowers purple May-September.

Medicago sativa L. Alfalfa. Perennial; fields, pastures, and roadsides; abundant; flowers purple April-October.

Medicago lupulina L. Black Medick. Annual; roadsides, waste areas, and pastures; abundant; flowers purple April-October.

Melilotus albus Desr. White Sweet Clover. Annual or biennial; roadsides, waste areas, and pastures; common; flowers white May-October.

- Melilotus officinalis (L.) Lam. Yellow Sweet Clover. Annual or biennial; roadsides, waste areas, and pastures; abundant; flowers yellow May-October.
- Petalostemon candidum Michx. White Prairie Clover. Perennial; prairies and pastures; common; flowers white May-July.
- Petalostemon multiflorum Nutt. White Prairie Clover. Perennial; prairies and roadsides; infrequent to common; flowers white June-September.
- Petalostemon purpureum (Vent.) Rydb. Purple Prairie Clover. Perennial; pastures and prairies; common; flowers purple May-September.
- Psoralea argophylla Push. Silvery Psoralea. Perennial; prairies and open valleys; infrequent to common; flowers purple June-August.
- Psoralea tenuiflora Pursh. var. floribunda (Nutt.) Rydb. Scurfy Pea. Perennial; prairies and roadsides; common; flowers purple May-September.
- Robinia pseudoacacia L. Black Locust. Tree; sloughs, fence rows and waste areas; common; flowers white to pink May-June.
- Strophostyles helvola (L.) Ell. Wild Bean. Annual; rocky woods, roadsides and fields; infrequent to common; flowers pink June-October.
- Strophostyles leiosperma (T.G.) Piper Wild Bean. Annual; fields, waste areas, and prairies; infrequent; flowers white June-October.
- Stylosanthes biflora (L.) B.S.P. Pencil Flower. Perennial; rocky open woods and prairies; southeast; infrequent to common; flowers yellow May-September.
- Tephrosia virginiana (L.) Pers. Hoary Pea. Perennial; prairies and roadsides; infrequent to common; flowers yellow and pink May-August.
- Trifolium compestre Schreb. Large Hop Clover. Annual; prairies and pastures; common; flowers yellow May-September.
- Trifolium pratense L. Red Clover. Perennial; prairies, pastures, and roadsides; common; flowers red May-September.
- Trifolium repens L. White Clover. Perennial; prairies, pastures, and lawns; abundant; flowers white May-October.

GERANIACEAE (Geranium Family)

Geranium carolinianum L. Cranesbill. Annual or biennial; roadsides, fields, and waste areas; common; flowers white to lavender May-July.

OXALIDACEAE (Wood Sorrel Family)

Oxalis dillenii Jacq. Yellow Wood Sorrel. Annual; prairies, pastures, and roadsides; abundant; flowers yellow May-November.

Oxalis stricta L. Sheep Sorrel. Perennial; wooded or shaded areas; abundant; flowers yellow May-October.

Oxalis violacea L. Violet Wood Sorrel. Perennial; roadsides, prairies, and open woods; common; flowers lavender April-July.

LINACEAE (Flax Family)

Linum sulcatum Ridd. Yellow Flax. Annual; prairies and pastures; common to abundant; flowers yellow May-September.

Linum usitatissimum L. Linseed. Annual; roadsides and along railroads; common; flowers blue May-September.

ZYGOPHYLLACEAE (Caltrop Family)

Tribulus terrestris L. Puncture vine. Annual; waste and disturbed areas; common; flowers yellow June-September.

RUTACEAE (Rue Family)

Zanthoxylum americanum Mill. Prickly Ash. Shrub; wooded areas; infrequent; flowers green April-May.

SIMAROUBACEAE (Quassia Family)

Ailanthus altissima (Mill.) Swingle. Tree of Heaven. Tree; thickets, roadsides and shadetree; common; flowers green May-June.

EUPHORBIACEAE (Spurge Family)

Acalypha monococca (Engelm.) Mill. Three-seed Mercury. (A. gracilens Gray var. monococca Engelm.) Annual; prairies, waste areas and roadsides; common; flowers green May-October.

Acalypha ostryaefolia Ridd. Annual; along streams and cultivated areas; infrequent to common; flowers green June-October.

Acalypha rhomboides Raf. Three-seeded Mercury. Annual; wooded areas and prairies; infrequent to common; flowers green July-October.

Acalypha virginica L. Virginia Three-seeded Mercury. Annual; wooded and prairie areas; common; flowers green July-October.

Argythamnia mercurialina (Nutt.) Muell. Arg. Wild Mercury. Perennial; dry prairies; western; infrequent; flowers green May-July.

Croton capitatus Michx. var. capitatus Hogwort. Annual; prairies, pastures and roadsides; common; flowers tan June-October.

Croton glandulosus L. var. septentrionalis Muell. Arg. Croton. Annual; prairies, open woods, and pastures; infrequent to common; flowers tan July-October.

Croton monanthogynus Michx. Prairie Tea. Annual; prairies, roadsides, and waste areas; common; flowers tan May-September.

Crotonopsis elliptica Willd. Rushfoil. Annual; rocky open woods; southern; infrequent; flowers green June-September.

Euphorbia corollata L. Flowering Spurge. Perennial; prairies, waste and disturbed areas; common; flowers white May-October.

Euphorbia cyathophora Murr. Wild Poinsettia. (E. heterophylla L.) Annual; open, rocky woods and along railroads; common; flowers green July-October.

Euphorbia dentata Michx. Toothed Spurge. Annual; prairies, roadsides, and along railroads; common; flowers green July-October.

Euphorbia maculata L. Prairie Spurge. Annual; roadsides, pastures, and disturbed areas; common; flowers green May-October.

Euphorbia marginata Pursh. Snow-on-the-mountain. Annual; roadsides, disturbed and waste areas; common; flowers green and white June-October.

Euphorbia missurica Raf. var. missurica. Prairie Spurge. Annual; rocky, open areas; infrequent; flowers green May-September.

Euphorbia nutans Lag. Nodding Spurge. (E. maculata L.) Annual; roadsides, pastures, and disturbed areas; common; flowers green May-October.

Euphorbia podperae Croizat. (E. esula L.) Perennial; dry sandy soils of roadsides and along railroads; rare; flowers green May-September.

Euphorbia prostrata Ait. Prostrate Spurge. (E. Chamaesyce L.) Annual; disturbed areas; common; flowers green June-October.

Euphorbia serpens H.B.K. Spreading Spurge. Annual; roadsides, disturbed areas, and sidewalk cracks; common; flowers green May-October.

Euphorbia spathulata Lom. Leafy Spurge. Annual; disturbed and wooded areas; common; flowers green May-July.

Euphorbia stictospora Engelm. Narrow-seeded Spurge. Annual; roadsides, disturbed, and waste areas; infrequent to common; flowers green July-October.

ANACARDIACEAE (Cashew Family)

Rhus aromatica Ait. var. serotina (Greene) Rehd. Fragrant Sumac. Shrub; rocky hillsides and fence rows; common; flowers yellow March-April.

Rhus copallina L. Winged Sumac. Shrub; dioecious; prairies, thickets and open woods; southeastern; abundant; flowers yellow July.

Rhus glabra L. Smooth Sumac. Shrub; dioecious; prairies, thickets and borders of woods; abundant; flowers yellow May-June.

Toxicodendron radicans (L.) Kuntze ssp. negundo (Greene) Gillis Poison Ivy. (Rhus radicans L.) Perennial vine; dioecious; wooded areas, roadsides and creek banks; abundant; flowers green May-June.

CELASTRACIAE (Staff-tree Family)

Celastrus scandens L. American Bittersweet. Perennial vine; wooded areas and fence rows; common; flowers green May-June.

Euonymus atropurpureus Jacq. Wahoo. Shrub; woodlands; common; flowers purple April-June.

STAPHYLEACEAE (Bladder-nut Family)

Staphylea trifolia L. American Bladder-nut. Shrub; woodlands; infrequent; flowers white April-May.

ACERACEAE (Maple Family)

Acer negundo L. Box Elder. Tree; woodlands and roadsides; common; flowers green April-May.

Acer saccharinum L. Silver Maple. Tree; woodlands; fence rows, and roadsides; abundant; flowers reddish February-April.

HIPPOCASTANACEAE (Horse Chestnut Family)

Aesculus glabra Willd. var. arguta (Buckl.) Robins. Ohio Buckeye. Tree; woodlands; common; flowers yellow April-May.

RHAMNACEAE (Buckthorn Family)

Ceanothus americanus L. var. pitcheri T. & G. New Jersey Tea. Shrub; rocky prairies and open woods; common; flowers white May-November.

Ceanothus herbaceus Raf. var. pubescens (T.&G.) Shinners. Redroot. (C. ovatus Desf.) Shrub; rocky prairies and open woods; abundant; flowers white April-June.

VITACEAE (Grape Family)

Ampelopsis cordata Michx. Raccoon Grape. Perennial vine; woodlands; infrequent; flowers green May-July.

Parthenocissus quinquefolia (L.) Planch. Virginia Creeper. Perennial vine; woodlands, fence rows and sides of buildings; abundant; flowers green May-August.

Vitis cinerea Engelm. Grayback grape. Perennial vine; dioecious; woodlands, thickets, and stream banks; common; flowers green June.

Vitis riparia Michx. Riverbank grape. Perennial vine; dioecious; woodlands, upland rock soils and stream banks; common to abundant; flowers green May.

Vitis vulpina L. Winter grape. Perennial vine; dioecious; along streams and in low woods; common; flowers green May.

TILIACEAE (Linden Family)

Tilia americana L. Basswood. Tree; rich woods and stream banks; common; flowers green June.

MALVACEAE (Mallow Family)

Abutilon theophrasti Medic. Velvet Leaf. Annual; fields, roadsides, waste, and disturbed areas; abundant; flowers pale orange June-October.

Althea rosea Cav. Hollyhock. Biennial or perennial; escapes to waste grounds; infrequent; flowers white to red May-September.

Callirhoe alcaeoides (Michx.) Gray Poppy Mallow. Perennial; prairies, pastures and roadsides; flowers white to pink May-August.

Hibiscus militaris Cav. Rose Mallow. Perennial; along streams, ditches, and ponds; common; flowers pink and purple July-October.

Hibiscus trionum L. Flower-of-the-hour. Annual; waste grounds, roadsides, and along railroads; common to abundant; flowers yellow and purple June-September.

Malvastrum hispidum (Pursh.) Houchr. (Sphaeralcea angusta (Gray) Fern.) Annual; rocky prairies; infrequent; flowers yellow July-August.

Sida spinosa L. Prickly sida. Annual; roadsides, fields, and disturbed areas; common; flowers orange June-October.

HYPERICACEAE (St. John's wort Family)

Hypericum drummondii (Grev. & Hook) T.&G. Nits-and-lice. Annual; fields, prairies, and dry open woods; southeast; common; flowers orange-yellow June-September.

Hypericum mutilum L. Dwarf St. John's wort. Annual or perennial; along ponds, streams, and moist woodlands; infrequent to common; flowers yellow July-October.

Hypericum perforatum L. Common St. John's wort. Perennial; prairies and pastures; common; flowers yellow May-September.

Hypericum punctatum L. St. John's wort. Perennial; prairies and open woods; common; flowers yellow June-September.

Hypericum sphaerocarpum Michx. Perennial; prairies and dry, open woods; infrequent to common; flowers yellow May-September.

CISTACEAE (Rockrose Family)

Helianthemum bicknellii Fern. Frostweed. Perennial; dry, open woods and prairies; infrequent to common; flowers yellow April-July.

Lechea tenuifolia Michx. Pinweed. Perennial; open rocky woods and prairies; infrequent to common; flowers red July-November.

VIOLACEAE (Violet Family)

Viola missouriensis Greene. Missouri Violet. Perennial; woodlands, disturbed areas, and lawns; abundant; flowers violet March-May.

Viola pedata L. Bird's foot violet. Perennial; dry, open woods and prairies; southeast; infrequent; flowers purple April-June.

Viola pedatifida G. Don. Prairie Violet. Perennial; prairies and disturbed sandy areas; common; flowers purple April-May.

Viola papilionacea Pursh. (Name mistakenly given to a variety of common violets)

Viola pratincola Greene. Common Violet. Perennial; prairies, lawns, and along railroads; abundant; flowers blue-violet March-June.

Viola rafinesquii Greene Johnny-jump-up. Annual; prairies, lawns, and roadsides; abundant; flowers violet March-May.

LOASACEAE (Stick-leaf Family)

Mentzelia oligosperma Nutt. Chicken-thief. Perennial; along railroads in rocky, open areas; infrequent; flowers orange May-August.

CACTACEAE (Cactus Family)

Opuntia macrorhiza Engelm. Prickly Pear. Perennial; rocky prairies and pastures; common; flowers yellow May-June.

LYTHRACEAE (Loosestrife Family)

Ammannia coccinea Rottb. Tooth-cup. Annual; wet areas along streams and roadsides; infrequent to common; flowers purple June-October.

Lythrum californicum T.&G. Winged Loosestrife. (L. alatum Pursh.) Perennial; sloughs, roadsides and marshy areas; infrequent to common; flowers purple June-September.

ONAGRACEAE (Evening Primrose Family)

Calylophus serrulatus (Nutt.) Raven. Yellow Evening Primrose. (Oenothera serrulata Nutt.) Perennial; prairies, pastures, and roadsides; abundant; flowers yellow May-September.

- Circaea lutetiana L. ssp. canadensis (L.) Asch. & Magnus.
Enchanter's Nightshade. (C. quadrisulcata) Perennial;
moist woodlands; infrequent; flowers white June-August.
- Gaura longiflora Spach. Gaura. (G. biennis var. Pitcheri
Pickering) Biennial; prairies, pastures, and roadsides;
common; flowers pink June-October.
- Gaura parviflora Dougl. Velvety Gaura. Biennial; prairies,
roadsides, and waste areas; common; flowers pink June-
October.
- Ludwigia alternifolia L. var. pubescens Palm & Steyerim.
Seedbox. Perennial; along streamas and wet areas of
prairies and woodlands; infrequent to common; flowers
yellow June-August.
- Ludwigia peoloides (H.B.K.) Raven. ssp. glabrescens (D. Kuntze.)
Raven. Floating Primrose Willow. (Jussiaea repens L.)
Perennial; shallow water of ponds and marshes; common;
flowers yellow May-October.
- Oenothera biennis L. ssp. centralis Munz. Evening Primrose.
Biennial; prairies, thickets and waste areas; common;
flowers yellow June-October.
- Oenothera grandis (Britt.) Smyth. Evening Primrose. (O.
laciniata var. grandiflora (Wats.) Robins.) Annual;
prairies and roadsides; infrequent; flowers pale yellow
May-October.
- Oenothera laciniata Hill. Cut-leaved Evening Primrose. Annual;
prairies, roadsides and along railroads; common; flowers
pale yellow May-October.
- Oenothera linifolia Nutt. Sundrops. Annual; rocky acid prairies;
southeast; infrequent; flowers yellow May-July.
- Oenothera macrocarpa Nutt. var. macrocarpa. Missouri Primrose.
(O. missouriensis Sims.) Perennial; rocky areas in
prairies and roadsides; common; flowers yellow May-August.
- Oenothera speciosa Nutt. White Evening Primrose. Perennial;
roadsides and prairies; common; flowers white May-July.
- Oenothera strigosa (Rydb.) Mack. & Bush. ssp. canovirens (Steel)
Munz. (O. biennis L. var. hirsutissima Gray) Biennial;
prairies, thickets and waste areas; infrequent to common;
flowers yellow June-October.
- Oenothera triloba Nutt. Evening Primrose. Biennial; prairies
and along railroads; infrequent; flowers yellow April-May.

Stenosiphon linifolius (Nutt.) Heynh. Biennial; rocky banks and slopes; infrequent; flowers white July-October.

UMBELLIFERAE (Parsley Family)

Chaerophyllum procumbens (L.) Crantz. Wild Chervil. Annual; wooded areas and roadsides; common; flowers white April-June.

Chaerophyllum tainturieri Hook. Chervil. Annual; wooded areas and roadsides; common; flowers white March-May.

Cicuta maculata L. Water Hemlock. Biennial; marshy areas, sloughs and edges of ponds; common; flowers white May-September.

Conium maculatum L. Poison Hemlock. Biennial; pastures, roadsides and along railroads; common; flowers white May-August.

Cryptotaenia canadensis (L.) DC. Honewort. Perennial; wooded areas; common; flowers white May-August.

Eryngium leavenworthii T.&G. Leavenworth Eryngo. Perennial; rocky prairies and roadsides; abundant; flowers lavender July-September.

Eryngium yuccifolium Michx. Rattlesnake Master. Perennial; prairies, pastures, and roadsides; infrequent to common; flowers white July-August.

Lomatium foeniculaceum (Nutt.) Coult. & Rose var. daucifolium (T.&G.) Cronq. Parsley. Perennial; prairies, rocky slopes, and roadsides; common; flowers yellow April-June.

Osmorhiza longistylis (Torr.) DC. var. villicaulis Fern. Anise Root. Perennial; rich woods and thickets; infrequent; flowers white April-June.

Polytaenia nuttallii DC. Prairie Parsley. Perennial; prairie and pasture; common; flowers yellow April-June.

Sanicula canadensis L. Black Snakeroot. Biennial; woodlands; common; flowers green May-July.

Sanicula gregaria Bickn. Black Snakeroot. Biennial; woodlands; infrequent to common; flowers green April-June.

Spermolepsis inermis (Nutt.) Robins. Scale-seed. Annual; prairies and roadsides; infrequent; flowers white May-June.

Thaspium trifoliatum (L.) Gray. Meadow Parsnip. Perennial; prairies, rocky open woods and thicket; rare; flowers yellow April-June.

Torilis arvensis (Huds.) Link. Hedge Parsley. (T. japonica (Houtt.) DC.) Annual; roadsides, and waste areas; abundant; flowers white June-August.

Zizia aurea (L.) Koch. Golden Alexanders. Perennial; moist prairies, roadsides, and open woods; flowers yellow April-June.

CORNACEAE (Dogwood Family)

Cornus amomum Mill. ssp. obliqua (Raf.) J.S. Wilson. Silky Dogwood. Shrub; woodlands; common; flowers white May-July.

Cornus drummondii Mey. Rough-leaved Dogwood. Shrub; woodlands; abundant; flowers white May-July.

PRIMULACEAE (Primrose Family)

Androsace occidentalis Pursh. Rock-Jasmine. Annual; fields, prairies, and disturbed areas; common; flowers white March-May.

Lysimachia ciliata L. Fringed Loosestrife. Perennial; moist prairies, roadsides, and marshy areas; infrequent to common; flowers yellow May-July.

EBENACEAE (Ebony Family)

Diospyros virginiana L. Persimmon. Tree; wooded areas and rocky hillsides; common; flowers May-June.

OLEACEAE (Olive Family)

Fraxinus pennsylvanica Marsh. var. subintegerrima (Vahl.) Fern. Green Ash. Tree; woodlands, flood plains and roadsides; abundant; flowers April-May.

GENTIANACEAE (Gentian Family)

Gentiana puberulenta Pringle. Downy Gentian. (G. puberula Michx.) Perennial; dry calcareous prairies; infrequent; flowers purple September-November.

Sabatia campestris Nutt. Marsh Pink. Annual; prairies, fields, and roadsides; southeast; infrequent; flowers lilac July-September.

APOCYNACEAE (Dogbane Family)

Apocynum cannabinum L. Indian Hemp. Perennial; pastures, fields, and roadsides; abundant; flowers white May-August.

ASCLEPIADACEAE (Milkweed Family)

- Asclepias purpurascens L. Purple Milkweed. Perennial; rocky, open woods, prairies, and stream banks; common; flowers purple May-July.
- Asclepias stenophylla Gray. Milkweed. Perennial; prairies and roadsides; infrequent to common; flowers green June-July.
- Asclepias sullivantii Engelm. Milkweed. Perennial; prairies, pastures, and roadsides; common; flowers lavender to white June-July.
- Asclepias syriaca L. Common Milkweed. Perennial; prairies and roadsides; abundant; flowers lavender May-August.
- Asclepias tuberosa L. ssp. interior Woods. Butterfly Weed. Perennial; prairies and roadsides; common; flowers red-orange May-September.
- Asclepias verticillata L. Whorled Milkweed. Perennial; prairies and roadsides; common; flowers greenish-white May-September.
- Asclepias viridiflora Raf. Green Milkweed. Perennial; prairies and roadsides; common to abundant; flowers green May-August.
- Asclepias viridis Walt. Spider Milkweed. Perennial; pastures, roadsides, and waste areas; common; flowers green May-June.
- Periploca graeca L. Silk-vine. Perennial vine; escapes to thickets; rare; flowers purple-brown.

CONVOLVULACEAE (Morning Glory Family)

- Convolvulus arvensis L. Field Bindweed. Perennial vine; fields, disturbed areas, and roadsides; abundant; flowers white May-September.
- Convolvulus sepium L. Hedge Bindweed. Perennial vine; fields, disturbed areas, and roadsides; common; flowers white May-September.
- Cuscuta glomerata Choisy. Dodder. Annual parasitic vine; pastures, fields and roadsides; common; flowers straw-colored July-September.
- Ipomoea hederacea (L.) Jacq. Blue Morning Glory. Annual vine; fields, roadsides, and pastures; abundant; flowers blue July-October.
- Ipomoea pandurata (L.) Mey. Wild Potato Vine. Perennial vine; fields, roadsides, and waste areas; infrequent to common; flowers white July-October.

Ipomoea purpurea (L.) Roth. Common Morning Glory. Annual vine; cultivated fields and along railroads; common; flowers blue July-October.

POLEMONIACEAE (Phlox Family)

Phlox divaricata L. ssp. laphamii (Wood) Wherry Blue Phlox. Perennial; woodlands; common; flowers blue April-June.

HYDROPHYLLACEAE (Water leaf Family)

Ellisia nyctelea L. Aunt Lucy. Annual; wooded areas, roadsides, and waste areas; abundant; flowers lavender April-June.

BORAGINACEAE (Borage Family)

Cynoglossum officinale L. Common Hound's Tongue. Biennial; fields, rocky waste ground, and roadsides; infrequent; flowers reddish-purple May-July.

Hackelia virginiana (L.) I.M. Johnst. Beggar's Lice. Biennial; woodlands, infrequent to common; flowers white to blue June-September.

Heliotropium tenellum (Nutt.) Torr. Heliotrope. Annual; prairies, roadsides, and waste areas; common; flowers white to blue June-August.

Lappula echinata Gilib. Stickseed. Annual; fields, disturbed areas, and roadsides; infrequent; flowers blue May-September.

Lithospermum arvensis L. Corn Gromwell. Annual; roadsides and disturbed areas; abundant; flowers white April-June.

Lithospermum incisum Lehm. Yellow Puccoon. Perennial; prairies, pastures, and roadsides; common; flowers yellow April-June.

Myosotis verna Nutt. (M. virginica (L.) BSP.) Annual; upland woods and fields; infrequent to common; flowers white April-May.

Onosmodium molle Michx. var. hispidissimum (Mack.) Cronq. (O. hispidissimum Mack.) Perennial; dry, rocky prairies and thickets; infrequent; flowers white May-July.

Onosmodium molle Michx. var. occidentale (Mack.) I.M. Johnst. False Gromwell. (O. occidentale Mack.) Perennial; rocky prairies and open rocky woods; infrequent to common; flowers white May-July.

VERBENACEAE (Vervain Family)

Phyla lanceolata (Michx.) Greene. Fog Fruit. (Lippia lanceolata Michx.) Perennial; marshy areas, sloughs, and along ponds and rivers; common; flowers whitish-pink May-September.

Verbena bipinnatifida Nutt. Small-flowered Verbena. Perennial; along railroads and dry prairies; western; infrequent; flowers pink to purple May-September.

Verbena bracteata Lag. & Radr. Prostrate Vervain. Biennial; roadsides, pastures, and waste areas; common; flowers blue to purple April-October.

Verbena canadensis (L.) Britt. Rose Vervain. Perennial; prairies, pastures and roadsides; common; flowers pink to rose March-November.

Verbena hastata L. Blue Vervain. Perennial; prairies, pastures, and roadsides; infrequent to common; flowers blue-lavender June-October.

Verbena simplex Lehm. Narrow-leaf Verbena. Perennial; prairies, pastures, and roadsides; common; flowers blue May-September.

Verbena stricta Vent. Hoary Vervain. Perennial; prairies, roadsides, and waste areas; common; flowers blue to lavender May-September.

Verbena urticifolia L. White Vervain. Perennial; woodlands, prairies, and pastures; common; flowers white June-October.

LABIATAE (Mint Family)

Agastache neptoides (L.) O.Ktze. Yellow Giant Hyssop. Perennial; wooded areas; infrequent to common; flowers yellow July-September.

Hedeoma hispida Pursh. Mock Pennyroyal. Annual; prairies, roadsides, and waste areas; common to abundant; flowers blue May-July.

Isanthus brachiatus (L.) B.S.P. False Pennyroyal. Annual; roadsides and waste areas; infrequent to common; flowers blue July-October.

Lamium amplexicaule L. Henbit. Annual; roadsides, disturbed areas, and lawns; abundant; flowers lavender February-November.

- Lycopus americanus Muhl. Water Horehound. Annual; marshy areas and edges of ponds and streams; common; flowers white June-October.
- Marrubium vulgare L. Horehound. Perennial; open, wooded areas and pastures; infrequent to common; flowers white May-September.
- Mentha arvensis L. Field Mint. Perennial; woodlands, prairies, and sloughs; flowers white to lavender July-September.
- Monarda bradburiana Beck. Horsemint. (M. Russeliana Nutt.) Perennial; dry, open woods; southeast; infrequent; flowers rose-purple April-June.
- Monarda citriodora Cerv. Lemon Mint. Annual; prairies and roadsides, infrequent to common; flowers lavender June-October.
- Monarda fistulosa L. var. fistulosa Wild Bergamot. Perennial; prairies, pastures, and roadsides; common; flowers lavender May-August.
- Nepeta cataria L. Catnip. Perennial; pastures, wooded areas, and waste areas; common; flowers white June-September.
- Prunella vulgaris L. Heal-all. Perennial; wooded areas, moist prairies, and roadsides; abundant; flowers lavender May-September.
- Pycnanthemum tenuifolium Schrad. Slender Mountain Mint. Perennial; open woods and prairies; southeast; infrequent to common; flowers white-lavender June-September.
- Salvia pitcheri Torr. Blue Sage. (S. azurea Lam. var. grandiflora Benth.) Perennial; prairies, pastures, and roadsides; common to abundant; flowers blue July-September.
- Salvia reflexa Hornem. Rocky Mountain Sage. Annual; roadsides, pastures, and waste areas; common; flowers blue May-October.
- Scutellaria parvula Michx. var. parvula. Skullcap. Perennial; prairies and open woods; southeast; infrequent; flowers blue May-July.
- Scutellaria parvula Michx. var. leonardi (Epl.) Fern. Perennial; prairies and open woods; common; flowers blue May-July.
- Stachys tenuifolia Willd. Smooth Hedge Nettle. Perennial; moist wooded areas; infrequent to common; flowers lavender June-September.

Teucrium canadense L. var. virginicum (L.) Eat. Wood sage.
Perennial; prairies, roadsides and wooded areas; common
to abundant; flowers lavender June-September.

SOLANACEAE (Nightshade Family)

Datura stramonium L. Jimson Weed. Annual; disturbed and waste
areas; common; flowers white to lavender May-October.

Physalis angulata L. var. pendula (Rydb.) Waterfall. Ground
Cherry. Perennial; prairies, open, rocky woods and road-
sides; common; flowers yellow May-August.

Physalis pubescens L. Downy Ground Cherry. Annual; rocky woods,
along railroads and sandbars; infrequent; flowers yellow
May-November.

Physalis pumila Nutt. Low Ground Cherry. Perennial; roadsides,
pastures, and waste areas; common; flowers yellow and brown
May-August.

Physalis virginiana Mill. var. sonorae (Torr.) Waterfall. Virginia
Ground Cherry. Perennial; prairies, pastures, and roadsides;
common; flowers yellow May-September.

Solanum americanum Mill. Black Nightshade. Annual; pastures,
roadsides and wooded areas; common; flowers white May-
November.

Solanum carolinense L. Horse Nettle. Perennial; disturbed areas,
roadsides, and fields; flowers white to lavender May-
October.

Solanum elaeagnifolium Cav. Silverleaf Nettle. Perennial; rocky
prairies and pastures; infrequent to common; flowers blue
July-September.

Solanum rostratum Dun. Buffalo Bur. Annual; pastures, roadsides,
and disturbed areas; abundant; flowers yellow May-October.

SCROPHULARIACEAE (Figwort Family)

Agalinis aspera (Benth.) Britt. Rough Purple Agalinis.
(Gerardia aspera Benth.) Annual; prairies, pastures,
and sloughs; common; flowers lavender August-October.

Agalinis heterophylla (Nutt.) Small. Prairie Agalinis.
(Gerardia heterophylla Nutt.) Annual; prairies and dry
woods; southern; infrequent; flowers pink and purple
August-September.

Agalinis skinneriana (Wood) Britt. (Gerardia skinneriana Wood.)
Annual; sandy prairies and dry woods; infrequent; flowers
yellow and pink July-September.

- Agalinis tenuifolia (Vahl.) Raf. Slender Agalinis.
(Gerardia tenuifolia Vahl.) Annual; moist prairies,
pastures and sloughs; common; flowers lavender August-
October.
- Buchnera americana L. Blue Hearts. Perennial; prairies;
infrequent to common; flowers lavender June-September.
- Gerardia ssp. see Agalinis and Tomanthera
- Leucospora multifida (Michx.) Nutt. (Conobea multifida (Michx.)
Benth.) Annual; prairies, pastures, and roadsides;
infrequent to common; flowers white to lavender June-
October.
- Penstemon cobaea Nutt. Fox-glove. Perennial; prairies and
roadsides; common to abundant; flowers white and lavender
April-June.
- Penstemon tubaeflorus Nutt. Beard-tongue. Perennial; prairies
and roadsides; common; flowers white May-June.
- Scrophularia lanceolata Pursh. Figwort. Perennial; open woods,
roadsides, and fence rows; infrequent; flowers reddish-
brown May-June.
- Scrophularia marilandica L. Figwort. Perennial; rich woodland
and thickets; common; flowers greenish-brown June-October.
- Tomanthera densiflora (Benth.) Penn. (Gerardia densiflora Benth.)
Annual; dry prairies; infrequent; flowers purple August-
October.
- Verbascum blattaria L. Moth Mullein. Biennial; roadsides and
prairies; common; flowers white to yellow May-September.
- Verbascum thapsus L. Mullein. Biennial; roadsides, prairies,
and pastures; abundant; flowers yellow May-September.
- Veronica agrestis L. Field Speedwell. (V. polita Fries.) Annual;
lawns and disturbed areas; infrequent to common; flowers
blue March-May.
- Veronica arvensis L. Corn Speedwell. Annual; roadsides, lawns,
and disturbed areas; abundant flowers blue March-May.
- Veronica peregrina L. var. xalapensis (H.B.K.) St. John & Warren
Purslane Speedwell. Annual; roadsides, fields, and disturbed
areas; common; flowers white April-August.

OROBANCHACEAE (Broomrape Family)

- Orobanche ludoviciana Nutt. Broomrape. Perennial; parasitic;
sandy soils; infrequent; flowers purple June-September.

BIGNONIACEAE (Trumpet Creeper Family)

Campsis radians (L.) Seem. Trumpet Creeper. Perennial vine; roadsides and wooded areas; abundant; flowers red-orange May-August.

Catalpa speciosa Warder. Catalpa. Tree; pastures, fence rows, and wooded areas; abundant; flowers white May-June.

MARTYNIACEAE (Unicorn-plant Family)

Proboscidea louisianica (Mill.) Thell. Devil's Claw. Annual; waste places and stream banks; infrequent; flowers white to purple June-September.

ACANTHACEAE (Acanthus Family)

Dicliptera brachiata (Pursh.) Spreng. Annual; moist woods; infrequent to common; flowers purple August-October.

Justicia americana (L.) Vahl. Water Willow. Perennial; marshy areas, sloughs, and edges of ponds; common; flowers white to lavender May-October.

Ruellia humilis Nutt. Wild Petunia. Perennial; prairies, roadsides, and pastures; common; flowers lavender May-October.

Ruellia strepens L. Wild Petunia. Perennial; wooded areas; common; flowers lavender May-October.

PHRYMACEAE (Lopseed Family)

Phryma leptostachya L. Lopseed. Perennial; wooded areas; flowers lavender June-September.

PLANTAGINACEAE (Plantain Family)

Plantago aristata Michx. Bracted Plantain. Annual; pastures, prairies, roadsides, and disturbed areas; abundant; flowers white May-November.

Plantago lanceolata L. English Plantain. Perennial; prairies, pastures and roadsides, and disturbed areas; abundant; flowers white May-November.

Plantago major L. Common Plantain. Perennial; roadsides, lawns, and waste areas; common; flowers green May-October.

Plantago patagonica Jacq. var. *patagonica* Salt and Pepper Plant. (*P. purshii* R. & S.) Annual; prairies, pastures, and roadsides; common; flowers green May-August.

Plantago pusilla Nutt. Annual; dry sandy soils; infrequent; flowers white April-June.

Plantago rhodosperma Dcne. Red-seeded Plantain. Annual or biennial; roadsides, disturbed, and waste areas; infrequent; flowers white May-June.

Plantago rugelii Dcne. Rugel Plantain. Perennial; pastures, roadsides, disturbed and waste areas; abundant; flowers white May-October.

Plantago virginica L. Hoary Plantain. Annual; fields, pastures and waste areas; common; flowers green April-June.

RUBIACEAE (Madder Family)

Cephalanthus occidentalis L. Buttonbush. Shrub; sloughs, marshy areas, edges of ponds and streams; common; flowers white June-August.

Diodia teres Walt. Rough Buttonweed. Annual; roadsides, waste and disturbed areas; common; flowers lavender June-October.

Galium aparine L. Cleavers. Annual; woodlands, fence rows, and disturbed areas; abundant; flowers white May-July.

Galium circaezans Michx. Wild Licorice. Perennial; wooded areas; common to abundant; flowers white May-July.

Galium obtusum Bigel. Bluntleaf Bedstraw. Perennial; marshy areas, moist prairies and railroads; infrequent to common; flowers white May-July.

Galium pilosum Ait. Hairy Bedstraw. Perennial; rocky, upland woodlands and thickets; infrequent to common; flowers white June-August.

Galium triflorum Michx. Sweet-scented Bedstraw. Perennial; rich woodland and along streams; infrequent to common; flowers white May-September.

Hedyotis crassifolis Raf. Bluets or Quaker Ladies (Houstonia minima Beck.) Annual; prairies and pastures; common; flowers blue March-April.

Hedyotis nigricans (Lam.) Fosb. (Houstonia nigricans (Lam.) Fern) Perennial; prairies, pastures, and roadsides, common; flowers white to lavender May-October.

CAPRIFOLIACEAE (Honeysuckle Family)

Lonicera japonica Thunb. Japanese Honeysuckle. Perennial vine; escaped into thickets, fence rows and along railroads; infrequent; flowers cream colored April-July.

Sambucus canadensis L. Common Elderberry. Shrub; fence rows, wooded areas, and roadsides; abundant; flowers white May-July.

Symphoricarpos orbiculatus Moench. Buckbrush. Shrub; wooded areas, pastures and roadsides; abundant; flowers green July-August.

Triosteum perfoliatum Horse Gentain. Perennial; woodlands; common; flowers orange May-July.

Virburnum rufidulum Raf. Southern Black Haw. Shrub; dry, rocky woods; common; flowers white late April.

CUCURBITACEAE (Gourd Family)

Cucurbita foetidissima H.B.K. Missouri Gourd. Perennial; roadsides and along railroads; infrequent; flowers yellow June-July.

Echinocystis lobata (Michx.) T.&G. Wild Cucumber Vine. Annual; wooded areas and roadsides; infrequent to common; flowers white June-October.

Sicyos angulatus L. Bur Cucumber. Annual; wooded areas; infrequent; flowers green July-October.

CAMPANULACEAE (Bellflower Family)

Campanula americana L. Tall Bellflower. Annual or biennial; wooded areas and roadsides; common; flowers blue June-October.

Triodanis leptocarpa (Nutt.) Nieuw.) Western Venus' Looking Glass. (Specularia leptocarpa (Nutt.) Nieuw.) Annual; pastures, prairies, and roadsides; infrequent to common; flowers purple May-August.

Triodanis perfoliata (L.) Nieuw. Venus' Looking Glass. (Specularis pefoliata (L.) Nieuw) Annual; prairies, pastures and roadsides; common; flowers purple April-August.

Lobelia cardinalis L. Cardinal Flower. Perennial; edges of streams and sloughs in wooded areas; southeast; common; flowered bright red July-October.

Lobelia spicata Lam. Pale Spiked Lobelia. Perennial; or biennial; prairies, pastures, and roadsides; common; flowers blue May-August.

COMPOSITAE (Sunflower Family)

- Achillea millefolium L. ssp. lanulosa (Nutt.) Piper. Yarrow. Perennial; prairies, roadsides, and pastures; abundant; flowers May-November.
- Ambrosia artemisiifolia L. Short Ragweed. Annual; roadsides, waste and disturbed areas; abundant; flowers green July-November.
- Ambrosia bidentata Michx. Southern Ragweed. Annual; prairies, pastures, roadsides and along railroads; southern common; flowers green July-October.
- Ambrosia psilostachya DC. Western Ragweed. Perennial; roadsides, pastures, waste and disturbed areas; abundant; flowers green June-September.
- Ambrosia trifida L. Giant Ragweed. Annual; roadsides, fields, waste and disturbed areas; abundant; flowers June-September.
- Antennaria neglecta Greene. Pussy's toes. Perennial; prairies and pastures; common; flowers white April-June.
- Antennaria plantaginifolia (L.) Richards. Pussy's toes. Perennial; southeast; common; flowers white April-June.
- Arctium minus Schkuhr. Burdock. Perennial; roadsides, waste areas, and pastures; infrequent; flowers white July-October.
- Artemisia ludoviciana Nutt. var. mexicana (Willd.) Fern. White Sage. Perennial; roadsides, prairies, and pastures; common; flowers yellow June-September.
- Aster azureus Lindl. Blue Devil. Perennial; prairie, roadsides, and open, rocky woods; common; flowers blue August-November.
- Aster drummondii Lindl. Drummond Aster. Perennial; wooded areas and roadsides; common; flowers blue (rays) and yellow (disks) August-October.
- Aster ericoides L. var. ericoides Wreath Aster. Perennial; roadsides, prairies, and pastures; common; flowers lavender (rays) and yellow (disks) July-October.
- Aster laevis L. Smooth Aster. Perennial; prairies, and dry, open woods; infrequent to common; flowers blue August-October.

Aster oblongifolius Nutt. Oblong-leaf Aster. Perennial; rocky prairies; common; flowers blue July-November.

Aster parviceps (Burgess) Mack.&Bush. Small-headed Aster. Perennial; prairies, pastures, and roadsides; infrequent to common; flowers lavender (rays) and yellow (disks) August-September.

Aster patens Ait. var. patentissimus (Lindl.) T.&G. Purple Daisy. Perennial; rock or sandy open woods; southeast; common; flowers blue August-October.

Aster pilosus Willd. Heath Aster. Perennial; prairies, pastures, and roadsides; infrequent to common; flowers white (rays) and yellow (disks) August-November.

Aster praealtus Poir. var. praealtus Willow-leaved Aster. Annual; wet meadows, prairies, and roadsides; common; flowers purple August-October.

Aster sericeus Willd. Silky Aster. Perennial; limestone prairies; infrequent; flowers purple (rays) and yellow (disks) August-October.

Aster simplex Willd. var. ramoissimus (T.G.) Cronq. Tall White Aster. Perennial; prairies and along streams; common; flowers white August-October.

Bidens bipinnata L. Spanish Needles. Annual; roadsides, marshy areas, and waste areas; common; flowers yellow August-October.

Bidens comosa (Gray) Wieg. Beggars Tick. Annual; along streams, ponds and ditches; common; flowers yellow August-October.

Bidens frondosa L. Beggars Tick. Annual; waste areas, edges of ponds and streams, and roadside ditches; common; flowers yellow August-October.

Bidens polylepis Blake. Tickseed Sunflower. Annual; marshy areas, edges of ponds and streams, and roadside ditches; common; flowers yellow August-October.

Bidens vulgata Greene Sticktight. Annual or perennial; marshy areas, sloughs, and roadsides; flowers yellow August-October.

Boltonia asteroides (L.) L'Her. var. latisquama (Cronq.) Perennial; marshy areas, sloughs, and roadsides; infrequent to common; pink (rays) and yellow (disk) July-October.

- Boltonia asteroides (L.) L'Her. var. recognita (Fern. & Grisc.) Fern. Perennial; marshy areas, sloughs, and roadsides; infrequent; flowers white (ray) and yellow (disks) July-October.
- Cacalia atriplicifolia L. Pale Indian Plantain. Perennial; open wooded areas; infrequent to common; flowers white June-October.
- Cacalia tuberosa Nutt. Indian Plantain. Perennial; prairies, pastures, and roadsides; common; flowers white May-August.
- Carduus nutans L. Musk Thistle. Biennial; waste and disturbed areas, pastures and roadsides; infrequent to common; flowers lavender June-October.
- Centaurea cyanus L. Bachelor's Button. Annual; waste areas, roadsides and along railroads; infrequent to common; flowers blue May-September.
- Chrysanthemum leucanthemum L. Ox-eye Daisy. Perennial; prairies, pastures, and roadsides; common; flowers white (rays) and yellow (disks) May-August.
- Chrysopsis pilosa Nutt. Golden Aster. Annual; rocky or sandy, dry prairies; southern; common; flowers golden June-October.
- Cirsium altissimum (L.) Spreng. Tall Thistle. Biennial or perennial; pastures, prairies and roadsides; common; flowers lavender July-October.
- Cirsium undulatum (Nutt.) Spreng. Common Thistle. Biennial or perennial; roadsides, pastures, and waste areas; common; flowers lavender June-October.
- Cirsium vulgare (Savi.) Ten. Bull Thistle. Biennial or perennial; roadsides, pastures, and waste areas; infrequent to common; flowers lavender June-September.
- Conyza canadensis (L.) Cronq. Horse Weed. (Erigeron canadensis L.) Annual; roadsides, waste, and disturbed areas; common; flowers white (rays) and yellow (disks) June-November.
- Conyza ramosissima Cronq. Dwarf Fleabane. (Erigeron divaricatus Michx.) Annual; waste areas, pastures, and roadsides; common; flowers white (rays) and yellow (disks) May-September.
- Coreopsis grandiflora Hogg. Large-flowered Tickseed. Perennial; prairies and roadsides; common; flowers yellow May-July.

- Coreopsis palmata Nutt. Stiff Tickweed. Perennial; roadsides and prairies; infrequent to common; flowers yellow May-July.
- Dyssodia papposa (Vent.) Hitchc. Fetid Marigold. Annual or biennial; roadsides, waste areas, and pastures; common; flowers yellow July-October.
- Echinacea angustifolia DC. var. angustifolia Purple Coneflower. Perennial; prairies and roadsides; common; flowers purple May-August.
- Echinacea atrorubens Nutt. Purple Coneflower. Perennial; prairies, and roadsides; infrequent to common; flowers pink to purple May-August.
- Echinacea pallida (Nutt.) Nutt. Purple Coneflower. Perennial; prairies and roadsides; common; flowers pink to purple May-July.
- Eclipta alba (L.) Hassk. Annual; edges of ponds and streams; common; flowers white July-October.
- Erechtites hieracifolia (L.) Raf. Fireweed. Annual; rocky open woods, roadsides and along railroads; southeast; infrequent; flowers yellow to white July-November.
- Erigeron annuus (L.) Pers. Daisy Fleabane. Annual or biennial; pastures, prairies, and roadsides; abundant; flowers white (rays) and yellow (disks) June-October.
- Erigeron candensis L. (see Conyza canadensis (L.) Cronq.)
- Erigeron divaricatus L. (see Conyza ramosissima Cronq.)
- Erigeron philadelphicus L. Philadelphia Fleabane. Perennial; wooded areas; common; flowers white (rays) and yellow (disks) April-June.
- Erigeron strigosus Muhl. Daisy Fleabane. Annual or perennial; prairies, pastures, and roadsides; common; flowers white (rays) and yellow (disks) May-September.
- Eupatorium altissimum L. Tall Thoroughwort. Perennial; waste areas, prairies, and roadsides; common; flowers white August-October.
- Eupatorium perfoliatum L. Boneset. Perennial; wet prairies, thickets and woodlands; southeast; common; flowers white July-October.

- Eupatorium rugosum Houtt. White Snakeroot. Perennial; wooded areas; common; flowers white July-October.
- Eupatorium serotinum Michx. Late Boneset. Perennial; prairies, pastures, and roadsides; southeast; infrequent to common; flowers white August-October.
- Galinsoga ciliata (Raf.) Blake. Annual; waste and cultivated grounds; infrequent; flowers white May-November.
- Gnaphalium obtusifolium L. Sweet Everlasting. Annual; prairies, pastures, and roadsides; southeast; common; flowers white July-November.
- Gutierrezia dracunculoides (DC.) Blake. Broomweed. Annual; waste and disturbed areas; abundant; flowers yellow July-October.
- Haplopappus ciliatus (Nutt.) DC. Annual; prairies, waste ground and along railroads; infrequent to common; flowers yellow August-September.
- Helenium amarum (Raf.) Rock. Bitterweed. Annual; prairies, waste grounds, and along railroads; infrequent; flowers yellow June-November.
- Helenium autumnale L. Sneezeweed. Perennial; roadsides; moist prairies, and marshy areas; common; flowers yellow August-November.
- Helianthus annuus L. Common Sunflower. Annual; waste and disturbed areas, fields, and roadsides; abundant; flowers yellow (rays) and brown (disks) July-November.
- Helianthus grosseserratus Martens. Saw-tooth Sunflower, Perennial; prairies, roadsides, and sloughs; flowers yellow July-October.
- Helianthus hirsutus Raf. Perennial; wooded areas; common; flowers yellow July-October.
- Helianthus maximiliani Schrad. Maximilian Sunflower. Perennial; prairies, pastures, and roadsides; abundant; flowers yellow July-October.
- Helianthus mollis Lam. Ashy Sunflower. Perennial; prairies, thickets, roadsides, and along railroads; infrequent to common; flowers yellow July-October.

Helianthus rigidus (Cass) Desf. ssp. rigidus. Prairie Sunflower. (H. laetiflorus var. rigidus (Cass) Fern.) Perennial; prairies and roadsides; common; flowers (rays) and reddish-purple (disks) August to October.

Helianthus salicifolius A. Dietr. Narrow-leaved Sunflower. Perennial; moist prairies, pastures and roadsides; common; flowers yellow (rays) and brown (disks) August-October.

Helianthus tuberosus L. Jerusalem Artichoke. Perennial; roadsides, wooded areas, and waste areas; common; flowers yellow August to October.

Heliopsis helianthoides (L.) Sweet. var. scabra (Dun.) Fern. Ox-eye. Perennial; prairies, roadsides, and open woods; common; flowers yellow May-September.

Hieracium gronovii L. Hawkweed. Perennial; rock, dry open woods and fields; southeast; infrequent; flowers yellow May-October.

Hieracium longipilum Torr. Hawkweed. Perennial; prairies, fields, and rocky open woods; southeast; infrequent to common; flowers yellow July-September.

Hymenopappus scabiosaes L'Her. var. corymbosus (T.&G.) B.L. Turner Old Plainsman. Biennial; tight calcareous prairie soils; common; flowers white (disks) April-June.

Iva annua L. Marsh Elder. (I. ciliata Willd.) Annual; fields, disturbed and waste areas; common; flowers green July-October.

Krigia oppositifolia Raf. (Serinia oppositifolia (Raf.) Ktze) Annual; roadsides, prairies, and pastures; flowers yellow April-June.

Kuhnia eupatorioides L. var. corymbulosa T.&G. False Boneset. Perennial; roadsides, prairies, and pastures; common; flowers white July-October.

Lactuca canadensis L. Wild Lettuce. Annual or biennial; prairies and wooded areas; common; flowers yellow July-September.

Lactuca floridana (L.) Gaerth. Florida Lettuce. Annual or biennial; wooded areas and roadsides; common; flowers blue August-October.

Lactuca ludoviciana (Nutt.) DC. Western Lettuce. Annual or biennial; roadsides, waste and disturbed areas; common; flowers yellow June-August.

Lactuca serriola L. Prickly Lettuce. (L. scariola f. scariola)
Annual or biennial; fields, roadsides and waste areas;
common; flowers yellow June-October.

Liatris aspera Michx. Blazing Star. Perennial; prairies
and roadsides; abundant; flowers purple August-November.

Liatris hirsuta Rydb. (L. squarrosa var. hirsuta (Rydb.)
Gaiser) Perennial; dry, rocky, open woods and prairies;
infrequent to common; flowers purple June-September.

Liatris mucronata DC. Slender Button-Snakeroot. Perennial;
prairies and roadsides; common; flowers purple July-
October.

Liatris punctata Hook. Gay Feather. Perennial; prairies and
pastures; abundant; flowers lavender August-October.

Liatris pycnostachya Michx. Button Snakeroot. Perennial;
prairies and pastures; infrequent to common; flowers
purple July-October.

Microseris cuspidata (Pursh) Schulta-Bip. (Agoseris cuspidata
(Pursh) Raf.) Perennial; dry, rocky prairies; infrequent;
flowers yellow April-June.

Parthenium hispidum Raf. American Feverfew. Perennial; rocky
calcareous prairies; infrequent; flowers white May-
October.

Prenanthes aspera Michx. Rough White Lettuce. Perennial;
prairies and pastures; infrequent; flowers yellow
August-September.

Pyrrhopappus carolinianus (Walt.) DC. False Dandelion.
Annual or biennial; roadsides, pastures, and waste
areas; common; flowers yellow May-October.

Ratibida columnifera (Nutt.) Woot. & Standl. Long-head
Coneflower. Perennial; prairies, pastures, and road-
sides; abundant; flowers yellow (rays) and brown (disks)
June-September.

Ratibida pinnata (Vent.) Barnh. Gray-head Coneflower.
Perennial; prairies, roadsides, and pastures; infrequent
to common; flowers yellow (rays) and gray (disks) May-
September.

Rudbeckia amplexicaulis Vahl. Coneflower. (Dracopis amplexi-
caulis (Vah.) Cass.) Annual; prairies and roadsides;
infrequent; flowers yellow (rays) and brown (disks)
June-July.

- Rudbeckia hirta L. Black-eye Susan. Perennial; prairies, pastures, and roadsides; common; flowers yellow (rays) and brown (disks) May-October.
- Rudbeckia laciniata L. Wild Golden Glow. Perennial; wooded areas and moist roadsides; infrequent to common; flowers yellow (rays) and greenish yellow (disks) July-September.
- Senecio plattensis Nutt. Prairie Ragwort. Perennial; prairies, pastures, and roadsides; common; flowers yellow May-June.
- Silphium integrifolium Michx. Rosin-weed. Perennial; prairies and roadsides; common; flowers yellow July-September.
- Silphium laciniatum L. Compass Plant. Perennial; prairies, pastures, and roadsides; common to abundant; flowers yellow July-September.
- Silphium Speciosum Nutt. Rosin-weed. (S. integrifolium var. laeve T.&G.) Perennial; prairies and roadsides; common to abundant; flowers yellow July-September.
- Solidago canadensis L. var. scabra (Muhl.) T.&G. Tall Goldenrod. (S. altissima L.) Perennial; prairies, pastures, and roadsides; abundant; flowers yellow August-November.
- Solidago gigantea Ait. var. serotina (O.Ktze.) Cronq. Late Goldenrod. Perennial; edges of streams and ponds, moist woods and prairies; abundant; flowers yellow July-October.
- Solidago graminifolia (L.) Salisb. var. gymnospermoides (Greene) Cront. Perennial; dry prairies, wooded areas, and roadsides; common; flowers yellow August-October.
- Solidago missouriensis Nutt. Missouri Goldenrod. Perennial; prairies, pastures, and roadsides; abundant; flowers yellow July-September.
- Solidago nemoralis Ait. Old-field Goldenrod. Perennial; dry prairies, fields and dry open woods; infrequent to common; flowers yellow June-November.
- Solidago petiolaris Ait. Goldenrod. Perennial; dry, rocky woods and rocky prairies; infrequent; flowers yellow May-November.
- Solidago rigida L. var. rigida Stiff Goldenrod. Perennial; prairies and roadsides; abundant; flowers yellow August-October.
- Solidago ulmifolia Muhl. var. microphylla Gray Elm-leaf-Goldenrod Perennial; wooded areas; southeast; common; flowers yellow August-November.

- Sonchus asper (L.) All. Spiny-leaved Sow Thistle. Annual; waste areas, roadsides, and pastures; common; flowers yellow May-October.
- Taraxacum officinale Weber. Common Dandelion. Perennial or biennial; roadsides, pastures, waste and disturbed areas; abundant; flowers yellow March-October.
- Tragopogon dubius Scop. Goat's Beard. Perennial; prairies, pastures, and roadsides; common; flowers yellow May-July.
- Tragopogon porrifolius L. Salsify. Biennial; fields, roadsides and waste ground; infrequent; flowers purple May-July.
- Verbesina alternifolia (L.) Britt. Yellow Ironweed. Perennial; wooded areas and meadows; common; flowers yellow August-October.
- Verbesina virginica (L.) Britt. White Crown-beard. Perennial; rocky open woods, thickets, and along streams; southeast; common; flowers white August-October.
- Vernonia baldwini Torr. var. interior (Small) Schub. Ironweed. Perennial; pastures, roadsides, and waste areas; common; flowers purple May-September.
- Xanthium strumarium L. Cocklebur. Annual; fields, waste and disturbed areas; common; flowers green August-October.

APPENDIX

Appendix A

Common and or distinctive species of the calcarious soils of the Osage Cuestas area.

Prairie Species	Woodland Species
<u>Achillea millefolium</u>	<u>Bromus inermis</u>
<u>Aegilops cylindrica</u>	<u>Carya cordiformis</u>
<u>Amorpha canescens</u>	<u>Dactylis glomerata</u>
<u>Andropogon gerardi</u>	<u>Dicentra cucullaria</u>
<u>Andropogon virginicus</u>	<u>Elymus canadensis</u>
<u>Antennaria neglecta</u>	<u>Elymus virginicus</u>
<u>Aristida oligantha</u>	<u>Populus deltoides</u>
<u>Asclepias syriaca</u>	<u>Quercus borealis</u>
<u>Bothriochloa saccharoides</u>	<u>Quercus macrocarpa</u>
<u>Bouteloua curtipendula</u>	<u>Quercus shumardii</u>
<u>Carex brevior</u>	<u>Ribes missouriense</u>
<u>Carex grvida</u>	<u>Salix nigra</u>
<u>Carex vulpinoidea</u>	<u>Symphoricarpos orbiculatus</u>
<u>Cirsium altissimum</u>	<u>Ulmus americana</u>
<u>Claytonia virginica</u>	<u>Ulmus rubra</u>
<u>Conium maculatum</u>	
<u>Convolvulus arvensis</u>	
<u>Cornus drummondii</u>	
<u>Eleocharis compressa</u>	
<u>Eragrostis capillaris</u>	
<u>Eragrostis pectinacea</u>	
<u>Erigeron annuus</u>	
<u>Euphorbia dentata</u>	
<u>Festuca pratensis</u>	
<u>Gutierrezia dracunculoides</u>	
<u>Helianthus maximiliani</u>	
<u>Hordeum jubatum</u>	
<u>Koeleria pyramidata</u>	
<u>Melilotus officinalis</u>	
<u>Panicum dichotomiflorum</u>	
<u>Panicum virgatum</u>	
<u>Poa pratensis</u>	
<u>Polygonum lapathifolium</u>	
<u>Polygonum bicone</u>	
<u>Prunella vulgaris</u>	
<u>Rhus glabra</u>	
<u>Salvia pitcheri</u>	
<u>Schizachyrium scoparium</u>	
<u>Solanum carolinense</u>	
<u>Solidago canadensis</u>	
<u>Sorghastrum avenaceum</u>	
<u>Spiranthes cernua</u>	
<u>Sporobolus asper</u>	
<u>Sporobolus drummondii</u>	
<u>Stellaria media</u>	
<u>Symphoricarpos orbiculatus</u>	

Common and or distinctive species of the cherty soils of the
Flint Hills area.

Prairie Species	Riverbottom Species
<u>Abutilon theophrasti</u>	<u>Cornus drummondii</u>
<u>Ambrosia artemisiifolia</u>	<u>Elymus virginicus</u>
<u>Ambrosia trifida</u>	<u>Geum canadense</u>
<u>Amorpha canescens</u>	<u>Populus deltoides</u>
<u>Andropogon gerardi</u>	<u>Quercus macrocarpa</u>
<u>Apocynum cannabinum</u>	<u>Rhus aromatica</u>
<u>Aristida oligantha</u>	<u>Rhus glabra</u>
<u>Aster ericoides</u>	<u>Salix exigua ssp. interior</u>
<u>Aster oblongifolius</u>	<u>Spartina pectinata</u>
<u>Bouteloua curtipendula</u>	<u>Symphoricarpos orbiculatus</u>
<u>Buchloe dactyloides</u>	
<u>Cacalia tuberosa</u>	
<u>Carex vulpinoidea</u>	
<u>Cassia fasciculata</u>	
<u>Chenopodium album</u>	
<u>Cirsium altissimum</u>	
<u>Convolvulus arvensis</u>	
<u>Conyza canadensis</u>	
<u>Descurainia pinnata</u>	
<u>Desmanthus illinoensis</u>	
<u>Eleocharis compressa</u>	
<u>Erysimum repandum</u>	
<u>Gutierrezia dracunculoides</u>	
<u>Helianthus maximiliani</u>	
<u>Juncus interior</u>	
<u>Lespedeza capitata</u>	
<u>Liatris punctata</u>	
<u>Melilotus officinalis</u>	
<u>Oenothera speciosa</u>	
<u>Oenothera macrocarpa</u>	
<u>Opuntia macrorhiza</u>	
<u>Panicum capillare</u>	
<u>Panicum virgatum</u>	
<u>Poa pratensis</u>	
<u>Polygonum bicornis</u>	
<u>Psoralea tenuiflora</u>	
<u>Rosa arkansas</u>	
<u>Salvia pitcheri</u>	
<u>Schizachyrium scoparium</u>	
<u>Schrankia nuttallii</u>	
<u>Silene antirrhina</u>	
<u>Silphium integrifolium</u>	
<u>Solanum rostratum</u>	
<u>Solidago canadensis</u>	
<u>Solidago missouriensis</u>	
<u>Solidago rigida</u>	
<u>Sorghastrum avenaceum</u>	
<u>Sporobolus asper</u>	
<u>Teucrium canadense</u>	

Common and or distinctive species of the sandy soils of the
Chautauqua Hills area.

Savannah Species	Savannah Species
<u>Agrimonia parviflora</u>	<u>Festuca pratensis</u>
<u>Agrimonia pubescens</u>	<u>Fimbristylus autumnalis</u>
<u>Amelanchier arborea</u>	<u>Gymnopogon ambiguus</u>
<u>Andropogon gerardi</u>	<u>Gnaphalium obtusifolium</u>
<u>Andropogon virginicus</u>	<u>Hypericum drummondii</u>
<u>Antennaria plataginifolia</u>	<u>Jumiperus virginiana</u>
<u>Arenaria patula</u>	<u>Leptoloma cognatum</u>
<u>Aristida oligantha</u>	<u>Lebelia cardinalis</u>
<u>Aristida purpurascens</u>	<u>Muhlenbergia bushii</u>
<u>Asimina triloba</u>	<u>Muhlenbergia capillaris</u>
<u>Asplenium platyneuron</u>	<u>Muhlenbergia sobolifera</u>
<u>Asplenium trichomanes</u>	<u>Onoclea sensibilis</u>
<u>Aster patens</u>	<u>Panicum philadelphicum</u>
<u>Bothriochloa saccharoides</u>	<u>Panicum rigidulum</u>
<u>Botrychium virginicum</u>	<u>Quercus marlandica</u>
<u>Bouteloua curtipendula</u>	<u>Quercus stellata</u>
<u>Bouteloua gracilis</u>	<u>Quercus velutina</u>
<u>Bromus pubescens</u>	<u>Rhus copallina</u>
<u>Bromus tectorum</u>	<u>Rubus flagellaris</u>
<u>Carex muhlenbergia</u> var. <u>australis</u>	<u>Schizachyrium scoparium</u>
<u>Carex vulpinoidea</u>	<u>Scutellaria parvula</u>
<u>Chloris verticillata</u>	<u>Selaginella rupestris</u>
<u>Cicuta maculata</u>	<u>Solidago ulmifolia</u>
<u>Cyperus aristatus</u>	<u>Sorghastrum avenaceum</u>
<u>Cyperus ovularis</u>	<u>Sporobolus asper</u>
<u>Diarrhena americana</u>	<u>Sporobolus drummondii</u>
<u>Dryopteris marginalis</u>	<u>Symphoricarpos orbiculatus</u>
<u>Elymus canadensis</u>	<u>Uniola latifolia</u>
<u>Elymus virginicus</u>	<u>Viola pedata</u>
<u>Equisetum hyemale</u>	<u>Woodsia obtusa</u>
<u>Eupatorium perfoliatum</u>	<u>Zigadenus Nuttallii</u>
<u>Festuca octoflora</u>	

Appendix B

Species that may occur but were not seen or recorded for the county.

Scientific Name	Scientific Name
<u>Equisetum laevigatum</u>	<u>Lemna minor</u>
<u>Ophioglossum engelmannii</u>	<u>Spirodela polyrhiza</u>
<u>Osmunda regalis</u>	<u>Allium stellatum</u>
<u>Adiantum pedatum</u>	<u>Allium vineale</u>
<u>Cystopteris fragilis</u>	<u>Androstephium caeruleum</u>
<u>Alisma plantago-aquatica</u>	<u>Camassia angusta</u>
<u>Alisma subcordatum</u>	<u>Yucca glauca</u>
<u>Echinodorus cordifolius</u>	<u>Habenaria leucophaea</u>
<u>Sagittaria montevidensis</u>	<u>Carya illinoensis</u>
<u>Najas guadalupensis</u>	<u>Carya laciniosa</u>
<u>Juncus acuminatus</u>	<u>Carya ovata</u>
<u>Juncus dudleyi</u>	<u>Boehmeria cylindrica</u>
<u>Juncus marginatus</u>	<u>Chenopodium desiccatum</u>
<u>Bulbostylis capillaris</u>	<u>Cycloloma atriplicifolium</u>
<u>Carex bicknellii</u>	<u>Monolepis nuttaliana</u>
<u>Carex blanda</u>	<u>Talinum calycinum</u>
<u>Carex crus-corvi</u>	<u>Talinum parviflorum</u>
<u>Carex hystericina</u>	<u>Cerastium vulgatum</u>
<u>Carex lanuginosa</u>	<u>Delphinium ajacis</u>
<u>Carex lupulina</u>	<u>Myosurus minimus</u>
<u>Cyperus erythrorhizos</u>	<u>Ranunculus scleratus</u>
<u>Eleocharis acicularis</u>	<u>Sanguinaria canadensis</u>
<u>Fuirena simplex</u>	<u>Corydalis crystallina</u>
<u>Rhynchospora harveyi</u>	<u>Alliaria officinalis</u>
<u>Alopecurus carolinianus</u>	<u>Brassica juncea</u>
<u>Aristida longespica</u>	<u>Brassica kaber</u>
<u>Bromus commutatus</u>	<u>Camelina microcarpa</u>
<u>Cinna arundinacea</u>	<u>Camelina sativa</u>
<u>Danthonia spicata</u>	<u>Cardamine pensylvanica</u>
<u>Distichlis spicata</u>	<u>Cardamine draba</u>
<u>Elymus villosus</u>	<u>Descurainia sophia</u>
<u>Eragrostis hypnoides</u>	<u>Erysimum asperum</u>
<u>Eragrostis reptans</u>	<u>Lepidium oblongum</u>
<u>Glyceria striata</u>	<u>Rorippa palustris</u>
<u>Muhlenbergia schreberi</u>	<u>Rorippa sessiliflora</u>
<u>Paspalum floridanum</u>	<u>Rorippa sinuata</u>
<u>Phalaris arundinacea</u>	
<u>Poa annua</u>	

Species that may occur but were not seen or recorded for the county (con't).

Scientific Name	Scientific Name
<u>Thlaspi perfoliatum</u>	<u>Bumelia lanuginosa</u>
<u>Penthorum sedoides</u>	<u>Fraxinus americana</u>
<u>Prunus hortulana</u>	<u>Asclepias amplexicaulis</u>
<u>Rosa carolina</u>	<u>Asclepias hirtella</u>
<u>Rosa setigera</u>	<u>Asclepias incarnata</u>
<u>Apios americana</u>	<u>Cynanchum laeve</u>
<u>Astragalus latiflorus</u>	<u>Phlox pilosa</u>
<u>Dalea aurea</u>	<u>Lamium purpureum</u>
<u>Desmodium canadense</u>	<u>Physostegia virginiana</u>
<u>Desmodium cuspidatum</u>	<u>Scutellaria lateriflora</u>
<u>Glycyrrhiza lepidota</u>	<u>Lycium halimifolium</u>
<u>Lespedeza cuneata</u>	<u>Bacopa rotundifolia</u>
<u>Lespedeza repens</u>	<u>Linaria canadensis</u>
<u>Lespedeza striata</u>	<u>Lindernia anagallidea</u>
<u>Lotus purshianus</u>	<u>Lindernia dubia</u>
<u>Robinia hispida</u>	<u>Mimulus alatus</u>
<u>Trifolium hybridum</u>	<u>Penstemon digitalis</u>
<u>Trifolium reflexum</u>	<u>Tomanthera densiflora</u>
<u>Vicia americana</u>	<u>Dipsacus sylvestris</u>
<u>Vicia villosa</u>	<u>Anthemis cotula</u>
<u>Polygala incarnata</u>	<u>Aster subulatus</u>
<u>Polygala verticillata</u>	<u>Bidens cernua</u>
<u>Euphorbia glyptosperma</u>	<u>Bidens connata</u>
<u>Tragia betonicifolia</u>	<u>Cichorium intybus</u>
<u>Sapindus drummondii</u>	<u>Coreopsis tinctoria</u>
<u>Impatiens pallida</u>	<u>Gaillardia pulchella</u>
<u>Rhamnus lanceolata</u>	<u>Grindelia squarrosa</u>
<u>Callirhoe involucrata</u>	<u>Lactuca saligna</u>
<u>Malva neglecta</u>	<u>Pyrrhopapus scaposus</u>
<u>Hybanthus verticillatus</u>	<u>Rudbeckia triloba</u>
<u>Viola sororia</u>	<u>Senecio obovatus</u>
<u>Elaeagnus angustifolia</u>	<u>Thelesperma filifolium</u>
<u>Lythrum dacotanum</u>	<u>Thelesperma megapotamicum</u>
<u>Ludwigia palustris</u>	<u>Vernonia arkansana</u>
<u>Ludwigia peploides</u>	<u>Vernonia fasciculata</u>
<u>Dodecatheon meadia</u>	

Appendix C

Addenda list of new species for Greenwood County.

Scientific Name	Family
<u>Agrostis elliotiana</u> Schult.	GRAMINEAE
<u>Carex blanda</u> Dewey	CYPERACEAE
<u>Carya ovata</u> (Mill.) K.Koch.	JUGLANDACEAE
<u>Danthonia spicata</u> (L.) Beauv.	GRAMINEAE
<u>Eleocharis tenuis</u> (Willd.) Schult. var. <u>verrucosa</u> Svens.	CYPERACEAE
<u>Talinum parviflorum</u> Nutt.	PORTULACACEAE

LITERATURE CITED

LITERATURE CITED

- Barkley, T.M. 1968. A manual of the flowering plants of Kansas. The Kansas State University Endowment Association. Manhattan, Kansas. 402 p.
- Baum, B.R. 1967. Kalm's specimens of North America grasses. Their evaluation for typification. Canadian Jour. of Botany. 45:1845-1852.
- Bidwell, O.W. 1956. Major soils of Kansas. Kansas State College of Agriculture and Applied Science. Manhattan, Kansas 16 p.
- Brooks, R.E. 1975. Elymus. University of Kansas. Personal Communication.
- Correll, D.S. and M.C. Johnston. 1970. Manual of the vascular plants of Texas. Texas Research Foundation, Renner, Texas. 1879 p.
- Fernald, M.L. 1950. Gray's manual of botany. Eighth edition. Am. Book Co., New York. 1632 p.
- Flora, Snowden D. 1945. The Climate of Kansas. Report of the Kansas State Board of Agriculture. 67:1-320.
- Gleason, H.A. and A. Cronquist. 1963. Manual of vascular plants of Northeastern United States and adj. Canada. D. Van Nostrand Co., Inc., Princeton, New Jersey. 810 p.
- Gleason, H.A. 1952. The New Britton and Brown Illus. Flora of the Northeastern U.S. and adj. Canada. Lancaster Press Inc., Lancaster, Penn. 1732 p.
- Gould, F.A., and M.A. Ali and D.E. Fairbrothers. 1972. A Revision of Echinochloa in the United States. The American Midland Naturalist. 87:36-59.
- Gould, F.A. 1968. Grass Systematics. McGraw-Hill Book Co., New York. 382 p.
- _____. 1967. The Grass Genus Andropogon in the United States. Brittonia. 19:70-75.
- Hitchcock, A.S. 1951. Manual of the grasses of the United States. Second edition. Washington: U.S. Government Printing Office. 1051 p.

- Kuchler, A.W. 1967. Some geographic features of the Kansas prairie. *Trans. Kans. Acad. Sci.* 70(3):388-401.
- Lathrop, E.W. 1958. The Flora and Ecology of the Chautauqua Hills in Kansas. *University of Kansas Science Bull.* 39(4):97-209.
- McGregor, R.L., W.T. Barker, T.M. Barkley, and J.S. Wilson. 1975. Checklist of the plants of the Great Plains. University of Kansas Herbarium. Lawrence, Kansas.
- Möhlenbrock, R.H. 1967. The illus. Flora of Illinois: Ferns. Southern Illinois University Press, Carbondale, Ill. 191 p.
- Petrides, G.A. 1972. A field guide to trees and shrubs. Peterson Field Guide Series. Houghton Mifflin Co., Boston, Mass. 428 p.
- Richardson, J.W. 1968. The genus Euphorbia of the high plains and prairie plains of Kansas, Nebraska, South and North Dakota. *Univ. of Kansas Sci. Bull.* 48(3):45-112.
- Russell, N.C. 1965. Violets (Viola) of central and eastern United States: An introductory survey. *Sida Contrib. Bot.* 2(1):1-113.
- Rydberg, P.A. 1965. Flora of the prairies and plains of central North America. Hafner Publishing Co., New York. 969 p.
- Schoewe, W.H. 1949. The geography of Kansas: Part II physical geography of Kansas. *Trans. Kans. Acad. Sci.* 52(3):261-333.
- Stephens, H.A. 1973. Woody Plants of the North Central Plains. The University Press of Kansas, Lawrence, Kansas. 530 p.
- Steyermark, J.A. 1964. Flora of Missouri. Iowa State Univ. Press, Ames, Iowa. 1728 p.
- Waterfall, U.T. 1969. Keys to the Flora of Oklahoma. Oklahoma State University, Stillwater, Okla. 246 p.
- Weaver, J.E. 1954. North American Prairie. Johnsen Publishing Company, Lincoln, Nebraska. 347 p.
- Wilson, J.S. 1964. Variation of three taxonomic complexes of the genus Cornus. *Trans. Kans. Acad. Sci.* 67(4):747-817.

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