

## INTRODUCTION

Twelve Mile Prairie is located in southeast central Illinois. It is situated between Route 37 and the Illinois Central Railroad, and includes the counties of Effingham, Clay, Fayette and Marion. The northern tip of the study area is the city limits of Mason and extends southeast along Route 37 to just south of Kinmundy. Twelve Mile Prairie is owned by the Illinois Central Railroad, the Illinois Department of Transportation has scenic right-of-way on certain sections.

The study area can be found on the Edgewood, Kinmundy and Oskaloosa 7.5 quadrangle maps published by the United States Geological Survey. The study area boundaries occur in, T 6 N., R 5 E. to T 4 N., R 3 E. This includes sections 22, 27, 28, 32, 33 of Effingham, 5, 6, 7 of Clay, 12, 13, 14, 22, 23, 27, 28, 32, 33 of Fayette, and 5, 6, 7, 12, 13, 14, 23, 27 of Marion counties. The study area is approximately 94.4 hectares

Twelve Mile Prairie is located in the Southern Till Plain Division, one of the fourteen natural divisions in Illinois (Schwegman et al., 1973). Due to glaciation, the area is relatively flat with only a maximum relief of approximately 70 feet. The highest elevation is just north of Kinmundy at 600 feet above sea level. The lowest is found along the Dismal Creek drainage with a elevation of 530 feet above sea level. The tributaries of the Little Wabash and the Kaskaskia rivers are the primary source of drainage for the study area.

The presettlement vegetation of Twelve Mile Prairie was tall grass prairie, with the exception of areas along streams such as Dismal Creek, which, were mostly upland forest (Anderson, 1970). Today the prairie vegetation still exists, however there are many man made disturbances. Herbicides used by the railroad to eliminate woody vegetation have caused damage along the edge of the railroad right-of-way. Some areas have been plowed for agricultural crops and exotic species of plants have become established along Twelve Mile Prairie. In some areas woody vegetation has encroached into in the prairie due to fire suppression.

Although many botanists have collected along Twelve Mile Prairie, no floristic study has ever be done. The primary goals of this study are:

1. To compile a complete plant list of the area
2. To document the presence of endangered or threatened species of plants and,
3. To identify plant communities that exist in the study area.

## PLANT COMMUNITIES

A community can be defined as an assemblage of organisms living together and linked together by their effects on one another and their responses to the environment they share (Whittaker 1975). Factors that affect a plant community are soil, climate, moisture, aspect, and interaction with animals and insects. Plant communities are dynamic and undergo constant change. It is sometimes difficult to draw a line where one community stops and another begins. To make these determinations I used plant species and habit, soil type, topography, and community descriptions by White and Madany (1978) and Nelson (1985).

Based on observation and sampling, eight plant communities are described at Twelve Mile Prairie as follows:

1. Disturbed community
2. Streambank community
3. Wet mesic upland forest
4. Dry mesic prairie
5. Mesic prairie
6. Wet mesic prairie
7. Clay or hardpan prairie
8. Dry mesic savanna

Disturbed community

These areas occur throughout the study area, and include; cultivated areas with agricultural crops, places where topsoil has been removed for development or road construction, and areas along the roadsides that cross the study site. Disturbed areas tend to have the largest percentage of exotic species. Native annuals also make up a large portion of the flora. In cultivated areas north of Farina common grass species include *Setaria faberi*, *Poa pratensis*, and *Festuca pratensis*. Other weedy species include *Sonchus asper*, *Conyza canadensis*, *Cichorium intybus*, *Ambrosia artemisiifolia*, and *Melilotus alba*. This area has been fallow for two years. This year native prairie plants were observed sprouting from the root systems that were deep enough to survive cultivation. These include such species as *Prenanthes aspera*, *Silphium integrifolium*, *Andropogon gerardii*, and *Oenothera biennis*.

The railroad ballast and roadside ditches along Route 37 and roads that cross the study site provide avenues from which weedy native and exotic species can invade. These species include *Matricaria matricariodes*, *Torilis japonica*, *Lonicera japonica*, *Campsis*

*radicans*, *Coronilla varia*, *Barbarea vulgaris*, *Thlaspi arvense*, *Dianthes amera*, and *Triodanis perfoliata*.

#### Streambank community

Streams in the area are slow and sluggish with few riffles. The plants that grow along the the tributaries of the Little Wabash and Kaskaskia rivers are typical of floodplain forest. Tree and shrub species that occur along the streams include *Amorpha fruticosa*, *Acer saccharinum*, *Acer negundo*, *Salix nigra*, *Betula nigra*, *Sambucus canadensis*, and *Populus deltoides*. The herbaceous layer varies among streams. Common species that occur along streams include *Equisetum arvense*, *Commelina communis*, *Lysimachia nummularia*, and *Mertensia virginica*.

The stream that flows through the wet mesic upland forest just south of Mason in Effingham County contain plants with southern infinities. These soils are the same as the Little Wabash River. These plants may have migrated up the stream valley from the Little Wabash River to become established in this isolated pocket between the railroad and Route 37. These plants include *Penstemon alluviorum*, *Smilax herbacia*, *Diodia virginiana*, and *Dioscorea quaternata*.

#### Wet mesic upland forest

At Twelve Mile Prairie wet mesic upland forest occurs just south of Mason and in a small area along Dismal Creek. These areas show signs of disturbance such as logging activities and past grazing. They do, however, have a diverse flora. The dominant tree species in the area include *Quercus alba*, *Celtis occidentalis*, *Ulmus americana*, *Quercus velutina*, and *Carya rubra*. Other important tree species in the area include *Cercis canadensis*, *Prunus serotina*, *Fraxinus pennsylvanica*, *Ulmus rubra*, and *Carya laciniosa*.

The wet mesic upland forest has a highly diverse spring flora. Spring ephemerals in the wet mesic upland forest include, *Podophyllum peltatum*, *Geranium maculatum*, *Erythronium albidum*, *Uvularia grandiflora*, *Dicentra cucullaria*, *Claytonia virginica*, *Dephinium tricorne*, and *Zizia aurea*. During late spring and early summer other species appear, and include *Campanula americana*, *Ozmorhiza longistylis* var. *villicaulis*, *Penstemon alluviorum*, *Phlox divaricata*, *Blephilia ciliata*, *Passiflora lutea*, and *Triosteum aurantiacum*.

## PRAIRIE VEGETATION

I have grouped prairie vegetation at the study site into four different communities depending on dominant species, topography, and soils. There are usually no defined boundaries in nature and often species and communities overlap with each other. At Twelve Mile Prairie the level topography and soil conditions combined to create conditions which allowed two entirely different communities to be in close proximity. For example, wet mesic prairie becomes dry mesic prairie with only one meter rise in topography.

### Dry mesic prairie

This community occurs throughout the study site. It is usually in association with a raise in topography along levees of streams, or where the clay content is lower and allows better drainage. They tend to have a highest number of leguminous species of the prairie communities. These include *Dalea purpurea*, *Amorpha canescens*, *Lespedeza capitata*, *Baptisa leucophaea*, and *Tephrosia virginiana*. Dominant grass species in the dry mesic prairie include *Schizachyrium scoparium*, *Sporobolus heterolepis*, and *Panicum virgatum*. Other grasses and sedges that occur in one or more sites include *Koeleria macrantha*, *Sporobolus cryptandrus*, and *Carex bicknelli*. Other important forbs in the dry mesic prairie community include *Solidago rigida*, *Hypoxis hirsuta*, *Ruellia humilis*, *Liatris aspera*, *Silphium terebinthaceum*, *Helianthus mollis*, *Nothoscordum bivalve*, *Asclepias tuberosa*, and *Viola sagittata*.

### Mesic prairie community

Mesic prairie occurs throughout the study site but tends to be concentrated just north Edgewood, and south of Farina to Kinmundy. This community is usually associated with level topography between stream drainages. Mesic prairie has better drainage than wet mesic prairie but its soils seem to have higher clay content than dry mesic prairie. Mesic prairie has the highest diversity of the three major prairie types. Spring flora is especially impressive, including species such as, *Zizia aurea*, *Cardimine bulbosa*, *Tradescantia virginiana*, *Oxalis violacea*, *Hypericum punctatum*, *Claytonia virginica*, *Polygala sanguinea*, and *Perideridia americana*.

Dominant grasses and leguminous species include *Andropogon gerardii*, *Elymus virginicus*, *Panicum virgatum*, *Sorghastrum nutans*, *Baptisia lactea*, *Desmodium sessilifolium*, and *Desmodium illinoense*. In areas of disturbance there are cool Eurasian

grasses such as *Festuca pratensis*, *Poa pratensis*, and *Bromus inermis*. In areas where fire has occurred the cool season grasses have been suppressed and the warm season grasses dominate. In one area in particular where burning has occurred five years consecutively the native grasses are close to 3 meters in height (S.Howell pers comm. 1990). Fire suppression is most evident in the mesic prairie where woody vegetation such as *Cornus racemosa*, *Rhus glabra*, and *Populus alba* invade and compete with prairie grasses and forbs. Important forbs in the mesic prairie community include *Silphium laciniatum*, *Helianthus grosseserratus*, *Liatris pycnostachya*, *Prenanthes aspera*, *Solidago juncea*, *Eryngium yuccifolium*, *Monarda fistulosa*, *Gentiana puberulenta*, *Euphorbia corollata*, *Gaura longifolia*, and *Rudbeckia hirta*.

#### Wet mesic prairie community

Wet mesic prairie is common throughout the study site. It is usually associated with depressions in the topography and along the streams that cross the study area. The wet mesic prairie is dominated exclusively by monocots such as sedges, bullrushes, rushes, Cattails, Grasses and Irises. Soil moisture dictates which group dominant. In areas where soil moisture is at the surface dominant species include *Typha latifolia*, *Phragmites australis*, *Scirpus atrovirens*, *Leersia oryzoides*, and *Phalaris arundinacea*. These areas usually have standing water until June or July depending on the year's precipitation.

The majority of the wet mesic prairie at the study site is dominated grasses like *Spartina pectinata*, *Andropogon gerardii*, and *Tripsacum dactyloides*. These area also have a rich flora of sedges and rushes including *Carex gravida*, *Carex meadii*, *Carex bushii*, *Carex davisii*, *Juncus torreyii*, *Juncus brachycarpus*, *Juncus interior*, and *Juncus biflora*. Forbs in the area include *Iris shrevei*, *Asclepias incarnata*, *Bidens aristosa*, *Lythrum alatum*, *Euthamia graminifolia*, *Euthamia gymnospermoides*, *Ludwigia alternifolia*, *Oenothera pilosella*, and *Physostegia speciosa*. In some areas of the wet mesic prairie there is a defined shrub layer this includes *Salix exigua*, and *Cephalanthus occidentalis*.

#### Clay or Hardpan prairie community

Clay or hardpan prairie is described by Nelson (1985), an area characterized by impermeable or slowly permeable subsoil layer. This fragipan or hardpan stops replenishment of soil moisture from capillary action restricting plant root systems and burrowing by animals.

Areas similar to this description exist at Twelve Mile Prairie. These are interspersed with the other prairie communities throughout the study area. They are usually associated with slight depressions but can occur on level ground. The determining factor appears to be the presence of a clay pan. During the spring these areas are inundated by water, and as the year progresses they become droughty. This creates a unique vegetation type, with wet mesic species occurring in the early part of the year and giving way to more drought tolerant species in summer and fall. Vegetation in the hardpan prairie tends to be of low stature, possibly due to restricted root penetration. This causes reduced competition from grasses, creating suitable habitat for low growing forbs and spikerushes. Although the claypan prairie has components of all three previously described prairie communities, it has its own unique floral components.

The grass species that exist in these areas are almost exclusively *Schizachyrium scoparium* and *Panicum virgatum*. Grasses in the claypan prairie tend to be reduced in stature and do not readily dominate the flora. Spring flora tend to be exclusively sedges and spikerushes. The dominant species include *Eleocharis verrucosa*, *Eleocharis elliptica* var *compressa* and *Eleocharis wolfii*. Species that are less frequent include *Carex scroparia*, *Hedyotis nuttalliana*, and *Galium tinctorium*. As the soil becomes drier during late spring and summer low growing forbs dominate the area. These include *Polygala verticillata*, *Myosotis verna*, *Polygala sanguinea*, *Hedyotis nuttalliana*, *Lobelia spicata*, *Sabatia campestris*, and *Helianthus mollis*.

#### Dry mesic savanna

Dry mesic savanna is the most diverse plant community at Twelve Mile Prairie. It contains species of mesic and dry mesic prairie as well as of dry upland forest. This area community occurs approximately 0.8 kilometers north of Leclde and continues north for approximately 3.2 kilometers. It is difficult to determine what is considered a true savanna. The majority of savanna habitat was destroyed before good floristic surveys could be accomplished (Packard 1987).

To determine if the area was a savanna community, I followed the descriptions of dry mesic savanna by White (1978) and Nelson (1985). I also compared plant lists of the savanna community by Mead (1846), Nuzzo (1986), and Madany (1981). I found that the written descriptions of dry mesic savanna closely resembled that of the study area. The study area also contains a high percentage of plants considered to occur in the original tall grass savanna.

The dry mesic savanna at the study site occurs on rolling hills and slopes of the Dismal Creek and its tributaries. The soils are of the Ava-Bluford-Wynoose association and

have a higher sand content than most of the study area. It appears that some of the large trees have been removed when Route 37 was constructed. Areas adjacent to the study area are primarily open forest dominated by species of oak and hickory, with a herbaceous layer of non-native pasture grasses or dry woodland species such as asters and goldenrods.

Because of the removal of the canopy layer prairie species are the dominant form of vegetation in open areas. In much of the area there is a regeneration of oaks and hickories. The canopy layer appears to be between the 20 to 40 year age class. Dominant species in the dry mesic savanna include *Quercus macrocarpa*, *Quercus velutina*, *Quercus stellata*, *Carya tomentosa*, and *Carya ovata*. Other important species are *Quercus alba*, *Quercus marilandica*, *Quercus stellata*, *Prunus serotina*, and *Sassafras albidum*.

The dry mesic savanna has a shrubby layer scattered throughout the open areas. The dominant shrub species include prairie species such as *Ceanothus americanus* and *Salix humilis*, and edge species including *Symphoricarpus occidentalis* and *Rhus glabra*. Other important woody vegetation includes *Cornus racemosa*, *Corylus americana*, *Rubus pensylvanicus*, *Rhus aromatica*, *Rosa blanda*, and *Rosa setigera*. In these open areas common species of vines are *Ipomea pandurata*, *Calystegia silvatica*, *Smilax illinoensis*, and *Vitis vulpina*.

The herbaceous layer of the dry mesic savanna has a high diversity of grasses and leguminous species. Grasses are a mixture of prairie and woodland species. The dominant grasses include *Andropogon gerardii*, *Sorghastrum nutans*, and *Sphenopholis obtusa*. Other important grasses in the area include *Sphenopholis nitida*, *Agrostis hyemalis*, *Agrostis scabra*, *Elymus hystrix*, and *Melica mitica*. The dry mesic savanna has the highest number of leguminous species that any other community type at Twelve Mile Prairie. These include *Desmodium sessilifolium*, *Baptisa leucophaea*, *Baptisa lactea*, *Psoralea psoraliodes*, *Lespedeza capitata*, *Lespedeza virginiana*, *Lespedeza stuevei*, *Tephrosia virginiana*, *Amphicarpa bracteata*, *Stylosanthes biflora* and *Cassia marilandica*.

Other herbaceous species in the dry mesic savanna inhabit localized areas. In dry well-drained open sites *Aster azureus*, *Aster patens*, *Lithospermum canesens*, *Pycnatthemem pilosum*, *Sabatia angularis*, *Coreopsis tripteris*, *Hieracium longipilium*, and *Helianthemum bicknellii* compose the majority of the flora. In more mesic sites under or adjacent to the tree canopy species include *Gentiana alba*, *Gentiana andrewsii*, *Frasera carolinensis*, *Scutellaria incana*, *Dodecatheon media*, *Coreopsis palmata*, *Solidago speciosa*, *Verbesina alternifolia*, *Silene stellata*, *Monarda bradburniana*, *Cacalia atriplicifolia*, *Thaspium trifoliatum*, *Heliopsis helianthoides*, and *Porteranthus stipulatus*.

## MANAGEMENT RECOMMENDATIONS

The following recommendations are based on known management procedures and personal observations. Of the 22 million acres of Illinois prairie in 1820 less than 2,300 acres of high quality prairie remained in today (White 1978). It is this author's opinion that Twelve Mile Prairie should be managed as a nature preserve. Twelve Mile Prairie provides an excellent opportunity for research in prairie and savanna management, floristics and grassland ecology. It also serves as an invaluable seed source for prairie restorations and reintroductions. Twelve Mile Prairie provides an excellent habitat corridor through the changed Illinois landscape of agricultural crops. Fire has long been accepted as standard practice for prairie management. Controlled burns can be used to control weeds, thatch, and encroachment of woody vegetation from prairie communities. A burning program should be adopted at Twelve Mile Prairie for the above mentioned reasons. A rotation could be established so that each area receives burning every three years. Areas that have cool season grasses such as bluegrass and fescue, or have sweet clover infestations respond better to late burns (early April) than burns conducted in February or March (McClain 1985). Controlled burns should be adjusted in these areas to get maximum control of weedy exotics. Areas that contain *Sabatia campestris* (prairie rose gentian), an endangered species in Illinois, should be monitored and burned on a rotation. Until 1989 prairie rose gentian had not been observed at Twelve Mile Prairie. It was observed that after the area was burned in 1989 that the populations increased possibly due to decreased competition from grasses, or that reduced duff layer increased germination of the seeds. After two years without fire the two populations went from over 100 individuals in each to none observed in 1991. It is possible that due to drought conditions of this summer that the plants or seeds are dormant.

Dry mesic savanna also should be set on a burning rotation, but different management practices should be applied than that for prairie. Different managers and researchers have different hypotheses for how to determine appropriate regimes of fire intensity, frequency, and season (Packard 1987). Since it appears there is a fairly stable savanna community present it is possible that minimal management is all that is needed. This may include burning preferably in the fall or very early spring. From personal observations I have noted that many of the savanna plants start growth earlier in the year. A burn late in the spring may damage plants that have started growth. I also believe there should be no brush removal this would minimize labor and disturbance. The dry mesic savanna at Twelve Mile Prairie is composed of open prairie areas intermixed with more shaded areas. The fire should be allowed to burn naturally. This would allow open areas to receive a more hot fire while areas under the larger trees receive a less intense fire. This would create a more



natural appearance and possibly a more diverse community. The goal should be to create as natural a community as possible. It may be possible to apply several different fire methods in different areas to monitor which gives the most desirable results.

Finally better communication between state agencies and Illinois Central Railroad should be established. There is considerable unnecessary disturbance along Twelve Mile Prairie. This ranges from herbicide drift from the railroad right-of-ways to mowing into the prairie by highway mowing crews. If possible more control should be established over the Prairie areas. Herbicide application methods should be improved to minimized drift off of target areas. Plowing of railroad right-of -ways should be eliminated. Also highway crews should confine mowing to the roadside ditch.. It has been noted that areas a far as way 6 meters off the roadside have been mowed.for no apparent reason During summer of 1991 a undetermined party did construction work along Twelve Mile Prairie. They remove areas of native prairie sod and replaced them with nursery grown *Acer rubra*, Red Maple,a nice gesture but hardly what one envisions of growing on the native prairie.

## THE VASCULAR FLORA

The following is an annotated list of the vascular plants collected or observed at Twelve Mile Prairie from April 1987 to July 1991. Nomenclature follows Mohlenbrock. (1986). The taxa are in order alphabetically by family, genus, and species. Terms used to express frequency are defined as follows:

**Rare** -encountered below five times or confined to a restricted area of the study site.

**Uncommon**- encountered in only a few scattered areas.

**Occasional**- scattered throughout study site in usually more than one community.

**Common**- occurs throughout the study site and is usually an important component in one or several communities.

**Abundant**- usually a dominant in one or several community in some areas excluding all other vegetation.

**Locally**- is used as a modifier to indicate distribution in a given area or community.

A total of 552 taxa were collected and 6 were observed. These specimens are now housed at the Illinois Natural History Survey at the University of Illinois, Champaign-Urbana, with duplicates to be sent to SIU herbarium Carbondale Illinois.

## ACANTHACEAE

*Ruellia humilis* Nutt. Wild Petunia. Dry mesic savanna and mesic prairie. Common. Fayette and Effingham counties. 159, 192, 258

## ACERACEAE

*Acer negundo* L. Boxelder. Streambank. Uncommon. Fayette County. 521

*Acer rubrum* L. Red Maple. Disturbed soil. Rare. Fayette County. 509

*Acer saccharinum* L. Silver maple. Streambank; wet mesic prairie. occasional Effingham County. 87

## ANACARDIACEAE

*Rhus aromatica* Ait. Fragrant Sumac. Dry mesic savanna. Occasional. Fayette County. 32

*Rhus glabra* L. Smooth Sumac. Dry mesic savanna; mesic prairie. Abundant. Fayette County. 163

*Toxicodendron radicans* (L.) Kuntze. Poison Ivy. Wet mesic upland forest. Common. Effingham County. Observed but not collected.

#### APIACEAE

*Charophyllum procumbens* (L.) Crantz. Wild Chervil. Wet mesic upland forest. Rare. Effingham County. 415

*Cicuta maculata* L. Water Hemlock. Wet mesic prairie. Rare. Fayette County. 130

*Cryptotaenia canadensis* (L.) DC. Honewort. Wet mesic upland forest. Rare. Effingham County. 336

*Daucus corota* (L.). Wild Carrot. Disturbed soil; mesic prairie. Abundant, Marion County. 84

*Eryngium yuccifolium* Michx. Rattlesnake Master. Mesic and wet mesic prairies. Abundant. Marion County. 106

*Ozmorhiza longistylis* var. *villicaulis* Fern. Sweet Cicely. Mesic woods. Rare. Effingham County. 408

*Pastinaca sativa* L. Parsnip. Disturbed soil. Occasional Fayette County. Observed but not collected.

*Perideridia americana* (Nutt.) Reichenb. Mesic prairie. Occasional. Fayette County. 36

*Polytaeia nuttallii* DC. Prairie Parsley. Mesic Prairie. Rare. Fayette County. 55

*Thaspium trifoliatum* (L.) Gray. Meadow Parsnip. Dry mesic savanna; mesic prairie. Common. Clay County. 23, 272

*Torilis japonica* (Houtt.) DC. Hedge Parsley. Disturbed soil. Occasional. Clay County 306

*Zizia aurea* (L.) Koch. Golden Alexanders. Dry mesic savanna; Wet mesic upland forest and mesic prairies. Abundant. Every County 169, 340, 342, 393, 419

#### APOCYNACEAE

*Apocynum cannabinum* L. Indian Hemp. Mesic prairie. Common. Marion County. 206

*Apocynum sibiricum* Jacq. Indian Hemp. Dry mesic savanna. Rare. Clay County. 142

#### ASCLEPIADACEAE

*Asclepias hirtella* (Pennell) Woodson. Tall Green Milkweed. Mesic prairie. Occasional. Fayette County. 107, 166

*Asclepias incarnata* L. Swamp Milkweed. Wet prairie. Occasional. Fayette County. 211

*Asclepias purpurascens* L. Purple Milkweed. Dry mesic savanna. Rare. Clay County. 282

*Asclepias sullivantii* Engelm. Prairie Milkweed. Mesic prairie. Occasional. Marion County. 539

*Asclepias syriaca* L. Common Milkweed. Mesic prairie. Abundant. Marion. 81

*Asclepias tuberosa* L. ssp. *interior* Woodson. Butterflyweed. Dry mesic prairie. Common. Marion. 61

*Asclepias verticillata* L. Horsetail Milkweed. Mesic prairie. Occasional. Effingham County. 103, 164

#### ASPLENIACEAE

*Asplenium platyneuron* (L.) Oakes. Ebony Spleenwort. Wet mesic upland forest. Occasional. Fayette County. 519

#### ASTERACEAE

*Achillea millefolium* L. Yarrow. Mesic prairie. Abundant. Effingham County. 17

*Ambrosia artemisiifolia* L. Common Ragweed. Disturbed soil. Occasional. Fayette County. Observed but not collected.

*Ambrosia psilostachya* DC. Western Ragweed. Disturbed soil. Rare. Effingham County. 95

*Ambrosia trifida* L. Giant Ragweed. Disturbed soil. Occasional. Fayette County. Observed but not collected

*Antennaria neglecta* Greene. Pussytoes. Uncommon. Mesic prairie. Effingham County. 1

*Antennaria plantaginifolia* (L.) Richards. Pussytoes. Locally common. Mesic prairie. Effingham County. 417

*Aster azureus* Linl. Sky-blue Aster. Dry mesic savanna. Locally common. Clay and Fayette counties. 229, 230, 432, 460

*Aster ericoides* L. Heath Aster. Mesic prairie. Common. Fayette 244, 462

*Aster novae-angliae* L. New England Aster. Mesic prairie. Common. Effingham and Marion counties. 239, 246

*Aster patens* Ait. Spreading Aster. Mesic prairie; Dry mesic savanna. Occasional. Fayette and Clay counties. 71, 231, 459

*Aster pilosus* Willd. Hairy Aster. Savanna. occasional. Clay County. 234, 251

*Aster praealtus* Poir. Willow Aster. Mesic prairie. Rare. Fayette County 232, 241, 245

*Aster X amethystinus* Nutt. Blue Aster. Mesic prairie. Uncommon. Effingham County. 477

- Bidens aristosa* (Michx.) Britt. Swamp Marigold. Wet prairie. Rare. Marion County. 470
- Boltonia asteroides* (L.) L'Her. False Aster. Mesic Prairie. Occasional. Effingham County. 92
- Boltonia diffusa* Ell. False Aster. Dry mesic savanna. Rare. Clay County. 444
- Cacalia atriplicifolia* L. Indian Plantain. Dry mesic savanna. Locally common. Clay County. 208
- Cichorium intybus* L. Chicory. Disturbed soil. Common. Effingham County. 83
- Conyza canadensis* L. Cronq. Muleweed. Disturbed soil. Occasional. Fayette County. 137
- Coreopsis palmata* Nutt. Prairie Coreopsis. Dry mesic savanna. Rare. Clay County. 110, 204
- Coreopsis tripteris* L. Tall Tickseed. Dry mesic savanna. Common. Effingham County. 190
- Echinacea pallida* Nutt. Pale Coneflower. Dry mesic savanna. Rare. Clay County. 179
- Erigeron pulchellus* Michx. Robin's Plantain. Dry mesic savanna. Rare. Clay County. 162
- Erigeron strigosus* Muhl. Daisy Fleabane. Mesic prairie. Abundant. Effingham County. 11, 44
- Eupatorium altissimum* L. Common Boneset. Mesic prairie. Common. Marion. 238, 473
- Eupatorium perfoliatum* L. Boneset. Wet mesic prairie. Occasional. Fayette County. 145
- Eupatorium serotinum* Michx. Late Boneset. Streambank. Occasional. Fayette County. 210
- Euthamia graminifolia* (L.) Salisb. Grass-leaved Goldenrod. Wet mesic prairie. Common. Marion County. 233, 253, 484
- Euthamia gymnospermoides* Greene. Grass-leaved Goldenrod. Wet mesic prairie. Marion County. 474
- Gnaphalium obtusifolium* L. Sweet Everlasting. Mesic prairie. Common. Effingham County. 253
- Helenium autumnale* L. Autumn Sneezeweed. Mesic prairie. Rare. Effingham County. 311
- Helianthus divaricatus* L. Woodland Sunflower. Dry mesic savanna. Locally abundant. Clay County. 522

- Helianthus grosseserratus* Martens. Sawtooth Sunflower. Mesic prairie. Common. Every County. 466, 468, 471, 496
- Helianthus mollis* Lam. Downy Sunflower. Dry mesic; mesic prairies; and claypan prairie. Abundant. Marion County. 427
- Helianthus rigidus* (Cass.) Desf. Prairie Sunflower. Common. Effingham and Marion counties. 467, 475, 495
- Heliopsis helianthoides* (L.) Sweet. False Sunflower. Dry mesic savanna. Occasional. Fayette County. 193
- Hieracium longipilium* Torr. Hairy Hawkweed. Dry mesic savanna. Uncommon. Fayette County. 181
- Lactuca canadensis* L. Wild Lettuce. Dry mesic savanna. Common. Fayette and clay counties 82, 151
- Lactuca floridana* (L.) Gaertn. Woodland Lettuce. Dry mesic savanna Occasional. 185
- Leucanthemum vulgare* Lam. Ox-eye Daisy. Mesic prairie. Occasional. Effingham County. 60, 493
- Liatris aspera* Michx. Rough Blazing Star. Abundant. Dry mesic prairie; Dry mesic savanna; and mesic prairie. Clay County. 240
- Liatris pycnostachya* Michx. Prairie Blazing Star. Abundant. Mesic prairie. Fayette, Effingham, and Marion County. 108, 146, 203
- Matricaria matricarioides* (Less.) Porter. Pineappleweed. Disturbed soil. Rare. Effingham County. 289
- Parthenium integrifolium* L. American Feverfew. Dry mesic savanna. Clay County. 73
- Prenanthes aspera* Michx. Rough White Lettuce. Mesic prairie. Occasional. Effingham County. 465
- Ratibida pinnata* (Vent.) Barnh. Drooping Coneflower. Mesic prairie. Common. Clay County. 113
- Rudbeckia bicolor* Nutt. Black-eyed Susan. Streambank. Rare. Fayette County. 217
- Rudbeckia hirta* L. Black-eye Susan. Mesic prairie. Common. Every County. 42, 122, 165, 476
- Rudbeckia triloba* L. Brown-eyed Susan. Mesic prairie. Rare. Fayette County. 300
- Silphium integrifolium* Michx. Rosin-weed. Mesic prairie; dry mesic savanna. Common. Clay and Fayette counties. 148, 150, 198
- Silphium laciniatum* L. Compass Plant. Mesic prairie. Abundant. Fayette County. 161
- Silphium terebinthinaceum* Jacq. Prairie Dock. Mesic and dry mesic prairies. Abundant. Marion County. 155

- Solidago canadensis* L. Tall Goldenrod. Mesic prairie. Common. Marion and Fayette counties . 236, 250, 483
- Solidago juncea* Ait. Early Goldenrod. Mesic prairie. Occasional. Marion County 140
- Solidago rigida* L. Rigid Goldenrod. Dry mesic prairie. Common. Marion County. 205
- Solidago rugosa* Mill. Rough-leaved Goldenrod. Mesic prairie. Occasional. Fayette County. 247, 248
- Solidago speciosa* Nutt. Showy Goldenrod. Dry mesic savanna; mesic prairie. Common. Effingham and Fayette counties. 202, 242, 463
- Sonchus asper* (L.) Hill. Spiny Sow Thistle. Disturbed soil. Rare. Marion County. 312
- Verbesina alternifolia* (L.) Britt. Yellow Ironweed. Dry mesic savanna. Locally common. Clay County 207
- Verbesina helianthoides* Michx. Yellow Crownbeard. Streambank. Locally Common. Fayette and Clay counties. 68, 197, 267, 378
- Xanthium strumarium* L. var. *glabratum* (DC.) Cronq. Common Cocklebur. Disturbed soil. Marion County. 428

#### BALSAMINACEAE

- Impatiens capensis* Meerb. Spotted Touch-me-not. Wet mesic prairie. Rare. Marion County. 541

#### BETULACEAE

- Betula nigra* L. River Birch. Streambank. Rare. Marion County. 126

#### BERBERIDACEAE

- Podophyllum peltatum* L. Mayapple. Mesic prairie; Wet mesic upland forest. Common. Effingham County. 70

#### BIGNONIACEAE

- Campsis radicans* (L.) Seem. Trumpet Creeper. Disturbed soil. Occasional. Fayette County. 63

#### BORAGINACEAE

- Lithospermum canesens* (Michx.) Lehm. Hoary Puccoon. Dry mesic prairie. Occasional. Fayette County. 411
- Mertensia virginica* (L.) Pers. Bluebells. Streambank. Fayette County. Rare. Fayette County. 418

*Myosotis verna* Nutt. Scorpion Grass. Claypan; wet mesic prairie. Common. Marion County. 544

## BRASSICACEAE

*Barbarea vulgaris* R. Br. Yellow Rocket. Disturbed soil. Common. Effingham County. 537

*Cardimine bulbosa* (Schreb.) BSP. Springcress. Mesic prairie. Occasional. Effingham County. 396

*Descurainia pinnata* (Walt.) Britt. Tansy Mustard. Wet mesic upland forest. Rare. Effingham County. 387

*Thlaspi arvense* L. Field Penny Cress. Disturbed soil. Occasional. Effingham County. 2, 386

## CAESALPINIACEAE

*Cassia fasciculata* Michx. Partridge Pea. Mesic prairie. Occasional. Effingham County. 152

*Cassia marilandica* L. Maryland Senna. Dry mesic savanna. Rare. Clay County. 200

*Cercis canadensis* L. Red Bud. Wet mesic upland forest. Rare. Clay County. 69

*Gleditsia tricanthos* L. Honey Locust. Wet mesic upland forest; disturbed soil Occasional. Effingham County. 508

## CAMPANULACEAE

*Campanula americana* L. American Bellflower. Wet mesic upland forest. Rare. Fayette County. 191

*Lobelia spicata* Lam. Spiked Lobelia. Mesic prairie. Abundant. Every County. 34, 62, 256, 345

*Triodanis perfoliata* (L.) Nieuwl Venus Looking Glass. Disturbed soil. Rare. Effingham County. 284

## CAPRIFOLACEAE

*Symphoricarpos occidentalis* Hook. Wolfberry. Dry mesic savanna. Locally abundant. Clay and Fayette counties 96, 186

*Sambucus canadensis* L. Elderberry. Streambank. Rare. Marion County. 172

*Lonicera japonica* Thumb. Japanese Honeysuckle. Mesic prairie. Effingham County. 254



*Triosteum perfoliatum* L. Late Horse Gentain. Mesic prairie. Common. Marion and Effingham counties. 40, 388, 423

*Triosteum aurantiacum* Bickn. Early Horse Gentain. Mesic prairie. Effingham County. 297

#### CARYOPHYLLACEAE

*Cerastium vulgatum* L. Common Mouse-eared Chickweed. Wet mesic upland forest. Rare. Effingham County. 407

*Dianthus ameria* L. Deptford Pink. Mesic prairie. Occasional. Effingham County. 67, 266

*Silene stellata* L. Aitf. Starry Campion. Dry mesic savanna. Locally common. Clay and Fayette counties. 115, 117

#### CHENOPODIACEAE

*Chenopodium album* L. Lambs Quarters. Disturbed soil. Rare. Effingham County. 97

#### CISTACEAE

*Helianthemum bicknellii* Fern. Frostweed. Dry mesic savanna. Rare. Fayette County. 259

#### COMMELINAECEAE

*Commelina communis* L. Common Dayflower. Streambank. Rare. Fayette County. 469, 491

*Tradescantia ohioensis* Raf. Spiderwort. Wet mesic prairie. Occasional. Marion County. 542

*Tradescantia virginiana* L. Spiderwort. Mesic prairie, dry mesic savanna. Abundant. Fayette and Clay counties. 25, 274, 394

#### CONVOLVULACEAE

*Calystegia sepium* (L.) R. Br. ssp. *americana*. American Bindweed. Dry mesic savanna. Rare. Clay County. 298

*Calystegia silvatica* (Kit.) Griseb. ssp. *fraterniflorus* (Mack. & Bush) Bummitt. Bindweed. Dry mesic savanna. Rare. Clay County. 53

*Ipomoea pandurata* (L.) G.F.W. Mey. Wild Sweet Potato Vine. Dry mesic savanna. Rare. Clay County. 109

## CORNACEAE

*Cornus racemosa* Lam. Gray Dogwood. Mesic prairie, dry mesic savanna. common. Effingham and Clay counties. 13, 285

## CORYLACEAE

*Corylus americana* Walt. Hazelnut. Dry mesic savanna. Occasional. Clay County. 101, 237

## CUPRESSACEAE

*Juniperus virginiana* L. Red Cedar. Wet mesic upland forest. Occasional. Effingham County. Observed not collected.

## CYPERACEAE

*Carex bicknelli* Britt. Sedge. Wet mesic prairie. Common. Effingham and Marion counties. 365, 375, 543

*Carex blanda* Dewey. Sedge. Wet mesic upland forest. Locally common. Effingham County. 323,390,392

*Carex bushii* Mack. Sedge. Wet mesic prairie. Common. Effingham County. 58

*Carex caroliniana* Schwein. Wet mesic prairie. Rare. Marion County. 504

*Carex davisii* Schwein. & Torr. Sedge. Wet mesic prairie. Rare. Effingham County. 455

*Carex gravida* Bailey. Sedge. Wet mesic prairie. Rare. Effingham County. 275

*Carex grisea* Wahlenb. Dry mesic savanna. Rare. Clay County. 322

*Carex hirsutella* Mack. Sedge. Dry mesic savanna. rare. Clay County. 457

*Carex hystricina* Willd. Sedge. Wet mesic upland forest. Rare. Effingham County. 276

*Carex lanuginosa* Michx. Sedge. Wet mesic prairie. Occasional. Effingham and Fayette counties. 6, 538

*Carex meadii* Dewey. Sedge. Wet mesic prairie. Occasional. Effingham County. 524

*Carex scroparia* Willd. Sedge. Wet mesic prairie. Rare. Effingham County. 499

*Carex tribuloides* Wahlenb. Wet mesic prairie. Rare. Fayette county. 98

*Carex vulpinoidea* Michx. Sedge. Wet mesic prairie. abundant. Every county. 7, 18, 350, 535

*Cyperus esculentus* L. Nut-grass. Disturbed ground. Rare. Marion County. 430, 498

*Eleocharis elliptica* Kunth. var. *compressa* (Sull.) Drap. & Mohlenbr. Spikerush.

Claypan prairie. Rare. Clay County. 321

*Eleocharis wolfii* Gray. Spikerush. Claypan prairie. Rare. Marion County. 503, 516

*Eleocharis verrucosa* (Svens.) Harms. Claypan prairie. Common. Marion County.  
506,517,536

*Scirpus atrovirens* Willd. Bulrush. Wet mesic prairie. Common. Every County. 18,  
46, 287, 454

*Scirpus pendulus* Muhl. Bulrush. Wet mesic prairie. Occasional. Effingham, Fayette,  
and Marion counties. 28, 500, 540

#### DENNSTAEDTIACEAE

*Pteridium aquilinum* (L.) Kuhn var. *latiusculum* (Desv.) Underw. Bracken fern. Dry  
mesic savanna. Rare. Clay County. 528

#### DIOSCOREACEAE

*Dioscorea quaternata* (Walt.) J.F. Gmel. Wild Yam. Wet mesic upland forest. Rare.  
Effingham County. 338

#### EBENACEAE

*Diospyros virginiana* L. var. *pubesens* (Pursh.) Dippel. Persimmon. Occasional. Clay  
County. 20

#### ELAEGNACEAE

*Elaeagnus umbellata* Thunb. Autumn Olive. Disturbed soil. Occasional. Marion County.  
57

#### EQUISTACEAE

*Equisetum arvense* L. Common Horsetail. Streambank. Rare. Fayette County. 334

#### EUPHORBIACEAE

*Acalypha gracilens* Gray. Slender Three-seeded Mercury. Disturbed soil. Rare. Marion  
County. 429

*Euphorbia corollata* L. Flowering Spurge. Mesic prairie. Very abundant. Marion and  
Effingham counties. 5, 45, 139

*Euphorbia corollata* L. var. *mollis* Millsp. Dry mesic savanna. Rare. Fayette County.  
301

#### FABACEAE

- Amorpha canescens* Pursh. Lead Plant. Dry mesic prairie. Occasional. Marion County. 173
- Amorpha fruticosa* L. False Indigo. Streambank. Rare. Marion and Fayette County. 41, 441
- Amphicarpa bracteata* (L.) fern. Hog Peanut. Dry mesic savanna. Rare. Fayette County. 218
- Baptisia lactea* Raf. Thieret. Wild Indigo. Mesic prairie. Common. Fayette County. 160, 324
- Baptisia leucophaea* Nutt. Cream Wild Indigo. Dry mesic savanna; dry mesic prairie; and mesic prairie. Locally common. Clay County. 79
- Coronilla varia* L. Crown vetch. Disturbed soil. Rare. Effingham County. 257
- Dalea purpurea* Vent. Purple Prairie Clover. dry mesic prairie. Occasional. Fayette, Marion, and Effingham counties. 158, 313, 447
- Desmodium illinoense* Gray. Illinois Tick Trefoil. Mesic prairie. Common. Marion County. 201, 293
- Desmodium sessilifolium* Torr. & Gray. Sessile-leaved Tick Trefoil. Mesic prairie and dry mesic savanna, Fayette and Marion counties. Two variations occur on Twelve Mile Prairie. A yellow flowered 183, 224 and a purple flowered 294.
- Lespedeza capitata* Michx. Round-headed Bush Clover. Dry mesic savanna, dry mesic prairie. Abundant. Marion County. 154
- Lespedeza stuevei* Nutt. Bush Clover. Dry mesic savanna. Rare. Fayette County. 223
- Lespedeza virginica* (L.) Britt. Slender Bush Clover. Dry mesic savanna; mesic prairie. Locally common. Fayette and Marion counties. 153, 268, 439
- Medicago lupulina* L. Black Medic. Disturbed ground. Rare. Effingham County. 261, 490
- Melilotus alba* Medic. White Sweet Clover. Mesic prairie. Locally very abundant. Fayette County. 56
- Psoralea psoralioides* (Walt.) Cory var. *englandulosa* (Ell.) Freeman. Sampson's Snakeroot. Dry mesic savanna. Locally common. Clay and Fayette counties. 35, 281, 369
- Robinia pseudoacacia* L. Black Locust. Mesic prairie; wet mesic upland forest. Occasional. Marion County. 100
- Stylosanthes biflora* (L.) BSP Pencil-flower. Dry mesic savanna. Fayette County. Rare. 112
- Tephrosia virginiana* (L.) Pers. Goat's-rue. Dry mesic savanna; dry mesic prairie. Common. Fayette and Marion counties. 37, 72

*Trifolium pratense* L. Red Clover. Mesic prairie; disturbed soil. Occasional. Effingham County. 91

*Vicia sativa* L. Common Vetch. Wet mesic prairie. Rare. Marion County. 514

#### FAGACEAE

*Quercus alba* L. White Oak. Dry mesic savanna; wet mesic upland forest. Common. Clay and Effingham counties. 118, 520

*Quercus imbricaria* Michx. Shingle Oak. Wet mesic upland forest; dry mesic savanna. Common. Clay County. 104

*Quercus macrocarpa* Michx. Bur Oak. Occasional. Dry mesic savanna; wet mesic upland forest. Common. Fayette County. 434

*Quercus marilandica* Muenchh. Blackjack Oak. Dry mesic savanna. Occasional. Fayette County. 305

*Quercus prinoides* Willd. var. *acuminata* (Michx.) Gl. Yellow Chestnut Oak. Wet mesic upland forest. Effingham County. 529

*Quercus stellata* Wangh. Post Oak. Dry mesic savanna. Common. Clay County. 105

*Quercus velutina* Lam. Black Oak. Dry mesic savanna. Occasional. Clay and Fayette counties. 119, 521

#### GENTIANACEAE

*Frasera caroliniensis* Walt. American Columbo. Dry mesic savanna. Locally common. Clay County. 114

*Gentiana alba* Muhl. Pale Gentian. Dry mesic savanna. Rare. Clay and Fayette counties. 464

*Gentiana andrewsii* Griseb. Closed Gentian. Dry mesic savanna. Rare. Clay County. 235

*Gentiana puberulenta* A. Davids. Downy Gentian. Mesic Prairie. Rare. Marion County. 226

*Sabatia angularis* (L.) Pursh. Marsh Pink. Dry mesic savanna. Occasional. Fayette County. 437

*Sabatia campestris* Nutt. Prairie Rose Gentian. Claypan prairie. Locally common. Marion and Effingham counties. 296, 315, 436

#### GERANIACEAE

*Geranium maculatum* L. Wild Geranium. Wet mesic upland forest. Occasional. Effingham County. 389

## HYDRANGEACEAE

*Hydrangea arborescens* L. Wild Hydrangea. Wet mesic upland forest. Rare. Fayette County. 219

## HYPERICACEAE

*Hypericum drummondii* (Grev. & Hook.) Torr. & Gray. Nits-and-lice. Dry mesic prairie. Occasional. Effingham County. 290

*Hypericum prolificum* L. Shubby St. John's-wort. Wet mesic prairie. Rare. Marion County. Observed but not collected.

*Hypericum punctatum* Lam. Spotted St. John's-wort. Mesic prairie. Abundant. Effingham County. 144, 443

*Hypericum sphaerocarpum* Michx. Round-fruited St. John's-wort. Dry mesic savanna. Rare. Fayette County. 318

## IRIDACEAE

*Iris shrevei* Small. Wild Blue Iris. Wet mesic prairie. Occasional. Fayette County. 30, 339

*Sisyrinchium albidum* Raf. Blue-eyed Grass. Present in all vegetation types. Abundant. Every County. 409, 421, 422, 505

## JUGLANDACEAE

*Carya laciniosa* (Michx.) Loud. Kingnut Hickory. Wet mesic upland forest. Rare. Effingham County. 111

*Carya ovata* (Mill.) K. Koch. Shagbark Hickory. Wet mesic upland forest; dry mesic savanna. Common. Observed but not collected.

*Carya tomentosa* (Poir.) Nutt. Mockernut Hickory. Dry mesic savanna. Occasional. Clay and Fayette counties. 431, 435

*Juglans nigra* L. Black Walnut. Streambank. Rare. Fayette County. 510

## JUNCACEAE

*Juncus biflorus* Ell. Rush. Wet mesic prairie. Occasional. Fayette County. 314

*Juncus brachycarpus* Engelm. Rush. Wet mesic prairie. Rare. Effingham County. 348, 446

*Juncus interior* Wieg. Rush. Wet mesic prairie. Occasional. Effingham County. 361

*Juncus scripoides* Lam. Rush. Dry mesic savanna. Rare. Clay County. 317

- Juncus secundus* Beauv. Rush. Dry mesic savanna. Rare. Fayette County. 189  
*Juncus tenuis* Willd. Path Rush. Wet mesic prairie; disturbed ground. Occasional.  
 Effingham and Marion counties. 9, 49, 347, 280  
*Juncus torreyi* Coville. Rush. Wet mesic prairie. Occasional. Marion County. 545

## LAMIACEAE

- Blephilia ciliata* (L.) Benth. Pagoda Plant. Wet mesic upland forest. Rare. Effingham  
 County. 530  
*Leonurus cardiaca* L. Motherwort. Disturbed ground. Rare. Effingham County. 271  
*Monarda bradburiana* Beck. Monarda. Dry mesic savanna. Abundant. Fayette and Clay  
 counties. 26, 283  
*Monarda fistulosa* L. Wild Bergamont. Dry mesic savanna; mesic prairie. Common.  
 Fayette, Clay, and Effingham counties. 147, 445, 472  
*Physostegia speciosa* (Sweet) Sweet. False Dragonhead. Wet mesic prairie. Uncommon  
 Marion County 546  
*Prunella vulgaris* L. Self-Heal. Disturbed ground. Occasional. Clay County. 141  
*Pycnanthemum pilosum* Nutt. Hairy Mountain Mint. Dry mesic savanna. Occasional.  
 135  
*Pycnanthemum tenifolium* Schrad. Slender Mountain Mint. All vegetation types except  
 streambank. Abundant. Fayette County. 93  
*Stachys tenuifolia* Willd. Smooth Hedge nettle. Streambank. rare Fayette County. 450  
*Scutellaria incana* Biehler. Downy Skullcap. Dry mesic savanna. Uncommon. Clay  
 County. 547  
*Scutellaria lateriflora* L. Mad-dog Skullcap. Streambank. Rare. Effingham County. 451  
*Teucrium canadense* L. var. *virginicum* (L.) Eat. American Germander. Mesic prairie.  
 Common. Marion and Clay counties. 132, 310

## LAURACEAE

- Sassafras albidum* var. *molle* (Raf.) fern. Sassafras. Dry mesic savanna. Occasional.  
 Clay County. 123

## LILIACEAE

- Allium canadense* L. Wild Onion. Mesic prairie; disturbed soil. Abundant. Every  
 County. 120, 255, 362, 376  
*Asparagus officinalis* L. Asparagus. Disturbed soil. Rare. Marion County. 174

*Camassia scilloides* (Raf.) Cory. Wild Hyacinth. Mesic prairie; Wet mesic upland forest. Locally abundant. Effingham and Marion counties. 325, 391

*Erythronium albidum* Nutt. Dog-toothed violet. Wet mesic upland forest. Occasional. Effingham County. 385

*Hypoxis hirsuta* (L.) Coville. Yellow Star Grass. Dry mesic prairie. Rare. Marion County. 515

*Nothoscordum bivalve* (L.) Britt. False Garlic. Mesic and dry mesic prairie. Abundant. Marion and Effingham County. 397, 410

*Polygonatum commutatum* (Shult.) A. Dietr. Solomon's Seal. Wet mesic upland forest. Occasional. Effingham County. 80

*Smilacina racemosa* (L.) Desf. False Solomon's Seal. Wet mesic upland forest. Occasional. Effingham County. 530

*Trillium recurvatum* Beck. Common Red Trillium. Mesic prairie; Dry mesic savanna. Common. Effingham County. 398

*Uvularia grandiflora* Sm. Yellow Bellwort. Wet mesic upland forest. Rare. Effingham County. 414

#### LINACEAE

*Linum medium* (Planch.) Britt. Wild Flax. Dry mesic savanna. Occasional. Clay County. 177, 448

*Linum sulcatum* Riddell. Wild Flax. Dry mesic savanna. Rare. Fayette County. 352

#### LYTHRACEAE

*Lythrum alatum* Pursh. Winged Loosestrife. Common. Wet mesic prairie. Effingham County. 52, 295, 308, 442

#### MENISPERMACEAE

*Menispermum canadense* L. Moonseed. Wet mesic upland forest. Rare. Effingham County. 337

#### MORACEAE

*Humulus japonicus* Sieb. & Zucc. Japanese Hops. Streambank. Rare. Fayette County. 333

#### OLEACEAE



*Fraxinus pennsylvanica* Marsh. Green Ash. Streambank; Wet mesic upland forest. Occasional. Fayette County. 89

#### ONAGRACEAE

*Circaea lutetina* Ashers. & Magnus ssp. *canadensis* (L.) Aschers & Magnus. Wet mesic upland forest. Effingham County 548

*Gaura longiflora* Spach. Gaura. Mesic prairie. Locally abundant. Marion County. 195

*Ludwigia alternifolia* L. Seedbox. Wet mesic prairie. Occasional. Fayette County. 157, 449

*Oneothena biennis* L. Evening Primrose. Disturbed soil; mesic prairie. Locally abundant. Marion County. 196

*Oneothena biennis* L. var. *canescens* Torr & Gray. Gray Evening Primrose. Dry mesic savanna. Rare. Fayette County. 220

*Oneothena pilosella* L. Prairie Sundrops. Wet Mesic prairie; mesic prairie. Locally common. Effingham County. 10, 43

#### OXALIDACEAE

*Oxalis dillenii* Jacq. Yellow Wood Sorrel. Disturbed soil. Common. Effingham County. 527

*Oxalis violacea* L. Purple Oxalis. Dry mesic savanna; Mesic prairie. Locally common Fayette County. 24, 404

#### PAPAVERACEAE

*Dicentra cucullaria* L. Bernh. Dutchman's-breeches. Wet mesic upland forest. Rare. Effingham County. 401

*Sanguinaria canadensis* L. Bloodroot. Wet mesic upland forest. Rare. Effingham County. 402

#### PASSIFLORACEAE

*Passiflora lutea* L. var. *glabriflora* fern. Small Passion Flower. Wet mesic upland forest. Rare. 549

#### PHYTOLACCACEAE

*Phytolacca americana* L. Pokeweed. Disturbed soil. Occasional. Clay County. 167

#### PLANTAGINACEAE

- Plantago aristata* Michx. Bracted Plantain. Disturbed ground. Rare. Clay County. 64  
*Plantago lanceolata* L. Buckhorn. Disturbed ground. Occasional. Effingham County. 85  
*Plantago virginiana* L. Dwarf Plantain, Disturbed soil. Occasional. Effingham County.  
 331

## POACEAE

- Agrostis alba* L. Red Top. Mesic prairie. Rare. Clay County. 316  
*Agrostis hyemalis* (Walt.) BSP. Tickle Grass. Dry mesic savanna. Occasional. Clay  
 County. 38, 279  
*Agrostis scabra* Willd. Tickle Grass. Dry mesic savanna. Rare. Fayette County. 458  
*Andropogon gerardii* Vitman. Big Blue-stem. Mesic prairie. Abundant. Every County.  
 180, 225  
*Aristida longespica* Poir. Three Awn Disturbed soil. Rare. Fayette County. 497  
*Aristida oligantha* Michx. Three awn. Dry mesic savanna. Rare. Fayette County. 222  
*Bromus hordeaceus* L. Soft Chess. Disturbed soil. Occasional. Clay County. 50, 494  
*Bromus inermis* Leys. Awnless Brome Grass. Disturbed soil. Occasional. Clay  
 County. 39, 374  
*Bromus racemosus* L. Chess. Disturbed soil. Occasional. Effingham County. 353  
*Cinna arundinacea* L. Stout Wood Reed Wet mesic prairie. Marion County. 550  
*Dichanthelium acuminatum* (Sw.) Gould & Clark var. *fasciculatum* Torr.) Freckm. Panic  
 Grass. Wet mesic prairie. Common. Every County. 116, 277, 356, 364  
*Dichanthelium clandestinum* (L.) Gould. Broad-leaved Panic Grass. Streambank. Rare  
 Fayette County. 360  
*Dichanthelium oligosanthos* var. *scribnerianum* (Nash) Gould. Panic Grass. Occasional.  
 Dry mesic savanna; mesic prairie. Effingham and Fayette counties. 501, 525  
*Echinochloa crus-galli* (L.) Beauv. Barnyard Grass. Disturbed soil. Occasional. 184  
*Echinochloa muricata* (Beauv.) Fern. Wet mesic prairie. Occasional. Effingham. 309  
*Elymus hystrix* L. Bottlebrush. Dry mesic savanna. Occasional. Clay County. 302  
*Elymus riparius* Wiegand. Wild Rye. Wet mesic upland forest. Effingham County. 129  
*Elymus virginicus* L. Virginia Wild Rye. Mesic prairie, dry mesic savanna. Abundant.  
 Every County. 90, 133, 188, 263, 363, 487  
*Festuca obtusa* Biehler. Nodding Fescue. Wet mesic upland forest; Dry mesic savanna.  
 Common. Effingham and Clay counties. 358, 373, 456  
*Festuca pratensis* Huds. Meadow Fescue. Disturbed soil. Occasional. Clay County.  
 383

- Glyceria striata* (Lam.) Hitchcock. Fowl Manna Grass. Wet mesic upland forest, streambank Common. Effingham and Marion counties. 344, 370, 381, 351
- Hordeum jubatum* L. Squirrel-tail Grass. Disturbed soil. Occasional. Effingham and Marion counties. 48,102,354
- Hordeum pusillum* Nutt. Little Barley. Disturbed soil. Occasional. Clay and Effingham counties. 355, 332
- Koeleria macrantha* (Ledeb.) Spreng. June Grass. Dry mesic prairie. Occasional. Marion County. 552
- Leersia oryzoides* (L.) Swartz. Rice Cut grass Wet mesic prairie. Occasional. Observed but not collected
- Melica mitica* Walt. Two-flowered Melic Grass. Dry mesic savanna. Rare. Fayette County. 269
- Melica nitens* (Scribn.) Nutt. Three-flowered Melic Grass. Wet mesic upland forest. Effingham. 320
- Muhlenbergia glabriflorus* Scribn. Muhly Grass. Wet mesic prairie. Occasional. Fayette County. 488
- Panicum capillare* L. Witch Grass. Disturbed soil. Rare. Marion County. 481
- Panicum virgatum* L. Switch Grass. Mesic prairie. Common. Marion County. 292
- Phalaris arundinacea* L. Reed Canary Grass. Wet mesic prairie. Occasional. Marion County. 502
- Phleum pratense* L. Timothy. Disturbed soil. Rare. Fayette County. 75
- Phragmites australis* (Cav) Steud. Reed Grass. Wet mesic prairie. Occasional. Fayette County. 215.
- Poa compressa* L. Canadian Bluegrass. Dry mesic savanna, mesic prairie. Occasional. 65
- Poa pratensis* Huds. Kentucky Bluegrass. Disturbed soil; mesic prairie. Common. Every County. 264, 278, 526, 539
- Schizachyrium scoparium* (Michx.) Nash. Little Bluestem. Dry mesic prairie. Locally very abundant. Effingham County. 228
- Sertaria geniculata* (Lam.) Perennial Foxtail Mesic Prairie. Occasional Marion County 551
- Setaria faberi* Herrm. Giant Foxtail. Disturbed soil. Locally abundant. Fayette County. 136
- Sorghastrum nutans* Nash. Indian Grass. Dry mesic savanna and mesic prairies. Abundant. Fayette County 249

*Spartina pectinata* Link. Cord Grass. Wet mesic prairie. Locally abundant. Effingham and Marion counties. 291, 480

*Sphenopholis nitida* Scribn. Shinging Wedge Grass. Dry mesic savanna. Rare. Clay County. 262

*Sphenopholis obtusata* (Michx.) Scribn. var. *major* (Torr.) Erdman. Wedge Grass., Dry mesic savanna., mesic prairie Occasional. Effingham and Clay counties. 16, 433

*Sphenopholis obtusata* (Michx.) Scribn. var. *obtusata* Wedge Grass. Mesic prairie. Common. Effingham and Fayette counties. 51, 382

*Sporobolus asper* (Michx.) Kunth. Dropseed. Dry mesic prairie. Effingham County. 489

*Sporobolus cryptandrus* (Torr.) Gray. Sand Dropseed. Rare. Dry mesic prairie. 438

*Sporobolus heterolepis* (Gray) Gray. Prairie Dropseed. Dry mesic prairie. Marion County. 227, 486

*Tripsacum dactyloides* (L.) L. Gama Grass. Wet mesic prairie. Occasional. Marion. 508

*Tridens flavus* (L.) Hitchcock. Redtop. Mesic prairie. Occasional. 194, 243

#### POLEMONIACEAE

*Phlox divaricata* L ssp *laphamii* (Wood) Wherry. Common Phlox. Wet mesic upland forest. Occasional. Effingham County. 403

*Phlox paniculata* L. Garden Phlox. Streambank. Rare. Fayette County. 214

*Phlox pilosa* L. Downy Phlox. Dry mesic savanna; mesic prairie. Abundant. Every County. 22, 270, 420, 424

#### POLYGONACEAE

*Polygonum pensylvanicum* L. Common Smartweed. Streambank. Rare. Fayette County. 138, 213

*Rumex altissimus* Wood. Pale Dock. Streambank. Rare. Fayette County. 355

*Rumex crispus* L. Curly Dock. Disturbed soil. Occasional. Marion County. 99

#### POLYGALACEAE

*Polygala sanguinea* L. Field Milkwort. Mesic prairie; claypan prairie Common. Effingham County. 143

*Polygala verticillata* L. Whorled Milkwort. Claypan prairie. Common. Effingham County. 319

## PORTULACACEAE

*Claytonia virginica* L. Spring Beauty. Mesic prairie; wet mesic upland forest; dry mesic savanna. Abundant. 502

## PRIMULACEAE

*Dodecatheon meadia* L. Shooting Star. Dry mesic savanna. Occasional. Clay County. 27

*Lysimachia nummularia* L. Moneywort. Wet mesic upland forest. Rare. Effingham County. 478

*Lysimachia punctata* L. Dotted Loosestrife. Streambank. Rare. Fayette County. 127

## RANUNCULACEAE

*Aquilegia canadensis* L. Columbine. Wet mesic upland forest. Rare. Effingham County. 328

*Delphinium tricorne* Michx. Dwarf Larkspur. Wet mesic upland forest. Rare. Effingham County. 395

*Ranunculus abortivus* L. Small-flower Crowfoot. Wet mesic prairie. Locally Common. Effingham County. 3, 339

*Ranunculus fascicularis* Muhl. Early Buttercup. Dry mesic prairie. Rare. Clay County. 426

*Ranunculus hispidus* Michx. Bristly Buttercup. Mesic prairie. Rare. Effingham County. 416

*Thalictrum dioicum* L. Early Meadow Rue. Dry mesic savanna. Occasional. Clay County. 124

## RHAMNACEAE

*Ceanothus americanus* L. New Jersey Tea. Dry mesic savanna. Locally abundant. Clay County. 77

## ROSACEAE

*Agrimonia parviflora* Ait. Swamp Agrimony. Streambank. Rare. Fayette County. 209

*Crataegous crus-galli* L. Cock-spur Thorn. Dry mesic savanna. Locally common. Fayette and Clay counties 74, 149, 286, 479

*Crataegus engelmannii* Sarg. Barberry-leaved Hawthorn. Dry mesic savanna. Clay County. 175

*Crataegus faxonii* Sarg. Hawthorn. Dry mesic savanna. Rare. Clay County. 76

- Fragaria virginiana* Duchesne. Wild Strawberry. Dry mesic savanna; mesic prairie. Locally abundant. Marion and Clay counties. 134, 400
- Geum canadense* Jacq. White Avens. Mesic prairie. occasional. Effingham County. 58
- Geum vernum* (Raf.) Torr & Gray. Spring Avens. Dry mesic savanna. Clay County. 405
- Malus coronaria* (L.) Mill. Wild Sweet Crab Apple. Mesic prairie. Rare. Marion County. 492
- Porteranthus stipulatus* (Muhl.) Britt. Indian Physic. Dry mesic savanna. Locally common. Clay County. 78, 128, 380
- Potentilla recta* L. Sulfur Cinquefoil. Disturbed soil. Occasional. Fayette County. 29, 260, 377
- Prunus americana* Marsh. Wild Plum. Mesic prairie. Occasional. Marion County. 329
- Prunus serotina* Ehrh. Black Cherry. Wet mesic upland forest; Mesic prairie. Occasional. 171
- Potentilla simplex* Michx. Silverweed. Mesic prairie. Abundant. Effingham County. 4
- Rosa blanda* Ait. Meadow Rose. Dry mesic savanna. Rare. Clay County. 8
- Rosa carolina* L. Pasture Rose. Mesic prairie; dry mesic savanna. Common. Fayette County. 379
- Rosa multiflora* Thunb. Multiflora Rose. Mesic prairie. Occasional. Effingham County. 15
- Rosa setigera* Michx. Prairie Rose. Dry mesic savanna; mesic prairie. Common. Fayette County. 54
- Rubus pensylvanicus* Poir. Blackberry. Dry mesic savanna, mesic prairie. Common. Marion. 512
- Rubus roribaccus* (Bailey) Rudd. Velvet-leaved Dewberry. Wet mesic upland forest. Occasional. Fayette. 511

## RUBIACEAE

- Cephalanthus occidentalis* L. Buttonbush. Wet mesic prairie. Rare. Effingham County. 88
- Diodia teres* Walt. Rough Buttonweed. Disturbed soil. Rare. Fayette County. 221
- Diodia virginiana* L. Large Buttonweed. Wet mesic upland forest. Effingham County. 452
- Galium tirflorum* Michx. Sweet-scented Bedstraw. Wet mesic prairie. Occasional. Clay County. 21
- Galium circaezans* Michx. Wild Licorice. Wet mesic upland forest. Rare. Effingham County. 453

- Galium pilosum* Ait. Hairy Bedstraw. Mesic prairie. Rare. Effingham County. 326  
*Galium tinctorium* L. Stiff Bedstraw. claypan prairie. Rare. Marion County. 366  
*Hedyotis nuttalliana* Fosberg. Slender-leaved Bluets. Mesic prairie; claypan prairie.  
 Common. Effingham County. 12

## RUTACEAE

- Ptelea trifoliata* L. Wafer Ash. Wet mesic upland forest. Rare. Fayette County. 440

## SALICACEAE

- Populus alba* L. White Poplar. Dry mesic prairie. Locally common. Marion County. 176  
*Populus deltoides* Marsh. Cottonwood. Streambank. Occasional. Fayette County. 170  
*Salix exigua* Nutt. Sandbar Willow. Wet mesic prairie. Rare. Marion County. 178  
*Salix humilis* Marsh. Prairie Willow. Mesic prairie; dry mesic savanna. Abundant.  
 Fayette, and Clay counties. 14, 94, 341  
*Salix nigra* Marsh. Black Willow. Streambank. Occasional. Fayette County. 513

## SANTALACEAE

- Comandra umbellata* (L.) Nutt. False Toadflax. Mesic prairie. Common. Effingham and  
 Marion counties. 182, 265, 412

## SAXIFRAGACEAE

- Heuchera richardsonii* R. Br. var. *grayana* Rosend. Butt & Lak. Prairie Alumroot. Dry  
 mesic savanna; mesic prairie. Common. Fayette County. 19

## SCROPHULARIACEAE

- Agalinis besseyana* Britt. False Foxglove. Mesic prairie. Occasional Fayette County 461  
*Mimulus rignens* L. Monkey Flower. Streambank. Rare. Fayette County. 212  
*Pedicularis canadensis* L. Lousewort. Wet mesic prairie. Rare. Marion County. 425  
*Penstemon alluviorum* Pennell. Lowland Beardstongue. Wet mesic upland forest. Rare.  
 Effingham County. 288, 358, 533  
*Penstemon hirsutus* (L.) Willd. Hairy Beardstongue. Mesic prairie; dry mesic savanna.  
 Abundant. Fayette County. 31.  
*Scrophularia marilandica* L. Late Figwort. Streambank. Rare. Fayette County. 216  
*Verbascum thapsus* L. Woolly Mullein. Disturbed soil. Rare. Effingham County. 168  
*Veronicastrum virginicum* (L.) farw. Culver's Root. Dry mesic savanna. Common.  
 Fayette County 131

## SMILACACEAE

*Smilax herbacea* L. Carrion flower. Wet mesic upland forest. Rare. Effingham County. 125

*Smilax illinoensis* Mangaly. Carrion Flower. Dry mesic savanna. Occasional Clay County. 307

## SOLANACEAE

*Solanum carolinense* L. Horse-nettle. Disturbed soil. Occasional. Effingham County. 346

## STAPHYLEACEAE

*Staphylea trifolia* L. Bladdernut. Wet mesic upland forest. Fayette county. Uncommon 299

## TYPHACEAE

*Typha latifolia* L. Common Cattail. Wet mesic prairie. Occasional. Marion County. 507

## ULMACEAE

*Celtis occidentalis* L. Hackberry. Wet mesic upland forest. Occasional. Effingham county. 532

*Ulmus rubra* Muhl. Slippery Elm. Wet mesic upland forest. Occasional. Effingham County. 531

## VERBENACEAE

*Verbena hastata* L. Blue Vervain. Wet mesic prairie. Occasional. Fayette County. 156

*Verbena urticifolia* L. White Vervain. Wet mesic prairie. Rare. Clay County. 199

## VIOLACEAE

*Viola pratincola* Greene. Common Blue Violet. Wet mesic upland woods. Occasional. Effingham County. 406

*Viola rafinesquii* Greene. Johnny-jump-up. Disturbed soil. Rare. Marion County. 413

*Viola sagittata* Ait. Arrow-leaved Violet. Dry mesic prairie. Common. Effingham County. 327. 343



## VITACEAE

*Parthenocissus quinquefolia* (L.) Planch. Virginia Creeper. Wet mesic upland forest. Common. Effingham County. 523

*Vitis riparia* Michx. Riverbank Grape. Wet mesic upland forest. Rare. Effingham County. 512

*Vitis vulpina* L. Frost Grape. Wet mesic upland forest. Rare. Effingham County 534

## VALERIANACEAE

*Valeriana radiata* L. Dufr. Corn Salad. Disturbed Soil. Rare. Effingham County. 519

## Taxonomic Summary

Three hundred and seventy-three species of vascular plants representing 232 genera and 79 families have been identified to date at Twelve Mile Prairie. Other Taxa include twohybrids and 16 other lesser taxa. The Magnoliopsida (dicotyledons) is represented by 286 species, approximately 76.6% of the flora. Liliopsida (monocotyledons) is represented by 87 species, approximately 23.3 % of the flora. The remaining 0.4% is made up two species of Polypodiophyta (ferns) and one species of Equisetophyta (Horsetails). Approximately 10.7% of the flora is adventive or introductions from outside central Illinois. With the majority the being being Eurasian cool season grasses and roadside weeds. The largest of the 79 families represent are Asteraceae (61), Poaceae (48), Rosaceae (19), Cyperaceae (19), Apiaceae (12), Laminaceae (11), Liliaceae, (10.) The Largest genera are Carex (14), Asclepias (7), Aster (7), Quercus (7), Juncus (6), and Solidago (5).

There were 60 new taxa reported from the following counties( Mohlenbrock and Ladd, 1978; Ladd and Mohlenbrock 1983; Mohlenbrock, 1985 and 1987)

## EFFINGHAM COUNTY

<i>Carex hystrix</i>	<i>Carya laciniosa</i>
<i>Diodia virginiana</i>	<i>Elymus riparius</i>
<i>Galium pilosum</i>	<i>Helenium autumnale</i>
<i>Helianthus rigidus</i>	<i>Lenurus cardiaca</i>
<i>Matricaria matricarioides</i>	<i>Melica nitens</i>
<i>Nothoscordum bivalve</i>	<i>Ozmorhiza longistylis</i> var. <i>villicaulis</i>
<i>Penstemon alluviorum</i>	<i>Scripus pendulus</i>
<i>Scutellaria lateriflora</i>	<i>Smilax herbacea</i>
<i>Triosteum aurantiacum</i>	<i>Viola pranticola</i>

*Vitis riparia*

## CLAY COUNTY

<i>Bromus hordeaeus</i>	<i>Crataegus faxonii</i>
<i>Echinacea pallida</i>	<i>Galium triflorum</i>
<i>Gentiana andrewsii</i>	<i>Juncus scripoides</i>
<i>Ranunculus fascicularis</i>	<i>Rosa blanda</i>
<i>Smilax illinoensis</i>	<i>Sphenopholis nitida</i>
<i>Sporobolus cryptandrus</i>	<i>Verbesina alternifolia</i>

## FAYETTE COUNTY

<i>Agrostis scabra</i>	<i>Aster azureus</i>
<i>Aster patens</i>	<i>Galium tinctorium</i>
<i>Helianthemum bicknellii</i>	<i>Humulus japonicus</i>
<i>Juncus secundus</i>	<i>Lespedeza stuevei</i>
<i>Linium sulcatum</i>	<i>Lysimachia punctata</i>
<i>Melica mitica</i>	<i>Mulenbergia glabiflorus</i>
<i>Oenothera biennis</i> var. <i>canescens</i>	<i>Penstemon hirstus</i>
<i>Perideridia americana</i>	<i>Polyaia nuttallii</i>
<i>Polygonum pennsylvanicum</i>	<i>Rudbeckia bicolor</i>
<i>Solidago rugosa</i>	

## MARION COUNTY

<i>Stylosanthes biflora</i>	<i>Desmodium illinoensis</i>
<i>Eleocharis elliptica</i> var. <i>compressa</i>	<i>Eleocharis wolfii</i>
<i>Euthamia gymnospermoides</i>	<i>Fragaria virginiana</i>
<i>Malus coroaria</i>	<i>Panicum capillare</i>
<i>Pedicularis candensis</i>	<i>Vicia sativa</i>

Although there were several species of plants in the study area that are uncommon in the Illinois native flora, only one is listed as a threatened or endangered species. *Sabatia campestris* prairie rose gentian is listed as endangered in Illinois (Illinois Administrative Code, Title 17, Chapter I, Subchapter c. part 1010.30, as amended March 17, 1989) To date four populations of prairie rose gentian have been located at Twelve Mile Prairie.

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