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 artemissiifolia*, 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 *Equesitum 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 tricone,* 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 in to 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 canesens, Lespedeza capitata, Baptisa leucophaea* ,and *Tephrosia virginiana.* Dominant grass species in the dry mesic prairie include *Schizachyrium scroparium, Sporobolus heterolepis,* and*Panicum virgatum.* Other grasses and sedges that occur in one or more sites include *Koeleria macrantha, Sporobolus crytandrus,* and *Carex bicknelli*..Other important forbs in the dry mesic prairie community include *Solidago rigida, Hypoxis hirsuta, Ruellia humilis, Liatris apera,. Silphium terebithinaceum, 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 illinonese.* 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, bullrushs, rushes, Cattails, Grasses and Irises. Soil moisture dictates which group dominant. In areas where soil moisture is at the surface dominant species include *Typha latifola, Phragmites australis, Scirpus atrovirens, Leersia oryzoides,* and *Phalaris arundinacea.* These areas usually have standing water until June or July depending on the year's perciptation.

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 the 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 a 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, andas 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 away to more drought tolerant species in summer and fall. Vegetation in the hardpan prairie tend 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 it 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 Leclede 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 contain a high percentage of plants considered to occur in the original tall grass savanna.

The dry mesic savanna at the study sight occurs on rolling hills and slopes of the Dismal Creek and it tributaries. The soils are of 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 tometosa,* 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 *Vitus 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, Sorgastrum 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, Lespedesa capitata, Lespedesa virginiana, Lespedesa 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, Pycnatnhemem 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 caroliniesis, Scutellaria incana, Dodecatheon media, Coreopsis palmata, Solidago speciosa, Verbesina alternifloia, 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 a excellent opportunity for research in prairie and savanna management, floristics and grassland ecology. It also serves as a invaluable seed source for prairie restorations and reintroductions. Twelve Mile Prairie provides a 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 encrochment 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 establish 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 campestis* (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 possible due to decreased competition from grasses, or that reduce duff layer increased germination of the seeds. After two years without fire the two populations went from over 100 individuals in each to noneobserved 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 mangers 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 a 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 unnessary 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 construcion 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 a 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 a 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 autumale 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. Occaisional. 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 fasciulata 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 Occassional. 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.) Nievwl 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 ohiensis 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. Occcasional. 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 meisc 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 Effignham County. 499

Carex tribuloides Wahlenb. Wet mesic prairie. Rare. Fayette couunty. 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 praire. Common. Marion County. 506,517,536

Scirpus atrovirens Willd. Bulrush. Wet mesic priaire. 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

Equistem arvense L. Common Horsetail. Streambank. Rare. Fayette County. 334

EUPHORBIA EEAE

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

Euphorbia corollata L. Flowering Spurge. Mesic priaire. 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. Loccally 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 meisc 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. Effignham 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 Gentain. 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. Shurbby St. John's-wort . Wet mesic prairie. Rare. Marion County. Observed but not collected.

Hypericum punctatum Lam. Spotted St. John's-wort. Mesic priairie. 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 andFayette 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. Efingham 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 Moutain Mint. All vegetation types except streambank. Abundant. Fayette County. 93
Stachys tenuiflolia 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 praire. 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. Occcasional. 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. Meisc prairie. Locally abundant. Marion County. 195

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

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

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

Oneothra 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 Leyss. Awnless Brome Grass. Disturbed soil. Occasional. Clay County. 39, 374
Bromus racemosus L. Chess. Disturbed soil. Occasional. Effignham 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 oligosanthes 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 priarie. 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. Virgina 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. Effignham 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 meisc 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

Koleria 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. Ocassional. 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. Occaional. 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. Effignham 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 verticllata L. Whorled Milkwort. Claypan prairie. Common. Effingham County. 319

PORTULACACEAE

Claytonia virginica L. Spring Beauty. Mesic prairie; wet mesic upland forest; dry mesic savannna. 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

Crategous 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

Ptentilla simplex Michx. Silverweed. Mesic prairie. Abundant. Effingham County. 4

Rosa blanda Ait. Meadow Rose. Dry meisc 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) Rudb. 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

Gaiium 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. Fayettte 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. Wooly Mullein. Disturbed soil. Rare. Effignham 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 coutny. 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 priairie. Rare. Clay County. 199

VIOLACEAE

Volia 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. Virgina 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 Polypododiophyta (ferns) and one species of Equisetophya (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

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

Vitus riparia

CLAY COUNTY

Bromus hordeaoeus
Echinacea pallida
Gentiana andrewsii
Ranunculus fascicularis
Smilax illinoensis
Sporobolus cryptandrus
Crategous faxonii
Galium triflorum
Juncus scripoides
Rosa blanda
Sphenopholis nitida
Verbesina alternifolia

FAYETTE COUNTY

Agrostis scabra
Aster patens
Helianthemum bicknellii
Juncus secundus
Linium sulcatum
Melica mitica
Oneothera biennis var. *canescens*
Perideridia americana
Polygonum pensylvanicum
Solidago rugosa
Aster azureus
Galium tinctorium
Humulus japonicus
Lespedeza stuevei
Lysimachia punctata
Mulenbergia glabiflorus
Penstemon hirstus
Polyaeia nuttallii
Rudbeckia bicolor

MARION COUNTY

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

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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