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An Annotated Checklist of the Vascular Plant Flora of Guthrie County, Iowa

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The known vascular plant flora of Guthrie County, Iowa, based on field, herbarium, and literature studies, consists of 748 taxa (species, varieties, and hybrids), 135 of which are naturalized. Species which appear on the state's list of endangered and threatened species, or are otherwise rare, are discussed.

There is an affinity of the plants of Guthrie County with those of the Ozark plateau, and with specialized habitats providing extensions of ranges for species normally found farther north or east.

INDEX DESCRIPTORS: Guthrie County flora, Iowa vascular plant flora, endangered Iowa plants.

Guthrie County is located in the southwest quarter of Iowa, the fourth county from both the Missouri River to the west and from the Missouri border to the south. The surface area is 600 sq. mi. (1555 sq. km.). The county is composed of two major landform regions, the Des Moines Lobe in the northeast portion north of the Raccoon River, and the Southern Iowa Drift Plain south of the Raccoon River (names for landform regions after Prior, 1976). The former is a relatively young landscape, characterized by level uplands with deep, black soils; the latter, last glaciated 600,000 years ago, is a mature, dissected landscape characterized by wooded ravines, loess capped knobs, and eroded sideslopes where ancient tills are exposed. Outcrops of Dakota sandstone occur in the region of Springbrook State Park and near Coon Rapids. Lakin Slough is a shallow glacial pond located on the Des Moines Lobe in the northeast portion of the county.

Climate

The climate is continental — winters are severe and cause a relatively long annual dormant period for plants. Growing season (frost-free days) averages around 165 days, from April 15 to October 6. Most of the precipitation occurs in the form of rain during the spring and summer with June being the month of highest average precipitation.

Soils

Two soil associations occur in Guthrie County. The approximate northeast one-fifth is in the Clarion-Nicollet-Webster association, derived from calcareous glacial till. The remainder of the county lies in the Marshall soil association. Loess covers the uplands and high benches or terraces along major streams; till outcrops on the lower part of strongly sloping areas. The Marshall soils gradually change westward into the Monona soils of the Monona-Ida-Hamburg association.

PLANT COMMUNITIES

Following are locations and characteristic species of each community-type. Figures 1-9 illustrate common communities or rare plants.

Upland Prairie. Section 28, Valley Twp.; Section 25, Bear Grove Twp.; Section 33, Seely Twp. (See Fig. 1, 2)

- Amorpha canescens*
- Andropogon gerardii*
- Anemone cylindrica*
- Aristida oligantha*
- Artemisia ludoviciana*
- Aster ericoides*
- Asclepias tuberosa*
- Baptisia lactea*
- Bouteloua curtipendula*
- Cacalia plantaginea*
- Comandra umbellata*
- Coreopsis palmata*
- Dalea candida*
- Dalea purpurea*
- Echinacea pallida*
- Eryngium yuccifolium*
- Gnaphalium obtusifolium*
- Helianthus grosseserratus*
- Helianthus maximiliani*
- Heliopsis helianthoides*
- Heuchera richardsonii*
- Koeleria macrantha*
- Lespedeza capitata*
- Liatris aspera*

- Onosmodium molle var. occidentale*
 - Pedimelum argophyllum*
 - Rudbeckia serotina*
 - Solidago canadensis*
 - Solidago rigida*
 - Sorghastrum nutans*
 - Stipa spartea*
- Fen. A degraded peatland in a pasture in NW ¼, Section 17, Highland Twp. (See Fig. 3)
- Aster puniceus*
 - Caltha palustris*
 - Cardamine bulbosa*
 - Carex grvida*
 - Carex hystericina*
 - Carex prairea*
 - Equisetum arvense*
 - Eupatorium maculatum*
 - Eupatorium perfoliatum*
 - Glyceria striata*
 - Helianthus grosseserratus*
 - Lemma minor*
 - Lythrum alatum*
 - Pedicularis lanceolata*
 - Phalaris arundinacea*
 - Pycnanthemum virginianum*
 - Rumex orbiculatus*
 - Scirpus atrovirens*
 - Scirpus fluviatile*
 - Typha latifolia*
 - Viola nephrophylla*

Ruderal areas. Roadsides, old fields, and edges of cultivated fields; widely distributed.

- Abutilon theophrasti*
- Achillea millefolium*
- Agrostis gigantea*
- Amaranthus retroflexus*
- Ambrosia artemisiifolia*
- Ambrosia trifida*
- Arctium minus*
- Asclepias syriaca*
- Brassica nigra*
- Bromus inermis*
- Cannabis sativa*
- Capsella bursa-pastoris*
- Carduus nutans*
- Cenchrus longispinus*
- Chenopodium album*
- Cirsium arvense*
- Cirsium vulgare*
- Euphorbia dentata*
- Helianthus annuus*
- Hibiscus trionum*
- Lepidium densiflorum*
- Malva neglecta*
- Matricaria matricarioides*
- Mirabilis nyctaginea*
- Pastinaca sativa*
- Polygonum aviculare*
- Portulaca oleracea*
- Rumex acetocella*

Salsola iberica
Setaria glauca
Setaria viridis
Solanum americanum
Solanum rostratum
Sonchus asper
Taraxacum officinale
Tragopogon major
Verbena bracteata
Verbena stricta
Xanthium strumarium

Dry, rocky or gravelly knobs. Sections 28 & 29, Jackson Twp., T79N, R30W. (See Fig. 4)

Aristida basiramea
Aristida curtisii
Aristida oligantha
Artemisia campestris ssp. *caudata*
Asclepias stenophylla
Bouteloua curtipendula
Bouteloua hirsuta
Cyperus filiculmis
Cyperus schweinitzii
Dichanthelium depauperatum
Lespedeza capitata
Liatris punctata
Monarda punctata
Opuntia macrorhiza
Paspalum setaceum var. *ciliatifolium*
Strophostyles helvula

Moist woods and wooded ravines. Section 14, Bear Grove Twp., Sec. 4, Victory Twp. (See Fig. 5)

Acer nigrum
Acer saccharinum
Aesculus glabra
Adiantum pedatum
Aralia nudicaulis
Arisaema dracontium
Arisaema triphyllum
Asarum canadense
Athyrium angustum
Botrychium virginianum
Carex davisii
Caulophyllum thalictroides
Cypripedium calceolus var. *pubescens*
Cystopteris protrusa
Dicentra cucullaria
Erythronium albidum
Fraxinus pennsylvanica
Galium aparine
Hydrophyllum virginianum
Liparis liliifolia
Matteuccia struthiopteris
Monotropa uniflora

Osmunda claytoniana
Parthenocissus quinquefolius
Podophyllum peltatum
Tilia americana
Uvularia grandiflora

Shallow marshes. Lakin slough, Sections 34 & 35, Richland Twp.; McCord Pond, Section 8, Highland Twp.; Bays Branch, Sections 10, 15, 22, Cass Twp. (See Fig. 6)

Alisma plantago-aquatica
Asclepias incarnata
Carex attherodes
Carex vulpinoidea
Ceratophyllum demersum
Cicuta maculata
Cyperus erythrorhizos
Eleocharis acicularis
Eleocharis erythropoda
Eupatorium perfoliatum
Iris sbrveii
Juncus interior
Lemna minor
Lemna trisulca
Lobelia siphilitica
Penthorum sedoides
Phalaris arundinacea
Polygonum amphibium
Potamogeton nodosus
Rumex orbiculatus
Sagittaria brevirostra
Scirpus americanus
Scirpus atrovirens
Scirpus fluviatilis
Scirpus validus
Sparaganium eurycarpum
Typha X glauca
Typha latifolia
Wolffia columbiana

Sandy ledges and dry sandy slopes. (Crumbling Dakota sandstone). Section 4, Victory Twp., vicinity of Springbrook State Park.

Amorpha canescens
Andropogon gerardii
Antennaria plantaginifolia
Aristida basiramea
Aster sagittifolius
Astragalus canadensis
Carex blanda
Carex brevior
Carex pennsylvanica
Carex rosea
Ceanothus americanus var. *pitcheri*

Corylus americana
Danthonia spicata
Echinacea pallida
Equisetum laevigatum
Festuca obtusa
Hedeoma hispidum
Helianthemum bicknellii
Heuchera richardsonii
Hypoxis hirsuta
Koeleria macrantha
Lespedeza capitata
Lithospermum carolinense
Lycopodium lucidulum
Mirabilis hirsuta
Penstemon digitalis
Poa compressa
Quercus alba
Quercus macrocarpa
Quercus velutina
Rubus allegheniensis
Senecio plattensis
Sporobolus asper
Strophostyles helvula
Tradescantia obiensis
Woodsia obtusa

Hillside seep. North half of Section 22, Valley Twp. (See Fig. 7)

Asclepias incarnata
Bidens cernua
Carex lacustris
Carex vulpinoidea
Cicuta maculata
Epilobium glandulosum
Eupatorium perfoliatum
Glyceria striata
Impatiens capensis
Lemna minor
Liparis loeselii
Lycopus asper
Lytbrum alatum
Mentha arvensis
Onoclea sensibilis
Pycnanthemum virginianum
Rorippa palustris
Sagittaria latifolia
Sparaganium eurycarpum
Tbelypteris palustris
Typha latifolia

DISCUSSION OF THE FLORA

The only previous study of vegetation of Guthrie County was done by Fay (1953), as part of a study of the southwest Iowa flora for a doctoral dissertation. Because this study was never published, information on plants of this part of Iowa has been unavailable to many natural historians. Kennedy (1970) studied Sheeder Prairie for a master's thesis, but the orientation was ecological and his thesis also was not published.

The vascular plant flora of Guthrie County, as here compiled, consists of 748 taxa (species, subspecies, varieties, and hybrids), 135 (18.0%) of which are non-native.

Because the county lies in two quite different landforms, it

possesses a wider variety of habitats than most counties in the region. The marshes on the Des Moines Lobe provide habitat for a wetland flora generally missing in southwest Iowa. The moist wooded slopes along the Raccoon River provide habitat for an extension of the range of the black maple (*Acer nigrum*). The presence of a fen in the northwestern part of the county provides habitat for fen species (e.g. *Carex prairea*) and may indicate the presence of other fens on the Southern Iowa Drift Plain. There is an affinity of the flora of Guthrie County with that of the Ozark Plateau. Trees of southern distribution (e.g. *Betula nigra*, *Quercus prinoides*, and *Platanus occidentalis*) have migrated up river valleys into Guthrie County, where they terminate their ranges. *Betula nigra* was found by Fay (1953) in Springbrook State Park and in Adams County. Fitzpatrick reported it from



Figs. 1-2. Fig. 1. Sheeder Prairie; an 8.1 hectare (20-acre) prairie in Sec. 33, Seely Twp. Fig. 2. Prairie remnant in Sec. 17, Highland Twp.



Figs. 3-4. Fig. 3. Fen in Sec. 17, Highland Twp. Fig. 4. Dry gravelly knob with sandstone outcrop in Sec. 29, Jackson Twp.



Figs. 5-6. Fig. 5. Moist woods in Sec. 14, Bear Grove Twp. Fig. 6. Lakin Slough in Sec. 3, Richland Twp.



Figs. 7-8. Fig. 7. Hillside seep in Sec. 22, Valley Twp. Fig. 8. *Asclepias stenophylla* on gravelly knob in Sec. 29, Jackson Twp.

Ringgold Co. (cited in Fay, 1953). These seem to be the only southwest Iowa records for this species. *Betula nigra* is on the very northwest edge of its range in Guthrie County.

Quercus prinoides is widespread in the eastern and southern states. It is at the northern edge of its Iowa range in Guthrie County. (This taxon may not be distinguishable from *Q. muhlenbergii* Engelm.)

The range of *Platanus occidentalis* is rapidly attenuated as it reaches central and southwest Iowa. Guthrie County seems to be the very northwestern edge of its natural range.

Presence of endangered, threatened or otherwise rare species.

The Department of Natural Resources, under authority of Chapter 109A, Code of Iowa, is required to maintain a list of endangered and threatened species (see Chapter 77, Administrative Code of Iowa; Roosa, Leoschke, and Eilers, 1989). Seven species from this list occur in Guthrie County. These are *Amorpha nana* (last collected in 1904), *Asclepias stenophylla*, *Cypripedium reginae* (last collected in 1930, probably extirpated), *Dichanthelium linearifolium*, *Lechea intermedia*, *Platanthera praeclara*, and *Schedonardus paniculatus* (last collected in 1928). The status of these and other species of uncommon occurrence are discussed in the following section.

Notes on uncommon members of the flora.

Amaranthus arenicola. This species was found in Springbrook State Park by Zager in 1985, growing in sandy river alluvium. It is widely distributed in the Great Plains west of Iowa. Prior to this report, the only Iowa occurrences were in Muscatine County in 1895 and Palo Alto County in 1935.

Ammania robusta. This species was recently recognized as a separate taxon (Graham, 1979). It apparently is on the very northern edge of its Iowa range in Guthrie County. It is widespread in the southern Great Plains.

Amorpha nana (Fragrant false indigo). This species was collected in Guthrie County in 1904 by Pammel and from Decatur County in 1904 by Anderson (Fay, 1953). It is now known from Bremer, Clay, Dickinson, Emmet, Fayette, Hardin, Kossuth, Lyon, Osceola, and Palo Alto counties.

Asclepias stenophylla (Narrow-leaved milkweed). This milkweed is widely distributed in Nebraska, Kansas, and western Missouri. It was discovered by Jim Peck (#80-137 ISTC) in Sioux County on June 3, 1980 as a species new to Iowa. In 1982 it was found in Plymouth County (Novacek et al. 1985). In 1985, Scott Zager found it in Guthrie County growing on a dry prairie in Section 3, Seely Twp. During the Foray, seven plants were found on a rocky hillside in Section 28, Jackson Twp. (See Fig. 8)

Cypripedium calceolus var. *pubescens* (Yellow lady's slipper). Two known extant populations occur in Guthrie County. Both are in moist woodlands; one in Section 17, Baker Twp., the other in Section 14, Bear Grove Twp. Both populations were confirmed during the Foray. The closest known extant Iowa populations are in Decatur, Boone, and Buena Vista Counties.

Cypripedium candidum (Small white lady's slipper). A small population of this orchid was reported to Mark Leoschke by Linda Gucciardo in 1985. It has been seen during succeeding years and was observed during the foray. The closest known extant Iowa populations are in Decatur, Polk, and Cherokee counties.

Cypripedium reginae (Showy lady's slipper). Last collected in 1930 by Kness from the bank of the Raccoon River, seven miles below Coon Rapids; this taxon is probably extirpated from the county. This record, along with a 1922 collection from Emmet County, represent the western-most known Iowa populations (Niemann 1986). It formerly occurred in Dallas, Polk and Webster counties as the closest stations. The westernmost known extant Iowa station is in Hamilton County.

Dichanthelium depauperatum. A fairly large population of this grass was found on a barren hillside in Section 29, Jackson Twp. It was

previously known in Iowa from Clayton, Dickinson, Emmet, Muscatine, Story, Webster and Winneshiek counties.

Dichanthelium linearifolium. This grass grows in dry, rocky woods in Springbrook State Park. It was previously known in Iowa only from Dubuque, Jackson, Marion and Wapello counties.

Distichlis spicata var. *stricta* (Salt grass). This grass, widespread in saline habitats in the western U.S., is becoming more frequent in Iowa where it grows on the shoulders of roadsides in soil enriched by salt used in de-icing highways. Prior to 1980 the species was known in Iowa from Boone and Ida counties. It has since been found in Carroll, Polk, Story, Tama, and Warren Counties. In 1985 a population was found in Guthrie County growing along Highway 44 in Section 5, Seely Twp. This population was observed in anthesis during the Foray. A second population was found during the Foray along Hwy. 25 in Section 24, Thompson Twp.

Lechea intermedia. This species was found in Section 28, Valley Twp. by Fay (1953) on dry, rocky soil. It has been found in only two other Iowa counties; Allamakee (Hartley, 1966), and Dubuque (Lehmann, 1983). It was not observed during the Foray.

Liparis loeselii (Bog twayblade). This orchid is known principally from eastern Iowa and the fens of northwest Iowa. It was found in 1986 in a hillside seep in Section 22, Valley Twp. This extends the known range southward from Dickinson County and westward from Grundy County.

Lycopodium lucidulum (Shining clubmoss). This clubmoss is principally restricted to eastern Iowa, with previous central Iowa records from Boone County in 1933 and Webster County in 1977. In 1986, Scott Zager located a large population on a crumbling sandstone hillside in Section 4, Victory Twp. It was observed during the Foray.

Opuntia macrorhiza (Bigroot prickly pear). Previously this cactus was known in Iowa from sandy sites in Polk and Allamakee counties. A large population was found on a rocky, pastured hillside in Section 12, Thompson Twp. A smaller population was found in Section 29, Jackson Twp. It possesses a tuberous root in contrast to the fibrous root system of *O. humifusa*. (See Fig. 9)

Osmunda claytoniana (Interrupted fern). A single plant of this fern was observed by Fay (1953) in Section 14, Bear Grove Twp. A large population was found during the Foray in Section 4, Victory Twp. This is the western edge of its range in Iowa.

Platanthera praeclara (Western prairie fringed orchid). A large population of this orchid was found in a native prairie in Seely Twp. (Leoschke and Klier no. 368 ISC). This species was previously collected in the county in 1952 (Niemann, 1986).

Quercus prinoides (Dwarf chinquapin oak). This oak is of southern distribution and reaches the northern edge of its range in Guthrie County. It was reported by Fay (1953) from a dry hilltop four miles north of Casey. It was not observed during the Foray. (This taxon may be inseparable from *Q. muhlenbergii*).

Rhus aromatica (Fragrant sumac). Previously unknown from the western half of Iowa, this species was reported by Fay (1953) and found by Zager on dry sandy soil in Springbrook State Park. It may be introduced.

Schedonardus paniculatus (Tumblegrass). This grass was collected from a barren hilltop near Menlo in 1928 (Pohl, 1966). Favorable habitat could not be located in this area during the Foray. This species is known from Harrison, Lyon, Page, and Plymouth counties in extreme western Iowa.

Symplocarpus foetidus (Skunk cabbage). A small population exists in a hillside seep near the ranger's residence in Springbrook State Park. The original plants were introduced.

Trillium grandiflorum (Large-leaved trillium). There exists in the Iowa State University herbarium a voucher of this species from Springbrook State Park. It is undoubtedly another introduction because western Iowa is considerably out of the species' normal range.

Woodсия obtusa (Blunt-leaved woodсия). This fern occurs on Dakota

sandstone outcrops near Springbrook State Park. This species is principally restricted to eastern Iowa. The Guthrie County collection and an old Cass County collection represent the western edge of its range in Iowa.

CHECKLIST OF GUTHRIE COUNTY PLANTS

The following checklist is a compilation of species vouchered by Fay (1953), observed or vouchered during the Natural History Foray (May 27-June 4, 1988), subsequent trips to the county, results of a study of the plants of Springbrook State Park by Zager, and by records of other botanists. Published sources (e.g. Pohl 1966) were also consulted. The herbarium at Iowa State University was searched in its entirety. Specimens found there and not otherwise recorded are cited by collector name.

LYCOPODIOPHYTA

LYCOPODIACEAE (Clubmoss Family)

Lycopodium lucidulum Michx. Shining clubmoss. Rare. Crumbling sandstone cliff in Sec. 4, Victory Twp. Zager no. 1511 (ISTC).

EQUISETOPHYTA

EQUISETACEAE (Horsetail Family)

Equisetum arvense L. Common Horsetail. Common in damp woods, meadows and waste places; often abundant in roadside ditches.
Equisetum X ferrissii Clute Ferriss' hybrid scouring-rush. Frequent in moist prairies (cited in Peck, 1983).
Equisetum hyemale L. Scouring-rush. Frequent along shores of streams or lakes and in moist lowlands.
Equisetum laevigatum A. Br. Smooth scouring-rush. Common on dry roadside banks, in fence rows, and prairies.

POLYPODIOPHYTA

ADIANTACEAE

Adiantum pedatum L. Maidenhair fern. Common in moist wooded ravines.

ASPLENIACEAE

Asplenium rhizophyllum L. Walking fern. Rare in sandy ravines (cited in Peck, 1976).
Athyrium angustum (Willd.) Presl. Lady fern. Infrequent in rich wooded ravines.
Cystopteris protrusa (Weath.) Blasdell Creeping fragile fern. Common in rich woods.
Cystopteris tenuis Raf. Rare on rock outcrops (cited in Peck, 1983)
Dryopteris carthusiana (Vill.) H.P. Fuchs Spinulose wood fern. Rare in sandy ravines.
Matteuccia struthiopteris (L.) Todaro Ostrich fern. Rare in sandy wooded ravines in Sec. 4, Victory Twp. Roosa no. 6671 (ISTC)
Onoclea sensibilis L. Sensitive fern. Infrequent in wet alluvial woods, marshy lowlands, and near lakeshores.
Thelypteris palustris (Laws.) Fern. Marsh fern. Rare. Hillside seep in Sec. 22, Valley Twp.
Woodsia obtusa (Spreng.) Torr. Infrequent on moist outcrops of Dakota sandstone, Springbrook State Park.

OPHIOGLOSSACEAE

(Adder's-tongue Family)

Botrychium virginianum (L.) Sw. Rattlesnake fern. Frequent in moist woods.

OSMUNDACEAE

Osmonda claytoniana L. Interrupted fern. Rare. Wooded ravines in Sec. 14, Bear Grove Twp. and in Sec. 4, Victory Twp. Roosa no. 6665 (ISTC)

PINOPHYTA

CUPRESSACEAE (Cypress Family)

Juniperus virginiana L. Red cedar. Common on dry hilltops and in pastures.

MAGNOLIOPHYTA: MAGNOLIATAE

(Dicots)

ACANTHACEAE (Acanthus Family)

Ruellia humilis Nutt. Wild petunia. Infrequent in sandy soil.

ACERACEAE (Maple Family)

Acer negundo L. Box-elder. Common tree of alluvial woods, stream banks, roadsides, and farmyards.
Acer saccharinum L. Silver maple. Common tree of bottomlands, usually near streams.

Acer nigrum Michx. f. Black maple. Infrequent in moist ravines of the Raccoon River Valley.

AMARANTHACEAE (Amaranth Family)

Amaranthus albus L. Pigweed. Common weed of dry disturbed soil.

Amaranthus arenicola I.M. Johnston. Rare in dry sand. Zager no. 611 (ISTC)

Amaranthus graecizans L. Prostrate pigweed. Common weed of dry disturbed soil.

**Amaranthus retroflexus* L. Pigweed. Common in disturbed soil.

Amaranthus rudis Sauer. Common in wet, alluvial floodplains.

ANACARDIACEAE (Cashew Family)

Rhus aromatica Air. Fragrant sumac. Rare in dry sandy soil in Springbrook State Park.

Rhus glabra L. Smooth sumac. Common shrub of thickets and borders of woods.

Toxicodendron radicans (L.) Kuntze ssp. *negundo* (Greene) Gillis Poison Ivy. Very common in woods and thickets.

Toxicodendron rydbergii (Small ex Rydb.) Greene Poison Ivy. Common in open fencerows and woodland edges.

APIACEAE (Parsley Family)

Chaerophyllum procumbens (L.) Crantz Chervil. Rare in alluvial woods.

Cicuta maculata L. Water hemlock. Common in marshes, lowland woods, and on shores.

**Conium maculatum* L. Poison hemlock. Infrequent weed of waste places and roadsides.

Cryptotaenia canadensis (L.) DC. Honewort. Frequent in moist woods.

**Daucus carota* L. Queen Anne's lace. Common weed of roadsides, fields, and waste places.

Eryngium yuccifolium Michx. Rattlesnake master. Common in moist to mesic prairies.

**Falcaria siodes* (Wibel) Ascherson Sickleweed. Rare weed. Near Stuart, Gilman, 1931 (ISC).

Heracleum lanatum Michx. Cow parsnip. Frequent in alluvial woods.

Osmorhiza claytonii (Michx.) C.B. Clarke Sweet cicely. Frequent in rather moist woods.

Abundance designations while somewhat qualitative, are as follows:

- Common seen at more than 10 sites in the county
- Frequent seen at 6-10 sites
- Infrequent seen at 3-5 sites
- Rare seen at 1 or 2 sites

Introduced species are designated by an asterisk. Nomenclature follows Eilers (1989), except the common names for the Cyperaceae, which follows Gilly (1946). Also, *Dichantheium linearifolium* is kept separate from *D. perlongum*, and a few common names were taken from the Great Plains Flora. Abbreviations for herbaria follow Lanjou and Stafleu (1964).

Osmorhiza longistylis (Torr.) DC. Anise root. Infrequent in moist woods.

**Pastinaca sativa* L. Wild parsnip. Common on roadsides.

Polytaenia nuttallii DC. Prairie parsley. Rare in prairies and on borders of upland woods.

Sanicula canadensis L. Black snakeroot. Common in moist woods.

Sanicula gregaria Bickn. Common snakeroot. Common in upland woods.

Sium suave Walt. Water parsnip. Infrequent in marshes.

Taenidia integerrima (L.) Drude Yellow pimpernel. Infrequent on calcareous wooded slopes.

Zizia aurea (L.) W. Koch Golden Alexanders. Common in moist prairies, on roadsides, and in alluvial openings.

APOCYNACEAE (Dogbane Family)

Apocynum androsaemifolium L. Spreading dogbane. Infrequent in disturbed moist sites.

Apocynum cannabinum L. Indian hemp. Common on roadsides and alluvial woodland edges.

ARALIACEAE (Ginseng Family)

Aralia nudicaulis L. Wild sarsaparilla. Frequent on moist wooded slopes.

Aralia racemosa L. Spikenard. Infrequent on sandy or rocky wooded banks.

Panax quinquefolium L. Ginseng. Rare on moist wooded slopes.

ARISTOLOCHIACEAE (Birthwort Family)

Asarum canadense L. Wild ginger. Frequent in moist wooded ravines.

ASCLEPIADACEAE (Milkweed Family)

Asclepias incarnata L. Swamp milkweed. Common in swales and on shores of marshes.

Asclepias purpurascens L. Purple milkweed. Infrequent in sandy prairie soil.

Asclepias stenophylla Gray Narrow-leaved milkweed. Rare. Rocky hillside in Sec. 28, Jackson Twp. and dry prairie in Sec. 3, Seely Twp.

Roosa no. 6669 (ISTC); Zager no. 591 (ISTC).

Asclepias sullivantii Englm. ex Gray Prairie milkweed. Infrequent in moist prairie soil in Seely Twp.

Asclepias syriaca L. Common milkweed. Common on roadsides, grainfields, and along railroads.

Asclepias tuberosa L. ssp. *interior* Woodson Butterfly-weed. Frequent in prairie soil.

Asclepias verticillata L. Whorled milkweed. Common along roads, railroads, and in dry disturbed sites.

Asclepias viridiflora Raf. Green milkweed. Infrequent on dry prairies.

Cynanchum laeve (Michx.) Pers. Bluevine. Frequent in sandy alluvium.

ASTERACEAE (Composite Family)

- Achillea millefolium* L. ssp. *lanulosa* (Nutt.) Piper Yarrow. Common on roadsides, in prairies, and in cultivated fields.
- Ambrosia artemisiifolia* L. Small ragweed. Common weed of pastures, roadsides, and fence-rows.
- Ambrosia psilostachya* DC. Western ragweed. Frequent on dry slopes.
- Ambrosia trifida* L. Giant ragweed. Common weed of roadsides, fencerows, and other disturbed sites.
- Antennaria neglecta* Greene Pussy toes. Frequent on dry, upland soils.
- Antennaria plantaginifolia* (L.) Richardson Ladies'-tobacco. Infrequent in dry, open woods.
- **Anthemis cotula* L. Dog fennel. Common in moist disturbed areas.
- **Arctium minus* Bernh. Burdock. Common weed of waste places.
- **Artemisia biennis* Willd. Biennial wormwood. Infrequent weed of waste land and roadsides.
- Artemisia campestris* L. ssp. *caudata* (Michx.) Hall & Clem. Infrequent in dry sandy or rocky soil.
- Artemisia ludoviciana* Nutt. White sage. Common in prairies and along roadsides and railroads.
- Aster azureus* Lindl. Sky-blue aster. Frequent in prairies.
- Aster cordifolius* L. Blue wood aster. Common in dry upland woods.
- Aster drummondii* Lindley Drummond's aster. Infrequent in open woods.
- Aster ericoides* L. Heath aster. Very common on roadsides in prairies and in fields.
- Aster laevis* L. Smooth aster. Common on roadsides, in prairies, and in dry, open soil.
- Aster lanceolatus* Willd. Panicked aster. Common on roadsides and on borders of thickets.
- Aster novae-angliae* L. New England aster. Frequent on roadsides, along railroads, and on borders of woodlands.
- Aster oblongifolius* Nutt. Aromatic aster. Common on dry crests and in dry, rocky prairies.
- Aster ontariensis* Wieg. Ontario aster. Infrequent in moist woods near streams.
- Aster pilosus* Willd. Hairy aster. Usually occurs on dry roadsides and in prairies.
- Aster praealtus* Poir. Willow aster. Infrequent in moist prairies.
- Aster puniceus* L. Swamp aster. Infrequent in marshy habitats.
- Aster sagittifolius* Willd. Arrow-leaved aster. Common in upland woods.
- Aster sericeus* Vent. Silky aster. Common in dry, rocky prairies and on dry slopes.
- Aster umbellatus* Mill. Flat-topped aster. Infrequent in prairie swales.
- Bidens cernua* L. Nodding bur marigold. Common in marshes and in alluvial woods.
- Bidens frondosa* L. Beggar ticks. Frequent in marshes and in moist waste places.
- Bidens polylepis* Blake Coreopsis beggarticks. Common weed of roadsides and moist bottomlands.
- Bidens tripartita* L. Rare in moist sand.
- Bidens vulgata* Greene Tall beggar ticks. Common in moist lowlands, marshes, and on shores.
- Brickellia eupatorioides* (L.) Shinners False boneset. Frequent on prairies.
- Cacalia plantaginea* (Raf.) Shinners Indian plain-tain. Rare in mesic prairies.
- **Carduus nutans* L. Musk thistle. Frequent on moist, weedy roadsides and in fallow fields.
- **Chichorium intybus* L. Chicory. Common weed of roadsides, farmyards, and other disturbed sites.
- Cirsium altissimum* (L.) Spreng. Tall thistle. Common in sandy alluvial bottoms near streams, and in moist woodlands.
- **Cirsium arvense* (L.) Scop. Canada thistle. Common weed of pastures and cultivated fields.
- Cirsium discolor* (Muhl. ex Willd.) Spreng. Field thistle. Frequent in woods; infrequent in sandy lowlands.
- Cirsium flodmani* (Rydb.) Arthur Flodman's thistle. Frequent in dry pastures and on roadsides.
- **Cirsium vulgare* (Savi) Tenore Bull thistle. Common in pastures.
- Conyza canadensis* (L.) Cronq. Horseweed. Common weed of pastures, cultivated fields, roadsides and waste places.
- Coreopsis palmata* Nutt. Prairie coreopsis. Common on prairies.
- Coreopsis tripteris* L. Tall tickseed. Infrequent on borders of upland woods.
- Dysodia papposa* (Vent.) Hitchc. Fetid Marigold. Frequent on roadsides and in waste places.
- Echinacea pallida* Nutt. Pale coneflower. Common in prairies.
- Erechtites hieracifolia* (L.) Raf. ex DC. Fireweed. Frequent in marshes, moist lowlands, and on shores.
- Erigeron annuus* (L.) Pers. Daisy fleabane. Common weed of roadsides, fields, and borders of woods.
- Erigeron philadelphicus* L. Fleabane. Infrequent in moist woods and moist sand.
- Erigeron strigosus* Muhl. ex Willd. Fleabane. Common in dry open soil, pastures, roadsides, and along railroads.
- Eupatorium altissimum* L. Tall thoroughwort. Frequent in weedy, open woods and in disturbed sites.
- Eupatorium maculatum* L. Spotted Joe-pye-weed. Infrequent in marshes.
- Eupatorium perfoliatum* L. Boneset. Frequent in marshes, edges of streams and prairie swales.
- Eupatorium purpureum* L. Spotted Joe-pye-weed. Frequent in woods.
- Eupatorium rugosum* Houtt. White snakeroot. Common in moist woods.
- **Galinsoga quadriradiata* Ruiz & Pavon Peruvian daisy. Common weed of disturbed ground.
- Gnaphalium obtusifolium* L. Everlasting. Frequent in prairies and dry uplands.
- Grindelia squarrosa* (Pursh) Dunal Rare in sand. Paul Wilson, 1930 (ISC).
- Helenium autumnale* L. Sneezeweed. Common on roadsides, in fields, and open alluvial woods.
- Helianthus annuus* L. Common sunflower. Common along railroads, roadsides, and in alluvial waste land.
- Helianthus decapetalus* L. Pale sunflower. Infrequent in upland woods and woodland edges.
- Helianthus grosseserratus* Martens Saw-tooth sunflower. Common on roadsides and along railroads in disturbed soil.
- Helianthus maximiliani* Schrad. Maximilian's sunflower. Infrequent in dry upland prairies.
- Helianthus rigidus* (Cass.) Desf. ssp. *subrhomboides* (Rydb.) Heiser Common in dry upland prairies.
- Helianthus strumosus* L. Pale-leaved sunflower. Infrequent in woodlands.
- Helianthus tuberosus* L. Jerusalem artichoke. Common in alluvial bottoms, shores, and roadsides.
- Heliopsis helianthoides* (L.) Sweet Ox-eye. Common in prairies and on roadsides.
- Hieracium scabrum* Michx. Rough hawkweed. Rare in dry, rocky, upland woods.
- Lactuca canadensis* L. Wild lettuce. Common weed of roadsides, cultivated fields, and borders of woods.
- Lactuca floridana* (L.) Gaertn. Blue lettuce. Frequent in woods.
- Lactuca ludoviciana* (Nutt.) Riddell Prairie lettuce. Frequent in moist lowlands
- **Lactuca serriola* L. Prickly lettuce. Very common weed of fields, roadsides, and waste land.
- **Leucanthemum vulgare* Lam. Infrequent in dry disturbed areas; planted in Springbrook State Park.
- Liatris aspera* Michx. Blazing star. Infrequent in mesic prairies.
- Liatris punctata* Hook. Infrequent in dry, rocky, upland prairies.
- Liatris pycnostachya* Michx. Prairie blazing star. Infrequent on prairies.
- Liatris squarrosa* (L.) Michx. Infrequent in mesic prairies.
- **Matricaria matricarioides* (Less.) Porter Pineapple weed. Infrequent in dry disturbed soil.
- Prenanthes alba* L. Rattlesnake root. Frequent on borders of woods and on roadsides.
- Prenanthes aspera* Michx. Rough white lettuce. Infrequent in dry upland prairies.
- Ratibida pinnata* (Vent.) Barnh. Yellow coneflower. Common on mesic prairies.
- Rudbeckia hirta* L. Black-eyed Susan. Frequent to common on prairies.
- Rudbeckia laciniata* L. Tall coneflower. Frequent in alluvial woods and on shores.
- Rudbeckia subtomentosa* Pursh Fragrant coneflower. Infrequent in moist prairies and moist lowland woods.
- Rudbeckia triloba* L. Brown-eyed Susan. Infrequent in moist woods near streams.
- Senecio pauperculus* Michx. Prairie ragwort. Rare on prairies.
- Senecio plattensis* Nutt. Prairie ragwort. Infrequent in dry prairies.
- Silphium integrifolium* Michx. Rosinweed. Common in prairies and on roadsides.
- Silphium laciniatum* L. Compass plant. Common on mesic prairies.
- Silphium perfoliatum* L. Cup plant. Common in alluvial woods, on wooded shores, and in moist lowlands.
- Solidago canadensis* L. Canada goldenrod. Frequent on prairies.
- Solidago flexicaulis* L. Zig-zag goldenrod. Frequent on prairies.
- Solidago gigantea* Ait. Smooth goldenrod. Common on borders of woods, on roadsides, and along railroads.
- Solidago missouriensis* Nutt. Missouri goldenrod. Common on dry slopes and in dry, rocky prairies.
- Solidago nemoralis* Ait. Field goldenrod. Common in dry upland prairies.
- Solidago rigida* L. Stiff goldenrod. Common in prairies.

Solidago speciosa Nutt. Showy goldenrod. Infrequent in prairies and clearings in upland woods.

Solidago ulmifolia Muhl. ex Wild. Elm-leaved goldenrod. Common in upland woods.

**Sonchus arvensis* L. Perennial sow thistle. Infrequent weed on roadsides and in moist prairies.

**Sonchus asper* (L.) Hill Spiny-leaved sow thistle. Frequent weed of waste ground.

**Sonchus oleraceus* L. Common sow thistle. Frequent in waste places, fields, and in border of woods.

**Taraxacum officinale* Weber Common dandelion. Common weed of lawns, fields, and disturbed soil.

**Tragopogon dubius* Scop. Goat's-beard. Common weed of fields and roadsides.

Tragopogon pratensis L. Goat's-beard. Rare in dry, disturbed soil. M.H. Burns, 1926 (ISC).

Verbesina alternifolia (L.) Britton Wingstem. Common in alluvial woods.

Vernonia baldwinii Torr. Baldwin's ironweed. Common in dry pastures, prairies and along railroads.

Vernonia fasciculata Michx. Ironweed. Common in moist prairies, along railroads, and in moist disturbed soil.

**Xanthium strumarium* L. Cocklebur. Common weed of cultivated fields, waste places, and roadsides.

BALSAMINACEAE (Touch-me-not Family)

Impatiens capensis Meerb. Spotted touch-me-not. Frequent in alluvial woods.

Impatiens pallida Nutt. Pale touch-me-not. Common in wet wooded ravines and alluvial woods.

BERBERIDACEAE (Barberry Family)

**Berberis thunbergii* DC. Japanese barberry. Rare escape from cultivation.

Caulophyllum thalictroides (L.) Michx. Blue cohosh. Rare in moist woods.

Podophyllum peltatum L. Mayapple. Rare in open woods.

BETULACEAE (Birch Family)

Betula nigra L. River birch. Rare on banks of streams. Cited by Fay (1953) from Springbrook State Park.

Corylus americana Walt. Hazelnut. Common in upland woods and woodland edges.

Ostrya virginiana (Mill.) Koch Ironwood. Common on wooded slopes.

BIGNONIACEAE (Trumpet Creeper Family)

**Catalpa speciosa* Warder Catalpa. Frequent escape from cultivation.

BORAGINACEAE (Borage Family)

**Cynoglossum officinale* L. Hound's tongue. Infrequent weed of pastures.

Hackelia virginiana (L.) I.M. Johnston Strickseed. Frequent in lowland woods.

**Lappula ebinata* Gilib. Beggar's-lice. Rare in disturbed, dry areas.

Lithospermum canescens (Michx.) Lehm. Hoary puccoon. Common in dry or rocky prairies and open upland woods.

Lithospermum carolinense (Walter) MacM. Hairy puccoon. Rare in dry sand.

Lithospermum incisum Lehm. Yellow puccoon. Frequent on gravelly prairie knobs.

Lithospermum latifolium Michx. American gromwell. Infrequent in moist woods.

Onosmodium molle Michx. var. *occidentale* (Mack.) Johnst. False gromwell. Frequent in prairies.

BRASSICACEAE (Mustard Family)

Arabis canadensis L. Rock cress. Frequent in moist calcareous woods.

Arabis hirsuta (L.) Scop. Rare on rocky wooded bluffs.

**Barbarea vulgaris* R. Br. Yellow rocket. Common along roads and railroads.

**Berteroa incana* (L.) DC. Hoary alyssum. Infrequent in disturbed habitats.

**Brassica juncea* (L.) Czern. Chinese mustard. Common in fields and on roadsides.

**Brassica nigra* (L.) Koch Black mustard. Common weed of cultivated ground.

**Capsella bursa-pastoris* (L.) Medic. Shepherd's purse. Common in lawns and in dry disturbed soil.

Cardamine bulbosa (Schreb.) BSP. Spring Cress. Rare in marshes and alluvial soil.

Cardamine pennsylvanica Muhl. ex Willd. Bitter Cress. Rare along edges of woodland streams.

**Cardaria draba* (L.) Desv. Hoary cress. Infrequent weed in dry disturbed soil.

Dentaria laciniata Muhl. ex Willd. Toothwort. Infrequent in bottomland woods.

Descurainia pinnata (Walt.) Britt. var. *brachycarpa* (Rich.) Fern. Tansy mustard. Rare in dry woods.

Draba reptans (Lam.) Fern. Whitlow grass. Frequent in dry, open sand.

**Hesperis matronalis* L. Dame's rocket. Infrequent along roads.

**Lepidium campestre* (L.) R. Br. Field cress. Frequent on roadsides.

Lepidium densiflorum Schrad. Small peppergrass. Common on roadsides and disturbed ground.

Lepidium virginicum L. Peppergrass. Common on roadsides and along railroads.

**Nasturtium officinale* R. Br. Watercress. Rare in springs in Valley Twp.

**Raphanus sativus* L. Radish. Rare escape from cultivation.

Rorippa palustris (L.) Besser Marsh cress. Common in marshes.

**Rorippa sylvestris* (L.) Besser Creeping yellow cress. Frequent in bottomland woods.

**Sinapis arvensis* L. Charlock. Common weed of cultivated fields.

**Sisymbrium altissimum* L. Tumble mustard. Frequent in disturbed areas.

**Sisymbrium officinale* (L.) Scop. Hedge mustard. Common in disturbed habitats.

**Thlaspi arvense* L. Pennycress. Common along roads.

CACTACEAE (Cactus Family)

Opuntia macrorhiza Engelm. Bigroot Prickly-pear. Rare on dry, rocky, exposed bluffs. Roosa no. 6606 (ISTC)

CAMPANULACEAE (Bluebell Family)

Campanula americana L. Tall bellflower. Common in roadsides and moist upland woods.

Lobelia inflata L. Indian tobacco. Rare in open woods.

Lobelia siphilitica L. Great lobelia. Common in marshy areas.

Lobelia spicata Lam. Spiked lobelia. Frequent in mesic prairies.

Triodanis perfoliata (L.) Nieuwl. Venus' looking-glass. Frequent in disturbed areas.

CAPRIFOLIACEAE (Honeysuckle Family)

Lonicera dioica L. var. *glaucensens*. (Rydb.) Butters Wild honeysuckle. Frequent in upland woods.

Sambucus canadensis L. Common elder. Common

in woodlands, roadsides and on brushy stream banks.

Symphoricarpos orbiculatus Moench Coralberry. Frequent in dry uplands.

Triosteum perfoliatum L. Horse-gentian. Frequent in upland woods and woodland edges.

**Virburnum dentatum* L. Southern arrowhead. Infrequent. Possibly introduced at a station in Springbrook State Park.

Viburnum lentago L. Nannyberry. Infrequent in upland woods in Springbrook State Park.

Viburnum rafinesquianum Schultes Downy arrowwood. Infrequent in dry, rocky, upland woods.

CARYOPHYLLACEAE (Pink Family)

Cerastium nutans Raf. Mouse-ear chickweed. Common in open woods and sandy areas.

**Cerastium vulgatum* L. Common mouse-ear chickweed. Rare in open, disturbed habitats.

**Dianthus armeria* L. Deptford pink. Common in sandy disturbed soil in Springbrook State Park.

Paronychia canadensis (L.) Wood Forked chickweed. Infrequent in woods and woodland openings.

**Saponaria officinalis* L. Bouncing bet. Common on roadsides.

Silene antirrhina L. Sleepy catchfly. Common along roads and railroads.

**Silene dichotoma* Ehrh. Catchfly. Rare in upland prairies.

Silene nivea (Nutt.) Othth Showy Campion. Rare in disturbed prairies.

**Silene noctiflora* L. Night-flowering catchfly. Frequent weed of cultivated ground and roadsides.

Silene stellata (L.) Aiton f. Starry campion. Frequent in woodland edges and roadsides.

**Stellaria media* (L.) Vill. Common chickweed. Common in open, disturbed habitats.

CELASTRACEAE (Staff-Tree Family)

**Euonymus alatus* (Thunb.) Sieb. Winged wahoo. Rare escape from cultivation.

Euonymus atropurpureus Jacq. Burning-bush. Infrequent in rich woods and thickets.

CERATOPHYLLACEAE (Hornwort Family)
Ceratophyllum demersum L. Coontail. Frequent in quiet water of lakes, marshes and ponds.

CHENOPODIACEAE (Goosefoot Family)

**Chenopodium album* L. Lamb's quarters. Common weed of roadsides.

**Chenopodium ambrosioides* L. Mexican tea. Rare in open, disturbed areas.

Chenopodium desiccatum Nels. Narrow-leaved goosefoot. Infrequent in dry, usually sandy soil.

Chenopodium hybridum L. Maple-leaved goosefoot. Infrequent in dry disturbed soils.

Chenopodium standleyanum Aellen Frequent in alluvial woods.

**Kochia scoparia* (L.) Schrad. Summer-cypress. Common weed of roadsides and waste land.

**Salsola iberica* Sennen & Pau Russian thistle. Frequent in disturbed areas.

CISTACEAE (Rockrose Family)

Helianthemum bicknellii Fern. Frostweed. Common in dry prairies.

Lechea intermedia Leggett Rare in very dry, rocky, prairie soil (Collected by Fay; specimen at IA).

CONVOLVULACEAE

(Morning-glory Family)

Calystegia sepium (L.) R. Br. Bindweed. Common

weed of roadsides, railroad embankments, and other disturbed sites.

**Convolvulus arvensis* L. European bindweed. Common weed of fields and roadsides.

Cuscuta glomerata Choisy Infrequent along railroads and disturbed woodland borders.

Cuscuta groenovii Willd. Rare in alluvial woods.

**Ipomoea purpurea* (L.) Roth Annual morning glory. Infrequent in fields and fencerows.

CORNACEAE (Dogwood Family)

Cornus amomum Mill. ssp. *obliqua* (Raf.) J.S. Wils. Silky dogwood. Infrequent in moist woodland edges.

Cornus drummondii Meyer Rough-leaved dogwood. Common along the borders of upland woods.

Cornus foemina Mill. ssp. *racemosa* (Lam.) Wils. Gray dogwood. Common in roadsides and open uplands.

**Cornus stolonifera* Michx. Red-osier dogweed. Rare in seeps in Springbrook State Park; probably introduced.

CUCURBITACEAE (Gourd Family)

Cucurbita foetidissima HBK. Wild pumpkin. Rare. Railroad yard at Bayard. E. P. Sylwester, 1966 (ISC).

ELAEAGNACEAE (Russian Olive Family)

**Elaeagnus angustifolia* L. Russian olive. Rare escape from cultivation.

ERICACEAE (Wintergreen Family)

Monotropa uniflora L. Indian-pipe. Infrequent in moist, shady, wooded ravines.

EUPHORBIACEAE (Spurge Family)

Acalypha rhomboidea Raf. Three-seeded mercury. Common on shores and in alluvial woods.

Acalypha virginica L. Three-seeded mercury. Common in moist to dry lowlands.

Euphorbia corollata L. Flowering spurge. Common in dry open soil.

Euphorbia cyathophora Murray Wild poinsettia. Frequent in moist, often calcareous soil.

**Euphorbia cyparissias* L. Cypress spurge. Frequent escape from cultivation. Usually found near neglected cemeteries.

Euphorbia dentata Michx. Toothed spurge. Common along roads and railroads.

Euphorbia glyptosperma Engelm. Rare in open sand or on loess. Monson no. 3291 (ISC).

Euphorbia maculata L. Nodding spurge. Common weed of dry open soil.

Euphorbia marginata Pursh Snow-on-the-mountain. Rare in heavily grazed pastures. Monson no. 3312 (ISC).

FABACEAE (Pea Family)

Amorpha canescens Pursh Leadplant. Common in mesic prairies.

Amorpha fruticosa L. False indigo. Frequent along streams.

Amorpha nana Nutt. Fragrant false indigo. Rare in prairies; Pammel, 1904, ISC.

Ambicarpaea bracteata (L.) Fern. Hog peanut. Common in moist woods.

Apios americana Medic. Ground nut. Infrequent in low woods.

Astragalus canadensis L. Milk vetch. Common on prairies.

Astragalus crassicaarpus Nutt. Ground plum. Infrequent on dry prairies.

Baptisia bracteata Muhl. var. *glabrescens* (Larisey) Isely False indigo. Frequent in prairies.

Baptisia lactea (Raf.) Thieret Wild indigo. Frequent in moist lowland prairies and on road-

sides.

**Caragana arborescens* Lam. Siberian Pea tree. Established in Springbrook State Park.

Cercis canadensis L. Redbud. Infrequent in open woods and wooded bluffs.

Chamaecrista fasciculata (Michx.) Greene Partridge pea. Common in dry, sterile soil.

**Coronilla varia* L. Crown vetch. Commonly planted along roads.

Crotalaria sagittalis L. Rattle box. Infrequent in dry sandy or rocky soil.

Dalea candida Willd. White prairie clover. Common in prairies.

Dalea purpurea Vent. Purple prairie clover. Common in mesic prairie.

Desmodium canadense (L.) DC. Tick clover. Infrequent in dry open woods.

Desmodium cuspidatum (Muhl.) Loud. Tick trefoil. Infrequent in sandy or rocky woods.

Desmodium glutinosum (Muhl. ex Willd.) Wood. Pointed tick trefoil. Common in moist woods.

Desmodium illinoense Gray Illinois tick trefoil. Common in dry open soil.

Gleditsia triacanthos L. Honey locust. Frequent in moist lowlands.

Gymnocladus dioica (L.) K. Koch Kentucky coffee tree. Frequent in moist wooded ravines.

**Kummerowia stipulacea* (Maxim.) Makino Korean clover. Infrequent in dry disturbed sites.

Lathyrus palustris L. Marsh vetchling. Infrequent in mesic prairies.

Lespedeza capitata Michx. Bush-clover. Common in prairies.

**Lotus corniculatus* L. Birdsfoot trefoil. Rare along roads.

**Medicago lupulina* L. Black medic. Weed of dry, disturbed soil.

**Medicago sativa* L. Alfalfa. Infrequent escape to roadsides.

**Melilotus alba* Medicus White sweet clover. Common weed of roadsides and along railroads.

**Melilotus officinalis* (L.) Pallas Yellow sweet clover. Common weed of waste and cultivated ground, and along roads or railroads.

Pediomelum argophyllum (Pursh) Grimes Silver scurf-pea. Frequent in dry prairies.

Pediomelum esculentum (Pursh) Rydb. Prairie turnip. Rare in very dry upland prairie.

Psoralidium tenuiflorum (Pursh) Rydb. Scurf-pea. Rare in prairie openings.

**Robinia pseudoacacia* L. Black locust. Frequent in disturbed woodlands.

Strophostyles helvula (L.) Ell. Wild bean. Common in sandy alluvium; frequent in drier habitats.

Strophostyles leiosperma (T. & G.) Piper Wild bean. Common in dry sandy or loess soils.

**Trifolium hybridum* L. Alsike clover. Common along roadsides and railroads.

**Trifolium pratense* L. Red clover. Frequent escape from cultivation.

**Trifolium repens* L. White clover. Common in lawns and pastures.

Vicia americana Muhl. ex Willd. Vetch. Infrequent in moist thickets.

**Vicia villosa* Roth Hairy vetch. Infrequent on highway shoulders.

FAGACEAE (Beech Family)

Quercus alba L. White oak. Common in dry upland woods.

Quercus borealis Michx. f. var. *maxima* (Marsh)

Ashe Northern red oak. Common in woods.

Quercus macrocarpa Michx. Bur oak. Common in alluvial woods or on dry uplands.

Quercus muhlenbergii Engelm. Chinquapin oak. Infrequent on dry wooded ridges.

Quercus prinoides Willd. Dwarf chinquapin oak. Rare on dry uplands (May be the same taxon as *Q. muhlenbergii* Engelm.)

Quercus velutina Lam. Black oak. Common in woods in Springbrook State Park.

GENTIANACEAE (Gentian Family)

Gentiana andrewsii Griseb. Closed gentian. Rare on moist prairies.

Gentiana puberulenta Pringle Downy gentian. Rare in prairies.

GERANIACEAE (Geranium Family)

Geranium carolinianum L. Cranesbill. Frequent in gravelly soil along railroads.

Geranium maculatum L. Wild geranium. Frequent in mesic woods.

HALORAGIDACEAE (Water Milfoil Family)

Myriophyllum spicatum L. var. *exalbescens* (Fern.) Jepson Spiked water milfoil. Rare in marshes in the northeast portion of the county.

HIPPOCASTANACEAE (Buckeye Family)

Aesculus glabra Willd. Ohio buckeye. Frequent in lowland woods.

HYDROPHYLLACEAE (Waterleaf Family)

Ellisia nyctelea L. Wild tomato. Frequent in alluvial woods.

Hydrophyllum virginianum L. Virginia waterleaf. Common in moist woods.

HYPERICACEAE (St. John's-wort Family)

Hypericum majus (Gray) Britt. Rare in wet, sandy soil.

Hypericum punctatum Lam. Spotted St. John's wort. Frequent in rather moist prairies.

Hypericum pyramidatum Aiton Great St. John's wort. Rare in open, alluvial areas.

JUGLANDACEAE (Walnut Family)

Carya cordiformis (Wang.) K. Koch Bitternut hickory. Common in dry woods.

Carya ovata (Mill.) Koch Shagbark hickory. Common in upland woods.

Juglans cinerea L. Butternut. Infrequent on rocky banks near streams.

Juglans nigra L. Black walnut. Common in alluvial woods.

LAMIACEAE (Mint Family)

Agastache nepetoides (L.) Kuntze Yellow giant hyssop. Rare in woodland edges. Monson no. 3335 (ISC).

Agastache scrophulariifolia (Willd.) Ktze. Purple giant hyssop. Frequent in moist woods and borders of upland woods.

**Glechoma hederacea* L. Creeping Charley. Infrequent on damp, bare soil, and in lawns.

Hedeoma hispidum Pursh Rough pennyroyal. Frequent in dry sandy soil.

**Leonurus cardiaca* L. Motherwort. Common in moist disturbed soil.

Lycopus americanus Muhl. ex Bart. Water horehound. Common on shores and in marshes.

Lycopus asper Greene Infrequent in marshes.

Lycopus uniflorus Michx. Northern bugleweed. Infrequent in alluvial woods and on shores.

Lycopus virginicus L. Rare on sandy shores.

Mentha arvensis L. Wild mint. Common in marshes and bottomlands.

Monarda fistulosa L. Wild bergamot. Common along railroads, in prairies, and abandoned

fields.

Monarda punctata L. Horsemint. Rare in dry, gravelly soil.

**Nepeta cataria* L. Catnip. Common in disturbed areas.

Physostegia parviflora Nutt. ex Gray Obedient plant. Infrequent in marshes, on shores and in lowlands.

**Prunella vulgaris* L. Self heal. Common in moist lowlands and on borders of upland woods.

Pycnanthemum tenuifolium Schrad. Common in moist prairies and along railroads.

Pycnanthemum virginianum (L.) Durand & Jackson Mountain mint. Infrequent in prairies, marshes and seeps.

**Salvia nemorosa* L. Rare on roadsides.

Salvia reflexa Hornem. Lance-leaved salvia. Common weed of waste places.

Scutellaria galericulata L. Skullcap. Infrequent in Lakin Slough.

Scutellaria lateriflora L. Mad-dog skullcap. Infrequent in marshes and along streams.

Scutellaria leonardii Epling Infrequent in dry prairies.

Scutellaria parvula Michx. Skullcap. Frequent in dry, sandy or rocky soil.

Stachys palustris L. Woundwort. Common in marshes, alluvial woods, and on shores.

Stachys tenuifolia Willd. Hedge nettle. Infrequent in alluvial woods.

Teucrium canadense L. var. *occidentale* (Gray) McCl. & Epling Germander. Common in prairie swales and alluvial bottoms.

Teucrium canadense L. var. *virginicum* (L.) Eaton American germander. Frequent in wet prairies. Monson nos. 2532, 3268 (ISC).

LINACEAE (Flax Family)

Linum sulcatum Riddell Wild flax. Common in dry prairies and sandy soil.

LYTHRACEAE (Loosestrife Family)

Ammania robusta Heer & Regel Rare in sandy marshes. Hayden no. 5097 (ISC). Annotated as this taxon by Shirley A. Graham. This represents a species new to Iowa.

Lytbrum alatum Pursh Common loosestrife. Frequent on marsh edges and stream banks.

MALVACEAE (Mallow Family)

**Abutilon theophrasti* Medic. Velvet-leaf. Common weed of cultivated fields.

**Alcea rosea* L. Hollyhock. Frequent escape from cultivation.

**Hibiscus trionum* L. Flower-of-an-hour. Common weed of disturbed habitats.

**Malva neglecta* Wallr. Cheeses. Common weed of farmyards.

MENISPERMACEAE (Moonseed Family)

Menispermum canadense L. Moonseed. Common in woodlands and woodland edges.

MORACEAE (Mulberry Family)

**Cannabis sativa* L. Hemp. Common in fence-rows and other disturbed sites.

**Maclura pomifera* (Raf. ex Sarg.) Schneid. Osage orange. Common escape.

**Morus alba* L. White mulberry. Common escape from cultivation.

Morus rubra L. Red mulberry. Infrequent in moist alluvial woods.

NYCTAGINACEAE (Four O'clock Family)

Mirabilis albidia (Walter) Heimerl Pale four o'clock. Infrequent in dry prairies.

Mirabilis hirsuta (Pursh) MacM. Hairy four o'clock. Frequent in dry, sterile soil and on

sandstone outcrops.

Mirabilis nyctaginea (Michx.) MacM. Wild four o'clock. Common on roadsides.

OLEACEAE (Olive Family)

Fraxinus americana L. White Ash. Common in upland woods.

Fraxinus pennsylvanica Marsh. Red Ash. Common in moist lowlands and moist woods.

Fraxinus pennsylvanica Marsh. var. *lanceolata* (Borkh.) Sarg. Green Ash. Frequent at edges of low woodlands.

ONAGRACEAE (Evening-Primrose Family)

Calylophus serrulatus (Nutt.) Raven Toothed evening primrose. Frequent in sandy prairies. Monson nos. 2541, 3306 (ISC).

Circaea lutetiana (L.) Asch. & Magn. ssp. *canadensis* (L.) Asch. & Magn. Enchanter's nightshade. Common in moist woods.

Epilobium ciliatum Raf. Common in marshes and shores.

Epilobium coloratum Biehler Cinnamon willow-herb. Frequent at edges of marshes.

Gaura biennis L. Common on disturbed soil.

Oenothera biennis L. ssp. *centralis* Munz Evening primrose. Common weed of roadsides, grain-fields, fence rows, and disturbed prairies.

Oenothera villosa Thunb. ssp. *strigosa* (Rydb.) Dietr. & Raven Gray evening primrose. Frequent in moist prairies.

OROBANCHACEAE (Broom-rape Family)

Orobanche uniflora L. One-flowered cancer root. Rare in woods and woodland edges.

OXALIDACEAE (Wood-sorrel Family)

Oxalis stricta L. Yellow wood sorrel. Frequent in dry open soil.

Oxalis violacea L. Violet wood sorrel. Infrequent on dry, sparsely wooded ridges and occasional in prairies.

PAPAVERACEAE (Poppy Family)

Dicentra cucullaria (L.) Bernh. Dutchman's breeches. Common in moist woods.

Sanguinaria canadensis L. Bloodroot. Frequent on moist wooded slopes.

PHRYMACEAE (Lopseed Family)

Phryma leptostachya L. Lopseed. Common in moist upland woods, alluvial woods, and wooded slopes.

PHYTOLACCACEAE (Pokeweed Family)

Phytolacca americana L. Pokeweed. Infrequent in open sandy areas.

PLANTAGINACEAE (Plantain Family)

Plantago aristata Michx. Bracted plantain. Common in dry, sandy or sterile open soil.

**Plantago lanceolata* L. Buckhorn plantain. Frequent weed of fields, roadsides and waste land.

**Plantago major* L. Broad-leaf plantain. Common in open disturbed areas.

Plantago patagonica Jacq. Common on roadsides and dry disturbed soil.

Plantago rugelii Dcne. Rugel's plantain. Common weed of damp shores, farmyards and waste land.

PLATANACEAE (Plane-tree Family)

Platanus occidentalis L. Sycamore. Frequent in alluvial woods. (Cited without locality in Fay, 1953).

POLEMONIACEAE (Phlox Family)

Phlox divaricata L. Sweet William. Common in alluvial and moist wooded slopes.

Phylox pilosa L. Prairie phlox. Common in prairie remnants.

Polemonium reptans L. Jacob's ladder. Rare in moist woods.

POLYGONACEAE (Buckwheat Family)

**Fagopyrum esculentum* Moench. Buckwheat. Infrequent escape from cultivation.

Polygonum acboreum Blake Erect knotweed. Common weed of roadsides and waste ground.

Polygonum amphibium L. var. *emersum* Michx. Water smartweed. Common in shallow water of lakes, ponds and marshes.

**Polygonum aviculare* L. Knotweed. Common weed of roadsides.

**Polygonum convolvulus* L. Black bindweed. Common weed of roadsides and other disturbed habitats.

**Polygonum cuspidatum* Sieb. & Zucc. Japanese bamboo. Rare on roadsides.

Polygonum hydropiper L. Rare in shallow water of marshes. Pammel, 1925 (ISC).

Polygonum hydropiperoides Michx. Water-pepper. Infrequent in wetlands.

Polygonum lapathifolium L. Pale smartweed. Common in alluvial woods and waste ground.

Polygonum pensylvanicum (L.) Small Pennsylvania smartweed. Common in wet habitats.

**Polygonum persicaria* L. Lady's thumb. Common weed along railroads and highways.

Polygonum punctatum Ell. Water smartweed. Common in marshes.

Polygonum ramosissimum Michx. Bushy knotweed. Common weed of sterile soil.

Polygonum sagittatum L. Tearthumb. Infrequent in disturbed, marshy soil.

Polygonum scandens L. Climbing false buckwheat. Common along roadsides and in woodland edges.

Polygonum tenue Michx. Rare in dry, sandy soil.

Polygonum virginianum L. Jumpseed. Frequent in moist, weedy woodlands.

**Rumex acetosella* L. Red sorrel. Common in sterile soil.

Rumex altissimus Wood Smooth dock. Common in lowlands.

**Rumex crispus* L. Curly dock. Infrequent on marsh edges.

**Rumex maritimus* L. var. *fueginus* (Phil.) Dusen Yellow dock. Infrequent in wet sand.

Rumex orbiculatus Gray. Water dock. Rare in shallow water of marshes.

PORTULACACEAE (Purslane Family)

Claytonia virginica L. Spring beauty. Infrequent in rich woods.

**Portulaca oleracea* L. Common purslane. Common in dry disturbed habitats.

PRIMULACEAE (Primrose Family)

Androsace occidentalis Pursh Rare in dry, sandy soil.

Lysimachia ciliata L. Fringed loosestrife. Rare in alluvial woods.

Lysimachia hybrida Michx. Loosestrife. Infrequent in wet, sandy lowlands.

**Lysimachia nummularia* L. Moneywort. Infrequent in alluvial woods along streams.

Lysimachia quadriflora Sims Rare at edges of Lakin Slough.

Lysimachia thyrsoiflora L. Tufted loosestrife. Very rare in marshes in the northeast part of the county.

RANUNCULACEAE (Crowfoot Family)

Actaea pachypoda Ell. White baneberry. Infrequent in upland woods and wooded slopes.

Actaea rubra (Ait.) Willd. Red baneberry. Infrequent in moist wooded ravines.
Anemone canadensis L. Canada anemone. Common in prairie swales.
Anemone caroliniana Walt. Carolina anemone. Rare in dry open sand.
Anemone cylindrica Gray Windflower. Common in dry prairies and rocky woods.
Anemone virginiana L. Tall anemone. Common in dry to moist open woods.
Aquilegia canadensis L. Columbine. Frequent in rocky, open woods.
Caliba palustris L. Marsh marigold. Rare in seeps in Springbrook State Park and a fen in Sec. 17, Highland Twp.
Delphinium tricorne Michx. Dwarf larkspur. Rare in moist woods.
Delphinium virescens Nutt. Prairie larkspur. Frequent in upland prairies.
Hepatica nobilis Miller var. *acuta* (Pursh) Steyerl. Hepatica. Frequent in moist wooded ravines.
Isopyrum biternatum (Raf.) T. & G. False rue anemone. Infrequent in moist woodlands.
Ranunculus abortivus L. Small-flowered crowfoot. Common in moist woods and woodland edges.
Ranunculus cymbalaria Pursh Shore buttercup. Rare in wet sand.
Ranunculus sceleratus L. Cursed crowfoot. Rare in sandy lowlands.
Ranunculus septentrionalis Poir. Swamp buttercup. Frequent in alluvial woods.
Thalictrum dasycarpum Fisch. & Ave-Lall. Meadow-rue. Frequent in prairie swales.
Thalictrum thalictroides (L.) Eames & Boivin Rue anemone. Rare in moist woodlands.

RHAMNACEAE (Buckthorn Family)
Ceanothus americanus L. var. *pitcheri* T. & G. New Jersey tea. Frequent on prairies.
Ceanothus herbaceus Raf. var. *pubescens* (T. & G.) Shinners Redroot. Infrequent on prairies.

ROSACEAE (Rose Family)
Agrimonia gryposepala Wallr. Agrimony. Infrequent in moist woods.
Agrimonia pubescens Wallr. Downy agrimony. Frequent in moist woods.
Agrimonia striata Michx. Agrimony. Infrequent in woods and woodland edges.
Amelanchier arborea (Michx. f.) Fern. Serviceberry. Frequent wooded, rocky slopes in Springbrook State Park.
Crataegus mollis (T. & G.) Sheele Frequent in open uplands.
Crataegus punctata Jacq. Infrequent in upland woods and pastures.
Crataegus succulenta Schrader ex. Link. Frequent on wet sandy slopes.
Fragaria vesca L. var. *americana* Porter Woodland strawberry. Frequent on rocky, calcareous, wooded slopes.
Fragaria virginiana Duchesne Wild strawberry. Common in open woods and woodland edges.
Geum canadense Jacq. White avens. Common in woods.
Malus ioensis (Wood) Britton Wild crab. Common in dry brushy uplands.
 **Malus sylvestris* (L.) P. Miller Apple. Rare escape near homesteads.
Physocarpus opulifolius (L.) Maxim. Ninebark. Infrequent on calcareous or sandy banks.
Potentilla arguta Pursh Common in prairies.
Potentilla norvegica L. Strawberry weed. Common

on roadsides and in other disturbed soil.
 **Potentilla recta* L. Sulphur cinquefoil. Frequent along railroads and in ditches.
Potentilla simplex Michx. Rare in woods.
Prunus americana Marsh. Wild plum. Common along roadsides, fencerows, and borders of woods.
Prunus serotina Ehrh. Black cherry. Frequent in upland woods.
Prunus virginiana L. Choke cherry. Common in thickets, upland woods, and fencerows.
Rosa blanda Ait. Meadow rose. Infrequent in borders of woods.
 **Rosa multiflora* Thunb. ex. Murray Multiflora rose. Common in abandoned pastures.
Rubus allegheniensis Porter ex Bailey Blackberry. Common in successional uplands.
Rubus occidentalis L. Black raspberry. Common on woodland edges.
 **Spiraea billiardii* Herineq. Rare escape from cultivation.

RUBIACEAE (Madder Family)

Galium aparine L. Cleavers. Common in woodlands.
Galium circaezans Michx. Frequent in moist, wooded ravines.
Galium concinnum T. & G. Shining bedstraw. Common in moist woods.
Galium obtusum Bigel. Bluntleaf bedstraw. Infrequent in marshy bottomlands, alluvial woods, and on shores.
Galium triflorum Michx. Sweet scented bedstraw. Common in moist woods and alluvial woods.

RUTACEAE (Citrus Family)
Zanthoxylum americanum Mill. Prickly ash. Common in upland woods and brushy thickets.

SALICACEAE (Willow Family)

**Populus alba* L. White poplar. Frequent escape from cultivation.
Populus deltoides Bart. ex. Marsh. Cottonwood. Common in alluvial bottoms.
Salix amygdaloides Anders. Peach-leaved willow. Common near shores of streams and marshes.
Salix discolor Muhl. Pussy willow. Infrequent near streams.
Salix exigua Nutt. ssp. *interior* (Rowlee) Cronq. Sandbar willow. Frequent on sandbars and along streams.
Salix humilis Marsh. Prairie willow. Common in mesic prairies.
Salix nigra Marsh. Black willow. Common along streams.
 **Salix pentandra* L. Bay-leaved willow. Rare escape from cultivation or possibly planted.
Salix rigida Muhl. Common on stream banks and in wet lowlands.
Salix sericea Marsh. Silky willow. Rare along streams.

SANTALACEAE (Sandalwood Family)

Comandra umbellata (L.) Nutt. Bastard toadflax. Frequent in prairies.

SAXIFRAGACEAE (Saxifrage Family)

Heuchera richardsonii R. Br. Alum root. Common in prairies and open woods.
Penthorum sedoides L. Ditch-stonecrop. Common in marshes and muddy ditches.
Ribes missouriense Nutt. ex T. & G. Wild gooseberry. Common in thickets and upland woods.

SCROPHULARIACEAE (Figwort Family)

Agalimn tenuifolia (Vahl) Raf. Common in wet, sandy, lowlands; frequent on shores of creeks.

Castilleja sessiliflora Pursh Painted cup. Infrequent in dry prairies.

Chelone glabra L. White turtlehead. Rare in sandy seep in Sec. 1, Victory Twp. (Cited in Fay, 1953); rare in seep in Springbrook Park.

Linaria vulgaris Hill Butter and eggs. Frequent along roads.

Lindernia dubia (L.) Pennell Common in clear, shallow pools and on shores of lakes and streams.

Mimulus ringens L. Monkey flower. Common in marshes, lowlands, and on shores.

Pedicularis canadensis L. Lousewort. Frequent in dry upland woods, and prairies.

Pedicularis lanceolata Michx. Swamp lousewort. Rare in sandy seep in Springbrook Park, and a sandy seep in Victor Twp.

Penstemon digitalis Nutt. Foxglove penstemon. Rare in dry, sandy area.

Scrophularia lanceolata Pursh Figwort. Infrequent in upland woods.

Scrophularia marilandica L. Common in moist woods and thickets.

**Verbascum blastaria* L. Moth muellin. Roadsides: Pammel 1926, (ISC).

**Verbascum thapsus* L. Common muellin. Common weed of pastures, roadsides and waste land.

**Veronica anagallis-aquatica* L. Water speedwell. Rare in wet sand along streams.

**Veronica arvensis* L. Corn speedwell. Frequent in disturbed soil.

Veronica peregrina L. Common in disturbed soil.

Veronicastrum virginicum (L.) Farw. Culver's-root. Common in moist prairies and along railroads.

SOLANACEAE (Nightshade Family)

**Datura stramonium* L. Jimson weed. Frequent in sandy, disturbed soil.

Physalis heterophylla Nees Ground-cherry. Common in sandy soil.

Physalis virginiana Mill. Ground cherry. Frequent on prairies and disturbed areas.

Solanum americanum Mill. Black nightshade. Common weed of fields, gardens, barnyards, and other waste land.

**Solanum carolinense* L. Horse nettle. Frequent in sandy soil.

**Solanum rostratum* Dunal Buffalo bur. Frequent weed of pastures, barnyards, and fields.

STAPHYLEACEAE (Bladdernut Family)

Staphylea trifolia L. Butternut. Frequent on moist, rocky wooded slopes.

TILIACEAE (Linden Family)

Tilia americana L. Basswood. Common in moist woods; usually on north-facing slopes.

ULMACEAE (Elm Family)

Celtis occidentalis L. Hackberry. Common in woods.

Ulmus americana L. American elm. Common in alluvial woods and near dwellings.

**Ulmus pumila* L. Siberian elm. Common in successional areas.

Ulmus rubra Muhl. Red elm. Common in upland woods.

URTICACEAE (Nettle Family)

Boehmeria cylindrica (L.) Sw. Bog hemp. Rare on muddy shores of ponds in Bear Twp.

Laportea canadensis (L.) Wedd. Wood nettle. Common on floodplains.

Parietaria pennsylvanica Muhl. ex Willd. Pellitory. Frequent on stream banks.

Pilea pumila (L.) Gray Clearweed. Frequent in alluvial woods and moist wooded ravines.

Urtica dioica L. Stinging nettle. Common in disturbed habitats.

VERBENACEAE (Vervain Family)

Phyla lanceolata (Michx.) Greene Frogfruit. Common in marshes and along streams.

Verbena bracteata Lag. & Rodr. Prostrate vervain. Common weed along railroads and on roadsides.

Verbena hastata L. Blue vervain. Common in prairie swales and moist disturbed moist woods.

Verbena X rydbergii Moldenke Rare in pastures.

Verbena stricta Vent. Hoary vervain. Very common weed of dry pastures, roadsides, and disturbed soil.

Verbena urticifolia L. White vervain. Common in alluvial thickets, along streams, and at edges of marshes.

VIOLACEAE (Violet Family)

Viola missouriensis Greene Rare in alluvium.

Viola pedata L. Bird's-foot violet. Infrequent in dry upland prairies.

Viola pedatifida G. Don Prairie violet. Frequent, in upland prairies and on dry, rocky, sparsely wooded ridges.

Viola pratensis Greene Common blue violet. Very common in woods, meadows, on roadsides, etc.

Viola pubescens Ait. Downy yellow violet. Frequent in shady, moist woods.

Viola sororia Willd. Hairy blue violet. Common in alluvial woods.

VITACEAE (Grape Family)

Parthenocissus quinquefolia (L.) Planch. Virginia Creeper. Very common in woods.

Parthenocissus vitacea (Knerr) Hitchc. Woodbine. Common in woodlands.

Vitis riparia Michx. Riverbank grape. Common in alluvial woods.

MAGNOLIOPHYTA: LILIATAE

(Monocots)

ALISMATACEAE (Water-Plantain Family)

Alisma plantago-aquatica L. Water plantain. Common in shallow water of marshes.

Sagittaria brevirostris Mack. & Bush Arrowhead. Common in shallow water or mud.

Sagittaria latifolia Willd. Duck potato. Infrequent in shallow water.

ARACEAE (Arum Family)

Arisaema dracontium (L.) Schott Green dragon. Infrequent in alluvial woods.

Arisaema triphyllum (L.) Schott Jack-in-the-pulpit. Common in moist woods.

Symplocarpus foetidus (L.) Nutt. Skunk cabbage. Introduced into hillside seep in Springbrook State Park.

COMMELINACEAE (Spiderwort Family)

**Commelina communis* L. Dayflower. Frequent in farmyards, roadsides, and other dry, disturbed sites.

Tradescantia bracteata Small Spiderwort. Common in sandy or gravelly soil along highways.

Tradescantia obtusifolia Raf. Spiderwort. Frequent on roadsides.

CYPERACEAE (Sedge Family)

Carex albursina Sheldon Rare in moist woodlands.

Carex amphibola Steud. var. *turgida* Fern. Turgid sedge. Frequent in alluvial woods.

Carex annexens (Bickn.) var. *xanthocarpa* (Bickn.)

Wieg. Yellow-fruited sedge. Rare in moist prairies.

Carex atberodes Spreng. Awned sedge. Infrequent in marshes and prairie swales.

Carex bebbii (Bailey) Fern. Rare in moist woods.

Carex bicknellii Britt. Bicknell's sedge. Frequent in moist prairies.

Carex blanda Dewey Woodland sedge. Common in moist woods.

Carex brevior (Dew.) Mack. ex Lunnell Few-headed straw sedge. Common in dry sand; frequent in moist prairies.

Carex cephalophora Willd. Oval-headed sedge. Frequent in upland woods.

Carex cristatella Britton Crested sedge. Common in alluvial wetlands and moist prairies.

Carex davisi Schwein. & Torr. Davis' sedge. Frequent in alluvial woods and wooded ravines.

Carex festucacea Willd. Fescue sedge. Rare in moist woods in Springbrook State Park.

Carex gravida Bailey. Heavy sedge. Frequent in prairie remnants.

Carex haydenii Dewey Hayden's sedge. Rare in marshes and moist prairies.

Carex hystericina Muhl. ex. Willd. Infrequent in seeps and alluvial woods.

Carex lacustris Willd. River-bank sedge. Rare in shallow water.

Carex laevivaginata (Kuek.) Mack. Rare at edges of marshes and in seeps.

Carex lanuginosa Michx. Rare in seeps and moist prairies.

Carex lasiocarpa Ehrh. var. *americana* Fern. Slender sedge. Common in marshes, alluvial bottom, and moist prairies.

Carex lupulina Muhl. ex. Willd. Hop sedge. Frequent in lowland woods.

Carex meadii Dewey Mead's sedge. Frequent in mesic prairies.

Carex molesta Mackenz. Repulsive sedge. Frequent in moist open ground.

Carex muhlenbergii Willd. Muhlenberg's sedge. Dry hillsides. Cited in Gilly (1946).

Carex pennsylvanica Lam. Pennsylvania sedge. Common in upland woods.

Carex praegracilis W. Boott Clustered field sedge. Rare in prairie swales.

Carex prairiea Dewey Prairie sedge. Abundant on a degraded fen in Section 17, Highland Twp.

Carex rosea Willd. Stellate Sedge. Common in moist woods.

Carex sartwellii Dewey Sartwell's sedge. Rare in shallow water of Lakin Slough.

Carex scoparia Schkuhr ex. Willd. Pointed broom sedge. Frequent in moist prairies.

Carex sparganioides Muhl. ex. Willd. Bur-reed sedge. Frequent in moist woods.

Carex spengelii Dewey ex. Spreng. Sprengel's sedge. Infrequent in wooded ravines.

Carex stipata Muhl. ex. Willd. Rare in marshy area along highway west of Springbrook State Park.

Carex stricta Lam. Tussock sedge. Common in alluvial woods and prairie swales.

Carex tribuloides Wahl. Blunt broom sedge. Common in moist prairies, marshes and lake margins.

Carex trichocarpa Schkuhr Hairy-fruited sedge. Marshes and wet sandy areas.

Carex vulpinoidea Michx. Fox sedge. Common in moist lowlands and edges of Lakin Slough.

Cyperus aristatus Rottb. Awned cyperus. Frequent

in moist sandy lowlands.

Cyperus erythrorhizos Muhl. Red-rooted cyperus. Frequent in marshes and on sandy shores.

Cyperus esculentus L. Yellow nut grass. Common in open lowlands.

Cyperus filiculmis Vahl Rare in dry, sandy soil near Springbrook State Park.

Cyperus odoratus L. var. *squarrosus* (Britt.) Gilly Coarse cyperus. Infrequent in marshes and on muddy shores.

Cyperus rivularis Kunth Shining cyperus. Frequent in sandy marshes and sandy alluvium.

Cyperus schweinitzii Torrey Schweinitz's cyperus. Infrequent in sandy or rocky soil.

Cyperus strigosus L. Straw-colored cyperus. Common in marshes and in alluvium.

Eleocharis acicularis (L.) R. & S. Needle spike rush. Infrequent on muddy shores and shallow water.

Eleocharis compressa Sulliv. Flat-stemmed spike-rush. Infrequent in marshes and moist prairies.

Eleocharis erythropoda Steud. Spathiform spike rush. Common in marshes, wet alluvial bottomlands, and on muddy shores.

Eleocharis macrostachya Britton Infrequent in lowland prairies and in marshes.

Eleocharis obtusa (Willd.) Schultes Infrequent in wet sand and marshes.

Scirpus acutus Muhl. ex. Bigelow Hard-stemmed bulrush. Frequent in marshes.

Scirpus americanus Pers. Threesquare. Infrequent in shallow water of Lakin Slough.

Scirpus atrovirens Willd. Pale bulrush. Very common in wet places.

Scirpus cyperinus (L.) Kunth Wool-grass. Rare in wet roadside ditches. Sec. 28, Jackson Twp. Roosa no. 6670 (ISTC).

Scirpus fluviatilis (Torr.) Gray River bulrush. Frequent in shallow water near the shore of lakes and ponds, and in marshy places.

Scirpus pendulus Muhl. Reddish bulrush. Infrequent in marshy places, especially in wet roadsides.

Scirpus validus Vahl var. *creber* Fern. Soft-stemmed bulrush. Common in marshes and near the shores of ponds and lakes.

DIOSCOREACEAE (Yam Family)

Dioscorea villosa L. Wild yam. Rare in upland woods.

HYDROCHARITACEAE (Frog's-Bit Family)

Eleocharis canadensis Michx. Infrequent in shallow standing water in Springbrook State Park.

Elodea nuttallii (Planch.) St. John Rare in shallow standing water.

IRIDACEAE (Iris Family)

**Belamcanda chinensis* (L.) DC. Blackberry lily. Rare escape.

Iris schrevei Small Blue flag. Frequent in shallow water of marshes.

Sisyrinchium campestris Bickn. Blue-eyed grass. Common in prairie soil and in clearings of dry upland woods.

JUNCACEAE (Rush Family)

Juncus dudleyi Wieg. Infrequent in moist soil.

Juncus interior Wieg. Common in moist prairie soil and edges of marshes.

Juncus nodosus L. Infrequent in sandy marshes.

Juncus tenuis Willd. Path rush. Common on roadsides, trails and paths, and in farmyards.

Juncus torreyi Coville Common in marshes and on muddy shores.

LEMNACEAE (Duckweed Family)

Lemna minor L. Duckweed. Common in standing water.

Lemna trisulca L. Star duckweed. Infrequent in shallow water of Lakin Slough.

Spirodela polyrrhiza (L.) Schleid. Greater duckweed. Common in lakes, ponds, and marshes.

Wolffia columbiana Karst. Water meal. Rare in marshes.

LILIACEAE (Lily Family)

Allium canadense L. Wild garlic. Common in lowland prairies.

Allium tricoccum Ait. Wild leek. Infrequent in moist wooded ravines in Bear Grove Twp.

**Asparagus officinalis* L. Asparagus. Common escape from cultivation.

Erythronium albidum Nutt. Dog-tooth violet. Frequent in moist wooded ravines in Bear Grove Twp.

**Hemerocallis fulva* (L.) L. Day-lily. Common escape from cultivation.

Hypoxis hirsuta (L.) Coville. Yellow stargrass. Common on prairies.

Lilium michiganense Farw. Michigan lily. Infrequent in moist prairies and on borders of upland woods.

Lilium philadelphicum L. var. *andinum* (Nutt.) Ker-Gawl. Wood lily. Rare on mesic prairies in Seely Twp.

Polygonatum biflorum (Walter) Ell. Solomon's seal. Common in woods.

Smilacina racemosa (L.) Desf. False solomon's seal. Common in upland woods.

Smilacina stellata (L.) Desf. Starry solomon's seal. Infrequent on roadsides and borders of woods.

Smilax coccinea (Engelm. ex Kunth) S. Wats. Carrion flower. Frequent in upland woods in Springbrook State Park and in Bear Grove Twp.

Smilax herbacea L. Carrion-flower. Common on roadsides and borders of upland woods.

Smilax hispida Muhl. Greenbrier. Common in woods.

Trillium grandiflorum (Michx.) Salisb. Rare and probably introduced in Springbrook State Park. Riggins no. 725 (ISC).

Trillium nivale Riddell. Snow trillium. Infrequent on north-facing, calcareous, wooded slopes.

Uvularia grandiflora Sm. Bellflower. Common in unpastured woodlands.

NAJADACEAE (Naiad Family)

Najas guadalupensis (Spreng.) Magn. Rare in shallow water of lakes.

ORCHIDACEAE (Orchid Family)

Coeloglossum viride (L.) Hartman var. *virescens* (Muhl. ex Willd.) Luer. Bracted orchid. Rare in upland woods.

Cypripedium calceolus L. var. *pubescens* (Willd.) Correll. Yellow lady's slipper. Rare in undisturbed, wooded ravines. Leoschke no. 336 (ISC).

Cypripedium candidum Muhl. ex Willd. Small white lady's slipper. Rare in mesic prairie in Sec. 33, Seely Twp. Leoschke and Klier no. 336 (ISC).

Cypripedium reginae Walt. Showy lady's slipper. Very rare. Grant Kness, August 12, 1930, ISC.

Galearis spectabilis (L.) Raf. Showy orchis. Rare on moist wooded slopes.

Liparis liliifolia (L.) Rich. ex Lindley. Twayblade. Rare in mesic woods in Sec. 4, Victory Twp. Leoschke no. 126 (ISC).

Liparis loeselii (L.) Rich. Bog Twayblade. Rare in hillside seep in Sec. 22 Valley Twp. Roosa no. 6422 (ISTC).

Platanthera praeclara Sheviak and Bowles. Western prairie fringed orchid. Rare. Found only on a mesic prairie in Seely Twp. Leoschke and Klier no. 368 (ISC).

Spiranthes cernua (L.) L.C. Rich. Nodding ladies' tresses. Rare in mesic prairie in Sec. 33, Seely Twp. Leoschke and Klier no. 511 (ISC).

POACEAE (Grass Family)

**Agropyron repens* (L.) Beauv. Quack grass. Common grass of moist, disturbed soil.

Agropyron smithii Rydb. Western wheat grass. Frequent in open sandy areas.

**Agrostis gigantea* Roth. Redtop. Common and widespread on roadsides, prairies, and disturbed soil.

Agrostis hyemalis (Walt.) BSP. Hairgrass. Infrequent in open sand.

Agrostis perennans (Walt.) Tuckerm. Upland bent. Frequent in dry woodlands, often on sandy or rocky ledges.

Alopecurus aequalis Sobol. Shortawn foxtail. Rare. Edge of pond in Sec. 28, Jackson Twp. Roosa no. 6667 (ISTC).

Andropogon gerardii Vitman. Big bluestem. Very common in moist prairies and roadsides.

Aristida basiramea Engelm. ex Vasey. Three-awn. Infrequent in dry, sandy soil near Springbrook State Park.

Aristida curtisii (Gray) Nash. Rare on dry gravel knobs.

Aristida oligantha Michx. Common in dry soils.

Bouteloua curtipendula (Michx.) Torr. Side-oats grama. Common in dry prairies.

Bouteloua gracilis (HBK. ex Willd.) Lag. Blue grama. Common on dry slopes.

Bouteloua hirsuta Lag. Hairy grama. Rare on dry hills and gravel knobs.

Brachyelytrum erectum (Schreb.) Beauv. Infrequent in mesic woods in Bear Grove Twp.

**Bromus commutatus* Schrad. Hairy chess. Frequent in disturbed, open habitats.

**Bromus inermis* Leyss. Smooth brome. Common on roadsides, in fencerows and fields.

**Bromus japonicus* Thunb. ex Murray. Japanese brome. Infrequent on roadsides and cultivated fields.

Bromus pubescens Muhl. ex Willd. Canada brome. Common in moist woods on sandy, rocky slopes.

**Bromus tectorum* L. Downy chess. Common in dry disturbed sites.

Calamagrostis canadensis (Michx.) Beauv. Blue-joint. Common in marshes.

Cenchrus longispinus (Hackel) Fern. Sandbur. Very common in fields, roadsides, and other waste places.

Cinna arundinacea L. Wood reed. Frequent in moist, rocky woods.

**Dactylis glomerata* L. Orchard grass. Common in roadsides and fields.

Danthonia spicata (L.) Beauv. ex R. & S. Poverty oat grass. Very rare on dry, sandy slopes in Springbrook State Park.

Diarrhena americana Beauv. var. *obovata* G1. Infrequent in alluvial or moist upland woods.

Dichanthelium acuminatum (Sw.) Gould & Clark var. *implicatum* (Scrib.) Gould & Clark. Rare in sandy prairie soil.

Dichanthelium acuminatum (Sw.) Gould & Clark

var. *villosum* (Gray) Gould & Clark. Frequent in dry, sterile soil.

Dichanthelium depauperatum (Muhl.) Gould. Rare on barren hillside in Sec. 28, Jackson Twp. Roosa no. 6734 (ISTC).

Dichanthelium latifolium (L.) Gould & Clark. Broad-leaved panic grass. Frequent in open woods.

Dichanthelium linearifolium (Schrib.) Gould. Slim-leaved panic grass. Rare in dry, rocky upland woods in and near Springbrook State Park.

Dichanthelium oligosanthes (Schultes) Gould var. *scribnerianum* (Nash) Gould. Common in dry, sandy soil.

Dichanthelium oligosanthes (Schultes) Gould var. *wilcoxianum* (Vasey) Gould & Clark. Cited in Pohl, 1966. Rare in dry prairies.

Dichanthelium perlongum (Nash) Gould & Clark. Rare in dry sand.

**Digitaria ischaemum* (Schreb. ex Schweig.) Schreb. ex Muhl. Smooth crabgrass. Common in disturbed soil.

**Digitaria sanguinalis* (L.) Scop. Common crab grass. Common weed of lawns, and roadsides.

Distichlis spicata (L.) Greene var. *stricta* (Torr.) Beetle. Salt grass. Roadside in Section 5, Baker Twp., and Section 24, Thompson Twp. Roosa Nos. 6662, 6663 (ISTC).

**Echinochloa crusgalli* (L.) Beauv. Barnyard grass. Common in moist disturbed soil.

**Echinochloa muricata* (Beauv.) Fern. Weed of cultivated fields.

Elymus canadensis L. Wild rye. Common throughout county in a wide variety of habitats.

Elymus villosus Muhl. ex Willd. Slender wild rye. Common in moist woods in Bear Grove Twp.

Elymus virginicus L. Virginia wild rye. Common in moist, disturbed sites.

**Eragrostis cilianensis* (All.) Mosher. Stinkgrass. Common in fields and on roadsides.

Eragrostis hypnoides (Lam.) BSP. Pony grass. Common on wet sand or muddy shores.

Eragrostis pectinacea (Michx.) Nees. Common on sandy alluvium.

Eragrostis spectabilis (Pursh.) Steud. Purple lovegrass. Common in dry, sandy soil.

**Eriochloa villosa* (Thunb.) Kunth. Cup grass. Rare along roadside in Sec. 28, Jackson Twp. Roosa no. 6791 (ISTC).

Festuca obtusa Biehler. Nodding fescue. Frequent in moist woods.

Festuca octoflora Walt. var. *tenella* (Willd.) Fern. Six-weeks fescue. Infrequent in dry, sandy soil.

Glyceria grandis S. Wats. Manna grass. Frequent on muddy shores of Lakin Slough.

Glyceria striata (Lam.) Hitchc. Fowl manna grass. Common in moist lowlands in Bear Grove Twp.

**Hordeum jubatum* L. Squirrel-tail grass. Common weeds of fields and roadsides.

Hordeum pusillum Nutt. Little barley. Frequent on dry hillsides.

Hystrix patula Moench. Bottle-brush grass. Common in woods in Bear Grove Twp.

Koeleria macrantha (Ledeb.) Spreng. June grass. Frequent in prairies and in sandy soil.

Leersia oryzoides (L.) Sw. Rice cutgrass. Frequent in marshes and muddy shores.

Leersia virginica Willd. White grass. Frequent in moist woods.

- **Lolium perenne* L. var. *italicum* Parn. Annual rye grass. Common; often used in lawngrass mixtures, now spreading to fields and roadsides.
- **Miscanthus sacchariflorus* (Maxim.) Hackel Plume grass. Rare on roadsides.
- Muhlenbergii bushii* Pohl Rare in moist woods.
- Muhlenbergia cuspidata* (Torr.) Rydb. Rare on dry, gravelly knobs.
- Muhlenbergia frondosa* (Poir.) Fern. Frequent on prairie remnants, moist woods, and on edges of marshes.
- Muhlenbergia mexicana* (L.) Trin. Mexican drop seed. Sandy shore of Raccoon River in Victor Twp.
- Muhlenbergia racemosa* (Michx.) BSP. Frequent in prairies, roadsides, and disturbed areas.
- Muhlenbergia schreberi* J.F. Gmel. Nimblewill. Frequent in disturbed woodlands, farmyards, and roadsides.
- Muhlenbergia sobolifera* (Muhl. ex Willd.) Trin. Rare in moist woods.
- Panicum capillare* L. Witch grass. Very common in fields, roadsides, and other disturbed sites.
- Panicum dichotomiflorum* Michx. Very common in farmyards, on roadsides, and in waste areas.
- Panicum virgatum* L. Switchgrass. Common in prairie swales and in sandy alluvium.
- Paspalum setaceum* Michx. var. *ciliatifolium* (Michx.) Vasey Bead grass. Rare in sandy soil.
- Pbalaris arundinacea* L. Reed canary grass. Frequent on shores of lakes, ponds, and in alluvium.
- **Phleum pratense* L. Timothy. Common escape from cultivation.
- Phragmites australis* (Cav.) Trin. ex Steudel Frequent in marshes, drainage ditches, and pond

- margins.
- **Poa compressa* L. Canadian bluegrass. Frequent in dry open woods and roadsides.
- Poa palustris* L. Infrequent in seeps in Springbrook State Park.
- **Poa pratensis* L. Kentucky bluegrass. Common in a wide variety of habitats.
- Schedonardus paniculatus* (Nutt.) Trel. Tumblegrass. Barren hilltop near Menlo. Miller, 1928 (ISC).
- Schizachyrium scoparium* (Michx.) Nash Little bluestem. Very common in prairies and dry openings in upland woods.
- **Setaria faberii* Herrm. Giant foxtail. Common on roadsides and fields.
- **Setaria glauca* (L.) Beauv. Yellow foxtail. Common on roadsides, in farmyards, and fields.
- **Setaria viridis* (L.) Beauv. Green foxtail. Common in fields, farmyards, roadsides, and other waste places.
- Sorghastrum nutans* (L.) Nash Indian grass. Common in prairies.
- Spartina pectinata* Link Slough grass. Common in prairie swales.
- Sphenopholis obtusata* (Michx.) Scribn. Frequent in moist prairies and sandy meadows; infrequent in dry to moist rocky woods.
- Sphenopholis obtusata* (Michx.) Schribn. var. *major* (Torr.) Erd. Rare; edge on pond Sec. 25, Bear Grove Twp.
- Sporobolus asper* (Michx.) Kunth Dropseed. Common in prairies and dry, sandy soil.
- Sporobolus heterolepis* (Gray) Gray Prairie dropseed. Common in moist to dry prairies.
- Sporobolus neglectus* Nash Frequent in dry, sterile soils.

- Sporobolus vaginiflorus* (Torr. ex Gray) Wood Poverty-grass. Frequent in dry, rocky soil.
- Stipa spartea* Trin. Porcupine grass. Common in prairies.
- Triticum aestivum* L. Cultivated wheat. Rare escape.

PONTEDERIACEAE
(Pickerel-weed Family)

- Heteranthera dubia* (Jacq.) MacM. Water stargrass. Rare in shallow water or on mud.

POTAMOGETONACEAE
(Pondweed Family)

- Potamogeton foliosus* Raf. Infrequent in lakes and ponds.
- Potamogeton nodosus* Poir. Frequent in lakes and ponds.

SPARGANIACEAE (Bur-Reed Family)

- Sparganium eurycarpum* Engelm. Bur-reed. Frequent in shallow water of ponds and marshes.

TYPHACEAE (Cattail Family)

- Typha angustifolia* L. Narrow-leaved cattail. Rare in road ditches and edges of marshes.
- Typha X glauca* Godron Hybrid cattail. Common in shallow water.
- Typha latifolia* L. Broad-leaved cattail. Infrequent in shallow water of lakes, ponds, and drainage ditches.

ZANNICHELLIACEAE (Horned Pondweed Family)

- Zannichellia palustris* L. Horned pondweed. Rare in shallow standing water.

EXCLUDED SPECIES

- Eupatorium fistulosum* Barratt (Joe-pye-weed) was reported as new to Iowa by Fay (1953). It was recently examined by Zager and determined to be *Eupatorium maculatum* L.



Fig. 9. *Opuntia macrorhiza* on gravelly knob in Sec. 29, Jackson Twp.

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