

SURVEY OF THE VASCULAR FLORA OF THE BOEHLER SEEPS AND SANDHILLS PRESERVE

Submitted to the Department of Botany of Oklahoma State University
in partial fulfillment of the requirements for the Degree of Doctor of Philosophy
July 1997

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Located in Atoka County of south-central Oklahoma, The Nature Conservancy's Bohler Seeps and Sandhills Preserve comprises sandhills, acidic hillside seeps, marshes, intermittent and permanent streams, and shallow lakes. The sandhills are the site of the highest quality, old-growth vegetation of the Western Gulf Coastal Plains (S. Orzell, pers. comm. to Ian Butler). The flora is a unique assemblage of plants that is present nowhere else in the state and considered globally rare. Approximately 400 species are believed to be present (Jones 1993). More than 20 rare species have been reported to occur in the area, including some that are globally rare (Oklahoma Natural Heritage Inventory 1997). *Eriocaulon kornickianum*, for example, is designated G2 and S1. Other rare species in the preserve include *Penstemon murrayanus* (G4, S1S3), *Polygonella americana* (G5, S1S2), and *Paronychia drummondii* (G4G5, S1S2).

Prior to this study, our knowledge of the vascular plant species in the preserve was incomplete. Although several partial lists of its flora had been compiled, a systematic survey of the area to inventory all of the plants had not been conducted. Such information is essential for understanding the ecology of the site and making decisions about its management. This study was undertaken to provide this information. Specific objectives were to: (1) compile a list of the terrestrial and aquatic vascular plant species present and (2) prepare a set of herbarium specimens to document the

preserve's flora. This note summarizes my findings and provides a reference to the information compiled in Gatti Clark (1997).

BOEHLER SEEPS AND SANDHILLS PRESERVE

The preserve is a 235 ha site located in southern Atoka County, Oklahoma, approximately 11 miles north of Boswell (S25 & 26, T4S, R13W; Boswell NW Quad). It comprises two tracts bisected by a paved country road and is located in the watersheds of Muddy Boggy and Clear Boggy Creeks. Situated in the Dissected Coastal Plain Geomorphic Province and Western Coastal Plain Land Resource Area (Johnson et al. 1979, USDA Natural Resources Conservation Service 1992), its underlying strata are Cretaceous in age. Also underlying the preserve is the Antlers Sandstone Aquifer that is composed primarily of non-marine sand and clay, and marine limestone and clay up to 915 m thick and is saturated with water that has a moderate to high mineral content (Johnson et al. 1979). The water table is generally within 1-1.3 m of the surface, with seeps occurring where it reaches the surface (Jones 1993, pers. comm.). Soil series of the site are the Bernow-Romia complex, 8-12% slopes; Boggy fine sandy loam; and Larue loamy fine sand, 0-8% slopes (Shingleton and Watterson 1979). All are susceptible to erosion by both water and wind. Precipitation in the area of the preserve

occurs primarily in the spring and summer, and averages 119 cm per year (Ruffner 1980). The average growing season is 255 days; mean maximum annual temperature is 24.5° C and mean minimum is 11° C; the average number of days below 0° C is 52 (Ruffner 1980).

Vegetation of the area is Oak-Hickory Forest (Duck and Fletcher 1943) with several communities present. *Quercus stellata*, *Carya texana*, and *Sideroxylon lanuginosum* spp. *Lanuginosum* (=Bumelia lanuginosa) dominate and form an almost continuous canopy in the drier areas. Typically a thick leaf layer is present on the ground, and understory vegetation is sparse. *Juniperus virginiana* and *Pinus echinata*, while not dominant, can be found scattered throughout the preserve. Common woody understory species are *Nyssa sylvatica*, *Vaccinium arboreum*, *Berchemia scandens*, and *Vitis rotundifolia*. Herbaceous understory taxa include *Galium arkansanum*, *G. obtusum*, *Tephrosia virginia*, *Carex* spp., *Cyperus* spp., and *Juncus* spp. Scattered throughout the preserve and most conspicuous are glades dominated by *Aristida desmantha* and *Selaginella rupestris*. Other glades are present and are dominated by various grasses, such as *Panicum* spp., mosses, and forbs, such as *Gaillardia aestivalis* and *Hieracium longipilum*. At the glade edges, trees other than the forest dominants are encountered, in particular *Quercus incana*. Its saplings are occasionally found in the centers of the glades.

Hassel and Boehler Lakes are small, shallow bodies of water maintained by beaver dams. Both have dense stands of emergent and floating-leaved species at their edges and open water in their centers. Dominant taxa include *Typha angustifolia*, *Nuphar lutea*, and *Nymphaea odorata*. Often quite abundant, free-floating species are *Azolla caroliniana* and *Utricularia biflora*. Two types of seeps are present in the preserve. One has water percolating slowly to the surface and accumulating in one area

because of the topography. The ground surface has a spongy feel because of the thick carpet of vegetation, primarily mosses; *Sphagnum lescurii* and *Polytrichum commune* in particular dominate. Occupying natural drainage ways, the second type is characterized by water flowing away from the seepage point. Ferns, sedges, and rushes typically are in abundance along these watercourses. Between the lakes and the seeps are marshes dominated by *Osmunda regalis*, *O. cinnamomea*, *Cephalanthus occidentalis*, *Scirpus* spp., *Rhynchospora* spp., and *Cyperus* spp. Associated with Boehler Lake are rather deep drainages that resemble sloughs. They have less vegetation and are often banked by large trees such as *Quercus falcata*, *Q. nigra*, and *Q. phellos*.

METHOD OF SURVEY

A systematic collection of the terrestrial and aquatic vascular plants occurring in the preserve was conducted during the 1994 and 1995 growing seasons. The area was divided into three survey units using roads and fences as boundaries. Each unit was traversed on foot several times during the growing season. Plants were collected in both the flowering and fruiting stages, and prepared using standard herbarium techniques (Radford et al. 1974). One set of 440 voucher herbarium specimens (Appendix H) was prepared and deposited in the Oklahoma State University Herbarium (OKLA). Specimens previously collected by Conservancy personnel were identified and included in the inventory (Gatti Clark 1997, Appendices I and J). Identification was accomplished using the resources of the herbarium. Nomenclature used was based primarily on that of Waterfall (1969), Correll and Johnston (1979), and Gray's Manual of Botany (Fernald 1950). Common names were taken from Correll and Johnston (1979) and Taylor and Taylor (1994).

FLORA OF THE PRESERVE

Three hundred forty-five species in 225 genera and 84 families were encountered in this survey or by previous workers (Gatti Clark 1997, Appendices H, I, and J). Three families, Asteraceae (56 taxa), Poaceae (41 taxa), and Cyperaceae (35 taxa), composed 38% of the preserve's vascular flora. Other large families were the Fabaceae (21 taxa), Apiaceae (11 taxa), Lamiaceae (10 taxa), and Scrophulariaceae (10 taxa). The largest genera present were *Carex*, represented by 17 species, and *Panicum*, represented by 12 species.

Species designated by the U.S. Fish and Wildlife Service (1996) as endangered, threatened, or candidate (formally category 1) were not encountered. Species ranked by the ONHI (1997) as S1 or S2 and present in the preserve included the previously mentioned *Eriocaulon kornickianum* (G2, S1), *Penstemon murrayanus* (G4, S1S3), *Polygonella americana* (G5, S1S2), and *Paronychia drummondii* (G4G5, S1S2). Other rare species are listed in the table.

Although demonstrably secure globally and ranked G4 or G5 by ONHI, several species of interest were found in the preserve. The insectivorous *Drosera brevifolia* and the mycotrophic/parasitic *Monotropa hypopithys* were encountered. *Lycopodiella appressa* (= *Lycopodium appressum*) is reported for the site but was not seen in this study or in collections of The Nature Conservancy personnel (L. K. Magrath, pers. comm.).

With 22 rare taxa reported for the site, monitoring of the Bluejack Oak sandhills and seep communities should continue. The communities and its assemblage of plants at Bohler Seeps and Sandhills Preserve are rare within the state and deserve continued study.

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Table Taxa of Boehler Seeps and Sandhills Preserve that are ranked as rare by the Oklahoma Natural Heritage Inventory (ONHI)

Scientific Name	Common Name	ONHI Rankings*	
		Global	State
<i>Agalinis tenuifolia</i> (Vahl.) Raf.	slender leaved agalinis	G5	S2S3
<i>Aristolochia reticulata</i> Jacq.	netleaved snakeroot	G4	S2
<i>Azolla caroliniana</i> Willd.	mosquito fern	G5	S2
<i>Brasenia schreberi</i> J. F. Gmel.	water-shield	G5	S1
<i>Carex hyalina</i> Boott	whitesheath sedge	G5	S1
<i>Carex swanii</i> (Fernald) Mack.	swan sedge	G5	S1
<i>Carya myristiciformis</i> (Michx. f.) Nutt.	nutmeg hickory	G5	S2S3
<i>Drosera brevifolia</i> Pursh	sundew	G5	S2S3
<i>Dulichium arundinaceum</i> (L.) Britton	threeway sedge	G5	S1
<i>Eriocaulon kornickianum</i> van Heurch and Müll.Arg.	small pipewort	G2	S1
<i>Galium arkansanum</i> A. Gray	Arkansas bedstraw	G5	S1S2
<i>Houstonia micrantha</i> (Shinners) Terrell (=Hedyotis australis W.H. Lewis & D.M. Moore)	bluet	G4G5	S1S2
<i>Iris virginica</i> L.	southern blue flag	G5	S2?
<i>Monotropa hypopithys</i> L.	pinemap	G5	S1
<i>Paronychia drummondii</i> Torr. & A. Gray	Drummond's nailwort	G4G5	S1S2
<i>Penstemon murrayanus</i> Hook.	cupleaf beardtongue	G4	S1S3
<i>Platanthera flava</i> (L.) Lindl.	pale green orchid	G4	S1
<i>Polygonella americana</i> (Fisch. & C.A. Mey.) Small	southern jointweed	G5	S1S2
<i>Quercus incana</i> Bartram	bluejack oak	G5	S1S2
<i>Rhynchospora caduca</i> Elliott	anglestem beakrush	G5	S1
<i>Saccharum giganteum</i> (Walter) Pers. (=Erianthus giganteus (Walter) P. Beauv.)	giant plumegrass	G5	S1S2
<i>Sacciolepis striata</i> (L.) Nash	American cupscale	G5	S2

*ONHI Global Rankings:

G2 - Imperiled globally because of its rarity (6 to 20 occurrences or few remaining individuals or acres) or because of other factors demonstrably making it vulnerable to extinction throughout its range.

G4 - Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.

G5 - Demonstrably secure globally though it may be quite rare in parts of its range, especially at the periphery.

S1 - Critically imperiled in Oklahoma because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor of its biology making it especially vulnerable to extinction.

S2 - Imperiled in Oklahoma because of extreme rarity (6 to 20 occurrences or few remaining individuals or acres) or because of other factors making it very vulnerable to extinction throughout its range.

S3 - Rare and local in Oklahoma (thought it may be abundant at some of its locations); in the range of 21-100 occurrences.

APPENDIX
Vascular Plant Collections from Boehler Seeps and Sandhills Preserve
arranged by family. Collections of L. C. Gatti Clark and
The Nature Conservancy personnel.

[**Ed. Notes:** All plants are collected by L. Gatti Clark, unless indicated by an asterisk * for the Nature Conservancy or a tilde ~ for plants collected by both. Nomenclature has been updated using the PLANTS Database (plants.usda.gov/plants).]

FERN ALLIES

Selaginellaceae – Spikemoss Family

Selaginella rupestris (L.) Spring rock spikemoss

FERNS

Azollaceae – Azolla Family

Azolla caroliniana Willd. mosquito fern

Dryopteridaceae – Wood Fern Family

Onoclea sensibilis L. sensitive fern
Woodsia obtusa (Spreng.) Torr. blunt-lobed cliff fern

Ophioglossaceae – Adder's-Tongue Family

Botrychium virginianum (L.) Sw. rattlesnake fern

Osmundaceae – Royal Fern Family

Osmunda cinnamomea L. cinnamon fern
~ *Osmunda regalis* L. var. *spectabilis*
(Willd.) A. Gray royal fern

GYMNOSPERMS

Cupressaceae – Cypress Family

Juniperus virginiana L. eastern redcedar

Pinaceae – Pine Family

~ *Pinus echinata* Mill. shortleaf pine

ANGIOSPERMS

Liliopsida – Monocots

Alismataceae – Water Plantain Family

Alisma subcordatum Raf. water plantain
Echinodorus tenellus (Mart.ex Schult. f.) Buchenau lanceleaf burweed
Sagittaria latifolia Willd. wapato, duck potato

Commelinaceae – Spiderwort Family

Commelina erecta L. erect day flower
Tradescantia ohiensis Raf. Ohio spiderwort

Cyperaceae – Sedge Family

- ~ *Carex bicknellii* Britton Bicknell's sedge
- Carex blanda* Dewey loose flowered sedge
- Carex cherokeensis* Schwein. Cherokee sedge
- * *Carex complanata* Torr. & Hook. sedge
- Carex crinita* Lam. fringed sedge
- ~ *Carex digitalis* Willd. sedge
- * *Carex frankii* Kunth Frank's sedge
- Carex granularis* Muhl. ex Willd. meadow sedge
- Carex gravida* L.H. Bailey heavy sedge
- Carex hyalina* Boott whitesheath sedge
- Carex lupulina* Muhl. Ex Willd. hop sedge
- * *Carex muehlenbergii* Schkuhr ex Willd. Muhlenberg's sedge
- Carex normalis* Mack. sedge
- Carex retroflexa* Muhl. ex Willd. reflexed sedge
- * *Carex squarrosa* L. sedge
- Carex swanii* (Fernald) Mack. swan sedge
- Carex vulpinoidea* Michx. fox sedge
- ~ *Cyperus echinatus* (L.) Alph. Wood globe flatsedge
- (=C. ovularis (Michx.) Torr.)
- Cyperus retroflexus* Buckley one-flower flatsedge
- (=C. uniflorus Torr. & Hook., non Thunb.)
- * *Cyperus strigosus* L. false nutgrass
- Cyperus virens* Michx. green flatsedge
- Dulichium arundinaceum* (L.) Britton threeway sedge
- Eleocharis acicularis* var. *acicularis* (L.) Roem. & Schult. needle spikesedge
- (=E. acicularis (L.) Roem. & Schult. var. *gracilescens*)
- ~ *Eleocharis compressa* Sull. flatstem spikesedge
- Eleocharis engelmannii* Steud. Engleman's spikesedge
- ~ *Eleocharis lanceolata* Fernald blunt spikesedge
- (=E. obtusa (Willd.) Schultes var. *lanceolata* (Fernald) Gilly
- Eleocharis parvula* (Roem. & Schult.) Link ex Bluff, Nees. dwarf spikesedge
- & Schauer (=E. parvula (Roem. & Schult.) Link var.
- anachaeta* (Torr.) Svens.
- Eleocharis tenuis* (Willd.) Schult. slender spikesedge
- var. *verrucosa* (Svens.) Svens.
- ~ *Isolepis carinata* Hook. & Arn. ex Torr. bulrush
- (=Scirpus koilolepis (Steud.) Gleason
- * *Lipocarpa aristulata* (Coville) G. Tucker hemicarpa
- (=Hemicarpa aristulata (Coville) Smyth
- Rhynchospora caduca* Elliott anglestem beakrush
- ~ *Rhynchospora capitellata* (Michx.) Vahl false bogrush
- Rhynchospora glomerata* (L.) Vahl clustered beakrush
- Scleria ciliata* Michx. fringed nutrush
- Scleria triglomerata* Michx. whip nutrush

Eriocaulaceae – Pipewort Family

~ *Eriocaulon kornickianum* van Heurch & Müll. Arg. small pipewort

Iridaceae – Iris Family

Iris virginica L. southern blue flag
Sisyrinchium angustifolium Mill. blue-eyed grass

Juncaceae – Rush Family

Juncus acuminatus Michx. jointed rush
~ *Juncus coriaceus* Mack. leathery rush
Juncus effusus L. bog rush
~ *Juncus marginatus* Rostk. grassleaf rush
~ *Juncus scirpoides* Lam. needlepod rush
Juncus tenuis Willd. tender rush
Luzula bulbosa (Alph. Wood) Smyth & Smyth bulb woodrush

Lemnaceae – Duckweed Family

Spirodela polyrrhiza (L.) Schleid. duck meat

Liliaceae – Lily Family

~ *Allium canadense* L. wild onion
~ *Hypoxis hirsuta* (L.) Coville yellow stargrass

Orchidaceae – Orchid Family

* *Platanthera flava* (L.) Lindl. pale green orchid

Poaceae – Grass Family

Agrostis perennans (Walter) Tuck. autumn bentgrass
* *Andropogon gerardii* Vitman big bluestem
Andropogon ternarius Michx. splitbeard bluestem
Aira elegans Willd. ex Kunth annual silver hairgrass
Aristida desmantha Trin. & Rupr. curly threeawn
Bouteloua hirsuta Lag. hairy grama
Bromus arvensis L. (=B. japonicus Thunb.) Japanese brome
Bromus catharticus Vahl rescue grass
* *Bromus hordeaceus* L. soft chess
~ *Cenchrus spinifex* Cav. (=C. incertus M. A. Curtis) sandbur
~ *Chasmanthium latifolium* (Michx.) Yates inland seaoats
~ *Chasmanthium sessiliflorum* (Poir.) Yates spike-inland seaoats
(=C. laxum (L.) Yates spp. sessiliflorum (Poir.) L. Clark)
Danthonia spicata (L.) P. Beauv. ex Roem. & Schult. poverty oatgrass
~ *Dichantherium acuminatum* (Sw.) Gould & C.A. Clark wooly panicum
var. *fasciculatum* (Torr.) Freckmann
(=Panicum lanuginosum Elliott, non Bosc ex Spreng.)
Dichantherium boscii (Poir.) Gould & C.A. Clark Bosc panicum
(=Panicum boscii Poir.)

<i>Dichantherium depauperatum</i> (Muhl.) Gould (= <i>Panicum depauperatum</i> Muhl.)	slimleaf panicum
<i>Dichantherium dichotomum</i> (L.) Gould var. <i>dichotomum</i> (= <i>Panicum dichotomum</i> L.)	forked panicum
<i>Dichantherium linearifolium</i> (Scribn. ex Nash) Gould (= <i>Panicum linearifolium</i> Scribn.)	slimleaf panicum
~ <i>Dichantherium oligosanthes</i> (Schult.) Gould var. <i>oligosanthes</i> (= <i>Panicum oligosanthes</i> Schult.)	small panicgrass
<i>Dichantherium ravenelli</i> (Scribn. & Merr.) Gould (= <i>Panicum ravenelii</i> Scribn. & Merr.)	panicum
<i>Dichantherium sphaerocarpon</i> (Elliott) Gould var. <i>sphaerocarpon</i> (= <i>Panicum sphaerocarpon</i> Elliott)	leafy panicum
~ <i>Elymus virginicus</i> L.	Virginia wildrye
* <i>Eragrostis capillaris</i> (L.) Nees	lacegrass
* <i>Eragrostis hirsuta</i> (Michx.) Nees	bigtop lovegrass
<i>Eragrostis secundiflora</i> J. Presl	red lovegrass
<i>Eragrostis spectabilis</i> (Pursh) Steud.	purple lovegrass
<i>Gymnopogon ambiguus</i> (Michx.) Britton, Sterns & Poggenb.	broadleaf skeletongrass
<i>Leersia oryzoides</i> (L.) Sw.	Swartz cutgrass
~ <i>Panicum anceps</i> Michx.	beaked panicum
<i>Panicum dichotomiflorum</i> Michx.	fall panicum
* <i>Paspalum laeve</i> Michx.	field paspalum
~ <i>Paspalum setaceum</i> Michx.	thin paspalum
* <i>Saccharum giganteum</i> (Walter) Pers. (= <i>Erianthus giganteus</i> (Walter) P. Beauv.)	giant plumegrass
<i>Sacciolepis striata</i> (L.) Nash	American cupscale
<i>Setaria parviflora</i> (Poir.) Kerguélen (= <i>S. geniculata</i> (Willd.) P. Beauv., nom. illeg.)	knotroot bristlegrass
~ <i>Sorghum halepense</i> (L.) Pers.	Johnsongrass
<i>Sphenopholis obtusata</i> (Michx.) Scribn.	prairie wedgescale
~ <i>Steinchisma hians</i> (Elliott) Nash (= <i>Panicum hians</i> Elliott)	gaping panicum
~ <i>Tridens flavus</i> (L.) Hitchc.	purpletop
<i>Vulpia octoflora</i> (Walter) Rydb.	sixweeks fescue
<i>Zizaniopsis miliacea</i> (Michx.) Döll. & Asch.	southern wildrice
 Potamogetonaceae – Pondweed Family	
<i>Potamogeton pulcher</i> Tuck.	spotted pondweed
 Smilacaceae – Catbriar Family	
<i>Smilax bona-nox</i> L.	greenbrier
<i>Smilax rotundifolia</i> L.	common greenbrier
 Typhaceae – Cattail Family	
<i>Typha angustifolia</i> L.	narrow-leaved cattail

Magnoliopsida - Dicots

Acanthaceae – Acanthus Family

Ruellia humilis Nutt.

fringed leaf ruellia

Amaranthaceae – Amaranth Family

Froelichia floridana (Nutt.) Moq.

snake cotton

Anacardiaceae – Sumac Family

Rhus aromatica Aiton

Rhus copallinum L. (=R. copallina L., orth. var.)

Toxicodendron radicans (L.) Kuntze

lemon sumac

winged sumac

poison ivy

Apiaceae – Carrot Family

* *Chaerophyllum tainturieri* Hook.

~ *Daucus pusillus* Michx.

Eryngium prostratum Nutt. ex DC.

* *Hydrocotyle verticillata* Thunb.

~ *Ptilimnium capillaceum* (Michx.) Raf.

~ *Sanicula canadensis* L.

Sanicula odorata (Raf.) K.M. Pryer & L.R. Phillippe

(=S. gregaria E.P. Bicknell)

Spermolepis divaricata (Walter) Raf. ex Ser.

Spermolepis echinata (Nutt. ex DC.) A. Heller

Spermolepis inermis (Nutt. ex DC.) Mathias & Constance

Torilis arvensis (Huds.) Link

hairy fruit wild chervil

southwestern carrot

creeping eryngo

whorled pennywort

threadleaf mockbishopweed

black snakeroot

cluster snakeroot

forked scaleseed

bristly scaleseed

spreading scaleseed

hedge parsley

Apocynaceae – Dogbane Family

Apocynum cannabinum L.

Indianhemp

Aquifoliaceae – Holly Family

Ilex decidua Walter

deciduous holly

Aristolochiaceae – Birthwort Family

~ *Aristolochia reticulata* Jacq.

netleaved snakeroot

Asclepiadaceae – Milkweed Family

Asclepias tuberosa L.

Asclepias verticillata L.

Asclepias viridis Walter

Matelea biflora (Raf.) Woodson

butterfly milkweed

whorled milkweed

green milkweed

twoflower milkvine

Asteraceae – Sunflower Family

* *Achillea millefolium* L.

* *Ambrosia artemisiifolia* L.

~ *Ambrosia bidentata* Michx.

* *Ambrosia trifida* L.

~ *Antennaria parlinii* Fernald

yarrow

common ragweed

lanceleaf ragweed

giant ragweed

plainleaf pussytoes

- Astranthium integrifolium* (Michx.) Nutt. western daisy
 * *Bidens aristosa* (Michx.) Britton tickseed sunflower
Centaurea americana Nutt. American basket flower
 * *Chaetopappa asteroides* Nutt. ex DC. least daisy
 ~ *Chrysopsis pilosa* Nutt. softhair golden aster
 * *Cirsium altissimum* (L.) Hill tall thistle
Cirsium horridulum Michx. bull thistle
 * *Conoclinium coelestinum* (L.) DC. blue boneset
 (=Eupatorium coelestinum L.)
 ~ *Conyza canadensis* (L.) Cronquist horseweed
 ~ *Coreopsis grandiflora* Hogg ex Sweet bigflowered tickseed
 ~ *Croptilon divaricatum* (Nutt.) Raf. scratch daisy
 (=Haplopappus divaricatus (Nutt.) A. Gray)
 ~ *Echinacea pallida* (Nutt.) Nutt. pale coneflower
 ~ *Elephantopus carolinianus* Rausch. elephant's foot
 * *Erechtites hieracifolia* (L.) Raf. ex DC. fireweed
 ~ *Erigeron strigosus* Muhl. ex Willd. daisy fleabane
 * *Eupatorium perfoliatum* L. boneset
Evax prolifera Nutt. ex DC. rabbit's tobacco
Evax verna Raf. var. *verna* (=E. multicaulis DC.) rabbit's tobacco
Gaillardia aestivalis (Walter) H. Rock prairie gaillardia
 ~ *Gamochaeta purpurea* (L.) Cabrera (=Gnaphalium purpureum L.) purple cudweed
 * *Helenium amarum* (Raf.) H. Rock sneezeweed
 * *Helianthus angustifolius* L. narrow-leaf sunflower
 ~ *Helianthus hirsutus* Raf. hairy sunflower
Heterotheca villosa (Pursh) Shinnars var. *villosa* roughhair golden aster
 (=Chrysopsis villosa (Pursh.) Nutt. ex DC.)
 ~ *Hieracium gronovii* L. hawkweed
Hieracium longipilum Torr. longbeard hawkweed
Hymenopappus scabiosaeus L'Her. old plainsman
 ~ *Krigia cespitosa* (Raf.) K. L. Chambers common dwarf dandelion
 ~ *Krigia dandelion* (L.) Nutt. potato dandelion
Krigia virginica (L.) Willd. dwarf dandelion
Lactuca canadensis L. wild lettuce
 * *Lactuca sativa* L. prickly lettuce
Liatris aspera Michx. tall gayfeather
 * *Liatris elegans* (Walter) Michx. beautiful gayfeather
Liatris squarrosa (L.) Michx. gayfeather
 * *Mikania scandens* (L.) Willd. climbing hempweed
Packera obovata (Muhl. ex Willd.) W.A. Weber & A. Love roundleaf groundsel
 (=Senecio obovatus Muhl. ex Willd. var. rotundus Britton)
 * *Pluchea camphorata* (L.) DC. camphorweed
Pseudognaphalium obtusifolium (L.) Hilliard & B.L. Burt sweet everlasting
 ssp. *obtusifolium* (=Gnaphalium obtusifolium L.)
 ~ *Pyrrhopappus carolinianus* (Walter) DC. false dandelion
 * *Rudbeckia grandiflora* (D. Don) J.F. Gmel. ex DC. Mexican hat
 ~ *Rudbeckia hirta* L. blackeyed Susan

<i>Solidago canadensis</i> L.	common prairie goldenrod
<i>Solidago missouriensis</i> Nutt.	Missouri goldenrod
* <i>Solidago odora</i> Aiton	fragrant goldenrod
* <i>Solidago rugosa</i> Mill.	rough-leaved goldenrod
~ <i>Solidago ulmifolia</i> Muhl. ex Willd.	elmleaf goldenrod
* <i>Symphotrichum patens</i> (Aiton) G.L. Nesom var. <i>patens</i> (= <i>Aster patens</i> Aiton)	late purple aster
* <i>Symphotrichum subulatum</i> (Michx) G.L. Nesom (= <i>Aster subulatus</i> Michx.)	salt marsh aster
~ <i>Verbesina helianthoides</i> Michx.	yellow crownbeard
* <i>Vernonia baldwinii</i> Torr.	western ironweed
Balsaminaceae – Touch-Me-Not Family	
<i>Impatiens capensis</i> Meerb.	spotted touch-me-not
Berberidaceae – Barberry Family	
<i>Podophyllum peltatum</i> L.	May apple
Bignoniaceae – Trumpet Creeper Family	
<i>Campsis radicans</i> (L.) Seem. ex Bureau	trumpet creeper
Boraginaceae – Borage Family	
~ <i>Lithospermum carolinense</i> (Walter ex J.F. Gmel.) MacMill.	plains pucoon
<i>Myosotis verna</i> Nutt.	early scorpiongrass
Brassicaceae – Mustard Family	
<i>Cardamine pensylvanica</i> Muhl. ex Willd.	bitter cress
~ <i>Lepidium virginicum</i> L.	poorman's peppergrass
Buddlejaceae – Butterfly-Bush Family	
<i>Polypremum procumbens</i> L.	juniperleaf
Cabombaceae – Water Shield Family	
<i>Brasenia schreberi</i> J. F. Gmel.	water shield
Callitrichaceae – Water-Starwort Family	
<i>Callitriche heterophylla</i> Pursh	water-starwort
Campanulaceae – Bellflower Family	
~ <i>Triodanis perfoliata</i> (L.) Nieuwl.	clasping Venus looking-glass
Caprifoliaceae – Honeysuckle Family	
<i>Lonicera japonica</i> Thunb.	Japanese honeysuckle
<i>Symphoricarpos orbiculatus</i> Moench	buckbrush
<i>Viburnum rufidulum</i> Raf.	rusty blackhaw

Caryophyllaceae – Pink Family	
<i>Arenaria serpyllifolia</i> L.	thyme-leaved sandwort
<i>Paronychia drummondii</i> Torr. & A. Gray	Drummond's nailwort
<i>Stellaria media</i> (L.) Vill.	chickweed
Ceratophyllaceae – Hornwort Family	
<i>Ceratophyllum demersum</i> L.	coontail
Cistaceae – Rockrose Family	
<i>Lechea villosa</i> Elliott	pinweed
Clusiaceae – Mangosteen Family	
~ <i>Hypericum drummondii</i> (Grev. & Hook.) Torr. & A. Gray	nits-and-lice
~ <i>Hypericum hypericoides</i> (L.) Crantz	St. Andrew's cross
~ <i>Hypericum prolificum</i> L. (=H. spathulatum (Spach.) Steud.)	St. John's wort
Convolvulaceae – Morning Glory Family	
~ <i>Ipomoea pandurata</i> (L.) G. Mey.	wild potato vine
~ <i>Stylisma pickeringii</i> (Torr. ex M.A. Curtis) A. Gray	stylisma
Cornaceae – Dogwood Family	
<i>Cornus florida</i> L.	flowering dogwood
<i>Nyssa sylvatica</i> Marsh.	black gum
Droseraceae – Sundew Family	
~ <i>Drosera brevifolia</i> Pursh	sundew
Ericaceae – Heath Family	
~ <i>Vaccinium arboreum</i> Marsh.	farkleberry
Euphorbiaceae – Spurge Family	
<i>Acalypha rhomboidea</i> Raf.	rhombic copperleaf
<i>Acalypha virginica</i> L.	three seeded Mercury
<i>Chamaesyce serpens</i> (Kunth) Small (=Euphorbia serpens Kunth)	round-leaved spurge
<i>Cnidoscolus texanus</i> (Müll. Arg.) Small	Texas bullnettle
<i>Croton capitatus</i> Michx.	woolly croton
<i>Croton glandulosus</i> L.	sand croton
<i>Croton willdenowii</i> G.L. Webster (=Crotonopsis elliptica Willd.)	rush-foil
~ <i>Stillingia sylvatica</i> L.	queen's delight
Fabaceae – Pea Family	
<i>Apios americana</i> Medik.	ground nut
<i>Astragalus distortus</i> Torr. & A. Gray	bentpod milkvetch
* <i>Baptisia bracteata</i> Muhl. ex Elliott	plains wild indigo
<i>Baptisia leucophaea</i> Nutt. var. <i>leucophaea</i> (Nutt.) Kartesz & Gandhi (=B. leucophaea Nutt.)	white wild indigo
<i>Cercis canadensis</i> L.	redbud

<i>Chamaecrista fasciculata</i> (Michx.) Greene var. <i>fasciculata</i> (= <i>Cassia fasciculata</i> Michx.)	partridge pea
<i>Chamaecrista nictitans</i> (L.) Moench ssp. <i>nictitans</i> var. <i>nictitans</i> (= <i>Cassia nictitans</i> L.)	sensitive pea
<i>Clitoria mariana</i> L.	butterfly pea
<i>Dalea phleoides</i> (Torr. & A. Gray) Shinnars var. <i>phleoides</i> (= <i>Petalostemon phleoides</i> Torr. & A. Gray)	longbract prairie clover
<i>Desmodium paniculatum</i> (L.) DC. var. <i>paniculatum</i>	tall tickclover
<i>Desmodium sessilifolium</i> (Torr.) Torr. & A. Gray	sessile-leaved tickclover
<i>Desmodium viridiflorum</i> (L.) DC.	velvetleaf tickclover
<i>Galactia regularis</i> (L.) Britton, Sterns & Poggenb.	downey milkpea
<i>Gleditsia triacanthos</i> L. (=Caesalpinaceae Family)	honey locust
<i>Lespedeza stuevei</i> Nutt.	tall lespedeza
<i>Mimosa nutallii</i> (DC. ex Britton & Rose) B.L. Turner (= <i>Schrankia nutallii</i> (DC. ex Britton & Rose) Standl.)	sensitive briar
<i>Mimosa microphylla</i> Dryand. (=Schrankia <i>ucinata</i> Willd.)	catclaw briar
~ <i>Orbexilum pendunculatum</i> (Mill.) Rydb. var. <i>psoraloides</i> (Walter) Isely (=Psoralea <i>psoraloides</i> (Walt.) Cory)	Sampson's snakeroot
* <i>Orbexilum simplex</i> (Nutt. ex Torr. & A. Gray) Rydb. (=Psoralea <i>simplex</i> (Nutt. ex Torr. & A. Gray) Rydb.)	singlestem scurf pea
<i>Pediomelum digitatum</i> (Nutt. ex Torr. & A. Gray) Isely (=Psoralea <i>digitata</i> Nutt. ex Torr. & A. Gray)	palm-leaved scurf pea
* <i>Pediomelum hypogaeum</i> (Nutt. ex Torr. & A. Gray) Rydb. var. <i>subulatum</i> (Bush) J. Grimes (=Psoralea <i>subulata</i> Bush)	Sara scurf pea
<i>Rhynchosia latifolia</i> Nutt. ex Torr. & A. Gray	broadleaf snoutbean
<i>Strophostyles helvola</i> (L.) Elliott	wild bean
<i>Stylosanthes biflora</i> (L.) Britton, Sterns & Poggenb.	pencil-flower
~ <i>Tephrosia virginiana</i> (L.) Pers.	goat's rue
~ <i>Trifolium campestre</i> Schreb.	low hop clover
<i>Vicia sativa</i> L.	common vetch
Fagaceae – Beech Family	
<i>Quercus falcata</i> Michx.	southern red oak
<i>Quercus falcata</i> Michx. (= <i>Q. falcata</i> Michx. var. <i>triloba</i> (Michx.) Nutt)	southern red oak
* <i>Quercus incana</i> Bartram	bluejack oak
~ <i>Quercus nigra</i> L.	water oak
* <i>Quercus phellos</i> L.	willow oak
<i>Quercus stellata</i> Wangenh.	post oak
<i>Quercus velutina</i> Lam.	black oak
Fumariaceae – Fumitory Family	
<i>Corydalis micrantha</i> (Engelm. ex A. Gray) A. Gray	slender fumewort
Geraniaceae – Geranium Family	
<i>Geranium carolinianum</i> L.	Carolina cranesbill

Hydrophyllaceae – Waterleaf Family

- * *Hydrolea ovata* Nutt. ex Choisy
- ~ *Phacelia strictiflora* (Engelm. & A. Gray) A. Gray
var. *robbinsii* Constance

hairy hydrolea
prairie blue curls

Juglandaceae – Walnut Family

- Carya myristiciformis* (Michx. f.) Nutt.
- Carya texana* Buckley

nutmeg hickory
black hickory

Lamiaceae – Mint Family

- * *Lycopus virginicus* L.
- ~ *Monarda punctata* L.
- Monarda russeliana* Nutt. ex Sims.
- ~ *Prunella vulgaris* L.
- ~ *Pycnanthemum albescens* Torr. & A. Gray
- * *Pycnanthemum tenuifolium* Schrad.
- ~ *Salvia lyrata* L.
- Scutellaria elliptica* Muhl. ex Spreng.
- * *Scutellaria laterifolia* L.
- Scutellaria parvula* Michx. var. *missouriensis* (Torr.)
Goodman & C.A. Lawson
(=S. *parvula* Michx. var. *leonardii* (Epling) Fernald)

Virginia bugleweed
horsemint
red spotted horsemint
heal-all
whiteleaf mountainmint
narrowleaf mountainmint
lyreleaf age
hairy skullcap
sideflowering skullcap
skullcap

Lauraceae – Laurel Family

- Sassafras albidum* (Nutt.) Nees
(=S. *albidum* (Nutt.) Nees var. *molle* (Raf.) Fernald)

sassafras

Lentibulariaceae – Bladderwort Family

- Utricularia gibba* L. (=U. *biflora* Lam.)

twoflower bladderwort

Lythraceae – Loosestrife Family

- Rotala ramosior* (L.) Koehne

toothcup

Melastomaceae – Melastome Family

- Rhexia mariana* L.

meadow beauty

Menyanthaceae – Buckbean Family

- Nymphoides peltata* (S.G. Gmel.) Kuntze

yellow floating heart

Monotropaceae – Indian Pipe Family

- ~ *Monotropa hypopithys* L.

pinemap

Nymphaeaceae – Water Lily Family

- Nuphar lutea* (L.) Sm.
- Nymphaea odorata* Aiton

yellow pond lily
American water lily

Onagraceae – Evening Primrose Family

Ludwigia alternifolia L.
Oenothera laciniata Hill

bushy seedbox
cutleaf evening primrose

Oxalidaceae – Wood Sorrel Family

Oxalis stricta L.
Oxalis violacea L.

yellow wood sorrel
violet wood sorrel

Plantaginaceae – Plantain Family

Plantago lanceolata L.
Plantago patagonica Jacq.
Plantago virginica L.
Plantago wrightiana Decne.

buckhorn plantain
wooly plantain
paleseed plantain
Wright's plantain

Polemoniaceae – Phlox Family

Phlox glaberrima L.
Phlox pilosa L.

smooth phlox
prairie phlox

Polygalaceae – Milkwort Family

* *Polygala sanguinea* L.

blood polygala

Polygonaceae – Buckwheat Family

~ *Eriogonum longifolium* Nutt.
* *Eriogonum multiflorum* Benth.
~ *Polygonella americana* (Fisch. & C.A. Mey.) Small
~ *Polygonum hydropiperoides* Michx.
Polygonum persicaria L.
* *Polygonum sagittatum* L.
~ *Rumex hastatulus* Baldw.

longleaf eriogonum
heartsepal wild buckwheat
southern jointweed
mild water pepper
lady's thumb
arrowvine
heartwing sorrel

Primulaceae – Primrose Family

~ *Hottonia inflata* Elliott
* *Lysimachia lanceolata* Walter

American featherfoil
lanceleaf loosestrife

Ranunculaceae – Buttercup Family

Delphinium carolinianum Walter
Ranunculus laxicaulis (Torr. & A. Gray) Darby

prairie larkspur
spearwort

Rhamnaceae – Buckthorn Family

Berchemia scandens (Hill.) K. Koch
Ceanothus americanus L.
Frangula caroliniana (Walter) A. Gray
(=*Rhamnus caroliniana* Walter)

rattan vine
New Jersey tea
buckthorn

Rosaceae – Rose Family

Crataegus spathulata Michx.
Potentilla simplex Michx.

littlehip hawthorn
old-field cinquefoil

<i>Prunus serotina</i> Ehrh.	black cherry
<i>Rubus occidentalis</i> L.	blackberry
<i>Rubus ostryifolius</i> Rydb.	highbush blackberry
Rubiaceae – Madder Family	
<i>Cephalanthus occidentalis</i> L.	buttonbush
<i>Diodia teres</i> Walter	rough buttonweed
~ <i>Galium arkansanum</i> A. Gray	Arkansas bedstraw
<i>Galium circaezans</i> Michx.	woods bedstraw
~ <i>Galium obtusum</i> Bigelow	bluntleaf bedstraw
<i>Galium pilosum</i> Aiton	hairy bedstraw
<i>Houstonia micrantha</i> (Shinners) Terrell (=Hedyotis australis W.H. Lewis & D.M. Moore)	bluet
Sapotaceae – Sapodilla Family	
<i>Sideroxylon lanuginosum</i> Michx. ssp. <i>lanuginosum</i> (=Bumelia lanuginosa (Michx.) Pers.)	chittamwood
Scrophulariaceae – Figwort family	
* <i>Agalinis tenuifolia</i> (Vahl.) Raf.	slenderleaf agalinus
* <i>Castilleja coccinea</i> (L.) Spreng.	Indian paintbrush
<i>Castilleja indivisa</i> Engelm.	Indian paintbrush
<i>Collinsia violacea</i> Nutt.	violet collinsia
<i>Gratiola virginiana</i> L.	Virginia hedgehyssop
<i>Nuttallanthus canadensis</i> (L.) D.A. Sutton (=Linaria canadensis (L.) Chaz.)	blue toadflax
<i>Lindernia dubia</i> (L.) Pennell	yellowseed false pimpernell
<i>Pedicularis canadensis</i> L. ssp. <i>canadensis</i> (=P. canadensis L. var. <i>dobbsii</i> Fernald)	common lousewort
* <i>Penstemon laxiflorus</i> Pennell	loose flower penstemon
<i>Penstemon murrayanus</i> Hook.	cupleaf penstemon
Solanaceae – Potato Family	
<i>Physalis heterophylla</i> Nees.	clammy ground cherry
<i>Solanum carolinense</i> L.	Carolina horsenettle
Ulmaceae – Elm Family	
<i>Celtis tenuifolia</i> Nutt.	dwarf hackberry
Urticaceae – Nettle Family	
~ <i>Boehmeria cylindrica</i> (L.) Sw.	false nettle
Valerianaceae – Valerian Family	
~ <i>Valerianella radiata</i> (L.) Dufr.	common beaked cornsalad
Verbenaceae – Verbena Family	
<i>Callicarpa americana</i> L.	American beautyberry

Phryma leptostachya L.
* *Verbena simplex* Lehm.

lopseed
narrow-leaved verbena

Violaceae – Violet Family
Viola villosa Walter

wooly violet

Vitaceae – Grape Family
Ampelopsis arborea (L.) Koehne
Parthenocissus quinquefolia (L.) Planch.
Vitis aestivalis Michx.
Vitis rotundifolia Michx.

peppervine
Virginia creeper
pigeon grape
muscadine