

2024 Litzsinger Road Ecology Center Phenology Report

Prepared by Adam Rembert, Restoration Ecology Supervisor

Introduction

Phenology is the study of recurring biological events and the environmental factors that influence their timing. Our long-term phenological study at the Litzsinger Road Ecology Center (LREC) has been ongoing since 2014 and focuses on the timing of flowering within managed prairie and woodland habitats. The purpose of this study is to improve our understanding of the floral communities within these habitats and to establish a long-term record that can be used to monitor changes in flowering patterns and species composition over time.

Methods

One day per week throughout the growing season, LREC staff, interns, and volunteers survey established transects along pre-existing trails through each of the primary management units. Transects are checked periodically beginning in early February and the phenology monitoring season officially begins when the first flowering species is observed.

During each weekly survey, observers walk each transect and record the date and every species of forb, shrub, and tree observed in flower. For this study, “flowering” is defined as the period of anthesis, when the flowers are fully open and functionally reproductive, with the reproductive structures (pistils and/or stamens) visible. Each species is recorded once per transect.

To promote consistency among observers, only flowering plants visible from the established transect path are recorded. Observers may leave the trail only when necessary to confirm a species identification; plants are not otherwise sought out or surveyed off trail. Observers also note when a flowering plant appears to have been previously cut or mowed, as plants affected by these management activities may produce a later flush of flowers. Observations of cut or mowed plants can be identified separately and omitted from analyses when appropriate.

Update for 2024: As of this year, we are no longer monitoring the North Edge and South Edge transects included in previous years. We are also no longer including overstory (canopy) tree species, due to the difficulty of accurately assessing the flowering stage. These might be monitored with a separated study protocol in the future.

Transect Descriptions

North Prairie

Unit Area = 4.1 ac, Transect length = 221m

Reconstructed wet-mesic bottomland prairie, first planted in 1991. Our largest, oldest and most diverse prairie planting. Last burned in November 2023



North Woods

Unit Area = 0.6 ac. Transect length = 51 m

Narrow, open bottomland woodland. Original habitat has been reduced in size by Deer Creek Sanitary Tunnel Construction in 2020. Primary canopy species are bur oak (*Quercus macrocarpa*), Northern Red Oak (*Quercus rubra*), black walnut (*Juglans nigra*) and American elm (*Ulmus americana*). Very few shrubs in the understory. Moderately impacted by seasonal flooding from Deer Creek. Last burned in November 2023



South Prairie

Unit Area = 2.6 ac, Transect length = 161 m

Reconstructed wet-mesic bottomland prairie, planted in 1992. Last burned in November 2021.



South Woods

Unit area = 2.1 ac, transect length = 229 m

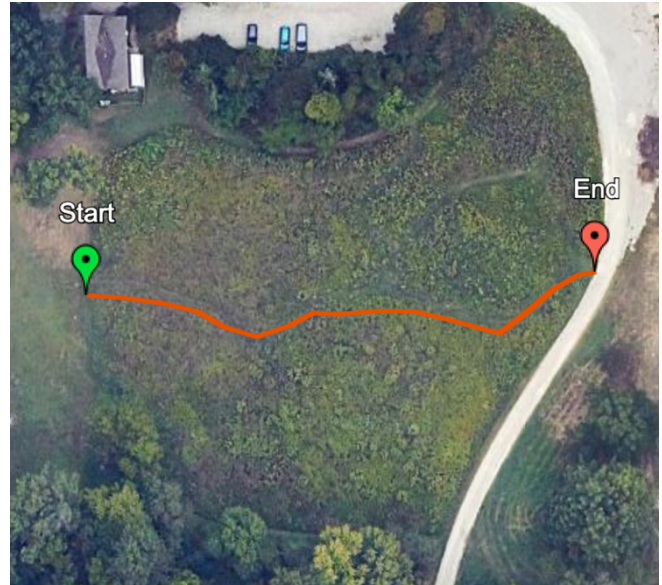
Semi-open bottomland woodland. Primary canopy species are box elder (*Acer negundo*), sycamore (*Platanus occidentalis*), American elm (*Ulmus americana*), and hackberry (*Celtis occidentalis*). Heavily impacted by seasonal flooding from Deer Creek. Last burned in February 2023



Pasture Prairie

Unit area = 1.7 ac, Transect length = 96 m

Reconstructed wet-mesic tallgrass prairie, first planted in 1995-96. Impacted by high flooding from Deer Creek. Last burned in February 2022



Results

The 2024 phenology study season lasted 30 weeks, from March 20 to November 6. A total of 1,401 observations representing 185 species were recorded.

See Appendix A for a complete species list.

Table 1. Summary of 2024 phenology sampling effort and species composition.

Metric	Value
Total Observations	1,401
Sampling Period	30
Total Species	185
Native Species	156 (84.3%)

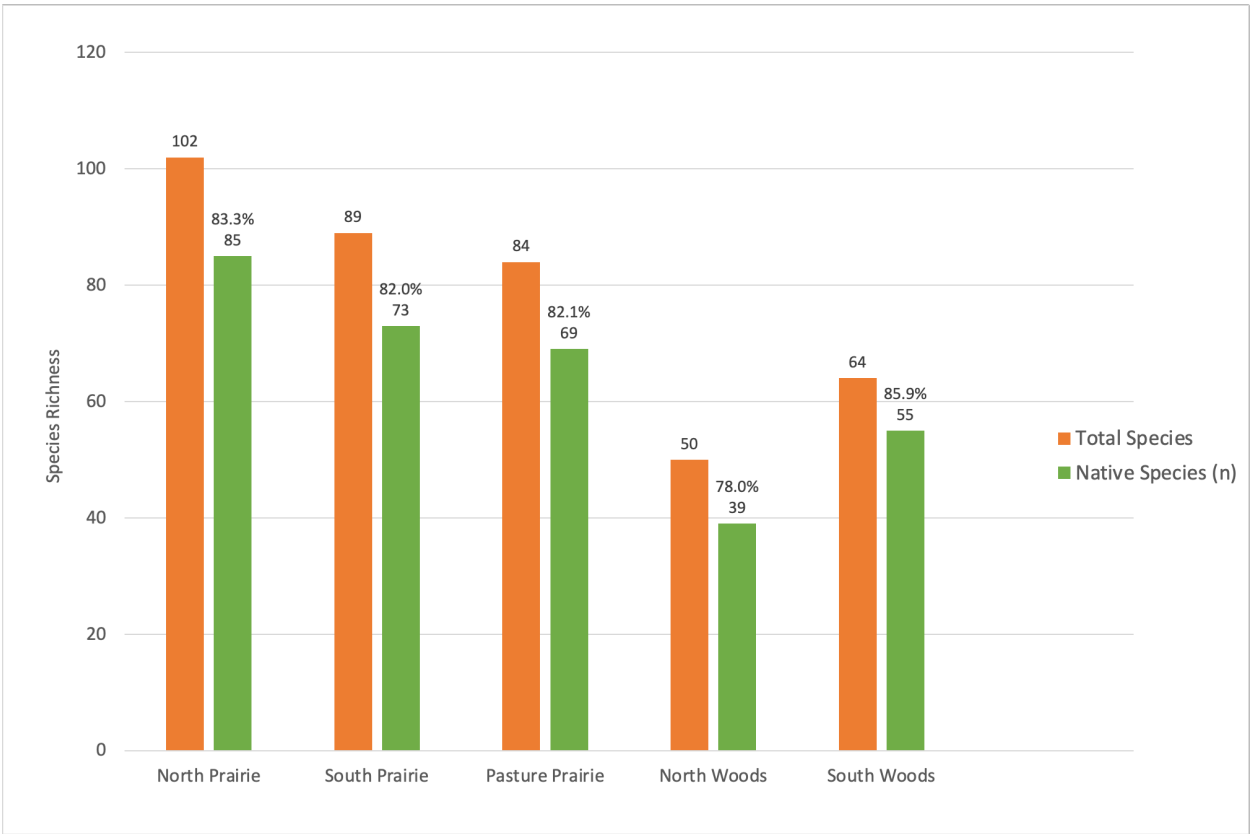


Figure 1. Species richness and native species representation across transects. Bars show total species richness and native species richness for each transect. Percent values indicate the proportion of native species relative to total species richness within each transect. Differences among transects reflect variation in community composition across habitats.

Table 2. Mean C of native plant species recorded within each transect. Coefficients of Conservatism (C - values) range from 0–10 and represent a native species’ fidelity to intact habitats, with higher values indicating greater sensitivity to disturbance. Mean C was calculated using the number of unique native species (n) for each transect.

Transect	Native Species (n)	mean C
North Prairie	85	3.68
South Prairie	73	4.06
Pasture Prairie	69	3.46
North Woods	39	3.55
South Woods	55	4.10

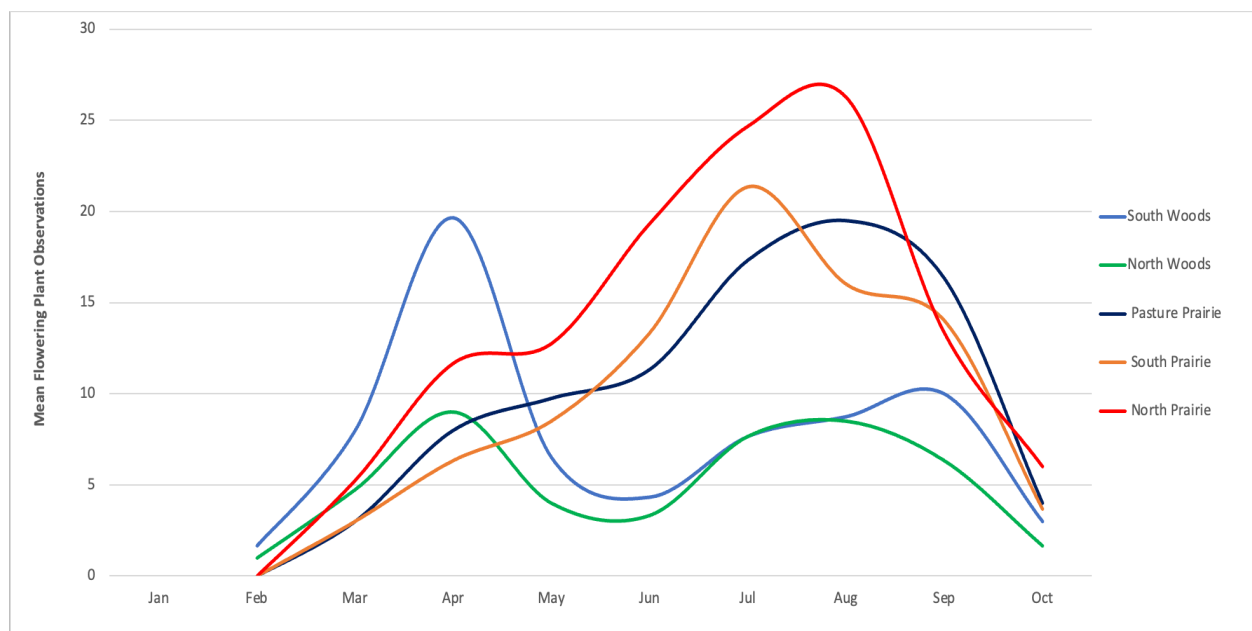


Figure 2. Seasonal patterns in flowering plant observations across prairie and woodland habitats during the 2024 phenology season. Lines represent five monitoring transects through our primary habitat management units. Values represent the mean number of flowering plant observations per sampling event within each month. Monthly means were used to account for variation in sampling frequency and allow comparison of seasonal flowering activity among transects.

Acknowledgements

I thank the interns, volunteers and fellow staff at LREC for their assistance with weekly phenology surveys and data collection throughout the 2024 field season: Allison Azmy, Susan Baron, Deanna Deterding, Malchai Frisby, Madelyn Schaus, Lexi Baiter, Akiva Zeff, Abby Andrews, Jinxin Li, Marty Schmitt, Pat Lynn, Mary Woodward, Lois Kordenbrock and the Missouri Botanical Garden Outdoor Youth Corps.

Appendix A. Species inventory and ecological characteristics. This table includes all recorded species, their observed flowering periods, habitat associations, and coefficients of conservatism (C-values) used in analyses.

“Origin” indicates whether a species is native to the region or introduced via human activity. Introduced species are not given C-values and are represented by an asterisk.

Species	Common name	Observed Flowering Period	Origin	Habitat	C-value
<i>Cardamine hirsuta</i>	hairy bitter cress	Mar 20 - Apr 17	introduced	Prairie and Woodland	*
<i>Ficaria verna</i>	lesser celandine	Mar 20 - Apr 17	introduced	Prairie and Woodland	*
<i>Narcissus pseudo-narcissus</i>	daffodil	Mar 20 - Apr 17	introduced	Prairie and Woodland	*
<i>Lindera benzoin</i>	spicebush	Mar 20 - Mar 27	native	Woodland	5
<i>Cardamine concatenata</i>	toothwort	Mar 20 - Mar 20	native	Woodland	4
<i>Vinca minor</i>	common periwinkle	Mar 20 - Apr 24	introduced	Woodland	*
<i>Erigenia bulbosa</i>	Harbinger-of-Spring	Mar 20 - Mar 27	native	Woodland	6
<i>Galanthus nivalis</i>	snowdrops	Mar 20 - Mar 27	introduced	Woodland	*
<i>Enemion biternatum</i>	false rue anemone	Mar 20 - May 1	native	Woodland	5
<i>Lamium purpureum</i>	purple dead nettle	Mar 20 - May 1	introduced	Prairie and Woodland	*
<i>Glechoma hederacea</i>	creeping charlie	Mar 20 - May 22	introduced	Prairie and Woodland	*
<i>Corylus americana</i>	American hazelnut	Mar 20 - Mar 20	native	Woodland	4
<i>Viola sororia</i>	hairy wood violet	Mar 27 - May 1	native	Prairie and Woodland	2
<i>Claytonia virginica</i>	spring beauty	Mar 27 - Apr 24	native	Prairie and Woodland	3
<i>Sanguinaria canadensis</i>	bloodroot	Mar 27 - Mar 27	native	Woodland	5

<i>Mertensia virginica</i>	Virginia bluebells	Mar 27 - Apr 24	native	Woodland	6
<i>Taraxacum officinale</i>	common dandelion	Apr 3 - Jun 26	introduced	Prairie and Woodland	*
<i>Barbarea vulgaris</i>	yellow rocket	Apr 3 - May 1	introduced	Prairie and Woodland	*
<i>Ribes missouriense</i>	wild gooseberry	Apr 3 - Apr 10	native	Woodland	3
<i>Ranunculus abortivus</i>	small-flowered buttercup	Apr 3 - Apr 17	native	Prairie	1
<i>Collinsia verna</i>	blue-eyed mary	Apr 3 - May 1	native	Woodland	7
<i>Viola rafinesquei</i>	Johnny-jump-up	Apr 3 - May 29	native	Woodland	0
<i>Staphylea trifolia</i>	bladdernut	Apr 3 - Apr 3	native	Woodland	5
<i>Trillium viride</i>	wood trillium	Apr 3 - May 1	native	Woodland	7
<i>Lamium amplexicaule</i>	henbit	Apr 3 - Apr 3	introduced	Prairie	*
<i>Trillium recurvatum</i>	red trillium	Apr 3 - May 1	native	Woodland	6
<i>Prunus americana</i>	wild plum	Apr 3 - Apr 10	native	Woodland	4
<i>Cercis canadensis</i>	redbud	Apr 3 - Apr 10	native	Woodland	3
<i>Phlox divaricata</i>	wild sweet william	Apr 10 - May 15	native	Woodland	4
<i>Pedicularis canadensis</i>	lousewort	Apr 10 - Oct 2	native	Prairie	5
<i>Nothoscordum bivalve</i>	false garlic	Apr 10 - Apr 17	native	Prairie	4
<i>Asimina triloba</i>	pawpaw	Apr 10 - Apr 24	native	Woodland	5
<i>Erigeron philadelphicus</i>	marsh fleabane	Apr 17 - Jun 5	native	Prairie and Woodland	3
<i>Packera obovata</i>	round-leaved ragwort	Apr 17 - May 29	native	Woodland	4
<i>Alliaria petiolata</i>	garlic mustard	Apr 17 - May 22	introduced	Woodland	*
<i>Asarum reflexum</i>	wild ginger	Apr 17 - May 22	native	Woodland	6
<i>Ranunculus hispidus</i>	swamp buttercup	Apr 17 - May 1	native	Woodland	4
<i>Osmorhiza longistylis</i>	smooth sweet cicely	Apr 17 - Apr 24	native	Woodland	3
<i>Stylophorum diphyllum</i>	celandine poppy	Apr 17 - Apr 24	native	Woodland	7

<i>Packera glabella</i>	butterweed	Apr 17 - Jun 5	native	Woodland	1
<i>Zizia aurea</i>	golden alexanders	Apr 17 - May 29	native	Prairie and Woodland	5
<i>Vicia sativa</i>	common vetch	Apr 24 - May 29	introduced	Prairie and Woodland	*
<i>Castilleja coccinea</i>	scarlet paintbrush	Apr 24 - Apr 24	native	Prairie	6
<i>Camassia scilloides</i>	wild hyacinth	Apr 24 - May 1	native	Prairie	6
<i>Ornithogalum umbellatum</i>	star-of-Bethlehem	Apr 24 - May 1	introduced	Prairie and Woodland	*
<i>Podophyllum peltatum</i>	may apple	Apr 24 - May 1	native	Woodland	4
<i>Oxalis dillenii</i>	yellow wood sorrel	Apr 24 - May 15	native	Prairie	0
<i>Veronica serpyllifolia</i>	thyme-leaf speedwell	Apr 24 - May 15	introduced	Prairie and Woodland	*
<i>Rumex altissimus</i>	pale dock	Apr 24 - May 22	native	Prairie	2
<i>Galium aparine</i>	annual bedstraw	Apr 24 - Jun 19	native	Prairie and Woodland	0
<i>Tradescantia virginiana</i>	Virginia spiderwort	Apr 24 - May 1	native	Woodland	6
<i>Tradescantia ernestiana</i>	Ernest's spiderwort	Apr 24 - May 15	native	Woodland	8
<i>Polemonium reptans</i>	jacobs ladder	Apr 24 - May 15	native	Woodland	6
<i>Geranium maculatum</i>	wild geranium	Apr 24 - May 1	native	Woodland	5
<i>Phacelia purshii</i>	Miami mist	Apr 24 - Apr 24	native	Woodland	4
<i>Rubus flagellaris</i>	common dewberry	May 1 - Jun 5	native	Prairie	3
<i>Rubus sp</i>	blackberry	May 1 - Jun 19	native	Prairie and Woodland	1-3
<i>Amsonia illustris</i>	shining blue star	May 1 - May 15	native	Prairie	7
<i>Potentilla simplex</i>	common cinquefoil	May 1 - May 15	native	Prairie	3
<i>Trifolium repens</i>	white clover	May 1 - Oct 9	introduced	Prairie and Woodland	*

<i>Hydrophyllum virginianum</i>	Virginia waterleaf	May 1 - May 15	native	Woodland	4
<i>Lonicera maackii</i>	amur honeysuckle	May 1 - May 1	introduced	Prairie	*
<i>Rumex crispus</i>	curly dock	May 15 - May 15	introduced	Prairie	*
<i>Tradescantia ohiensis</i>	common spiderwort	May 15 - Aug 7	native	Prairie	3
<i>Amorpha fruticosa</i>	indigo bush	May 15 - May 29	native	Prairie	6
<i>Vicia villosa</i>	hairy vetch	May 15 - Jun 5	introduced	Prairie	*
<i>Iris virginica</i>	southern blue flag	May 15 - May 29	native	Prairie	6
<i>Penstemon digitalis</i>	foxglove beard tongue	May 15 - Jul 3	native	Prairie and Woodland	3
<i>Iodanthus pinnatifidus</i>	purple rocket	May 15 - Jun 19	native	Woodland	7
<i>Medicago lupulina</i>	black medick	May 15 - May 15	introduced	Prairie	*
<i>Thalictrum amphibolum</i>	waxy meadow rue	May 22 - Jun 5	native	Prairie	5
<i>Trifolium pratense</i>	red clover	May 22 - Oct 2	introduced	Prairie	*
<i>Lonicera japonica</i>	Japanese honeysuckle	May 22 - Aug 28	introduced	Prairie and Woodland	*
<i>Erigeron annuus</i>	annual fleabane	May 22 - Aug 14	native	Prairie and Woodland	1
<i>Achillea gracilis</i>	yarrow	May 22 - Jul 3	native	Prairie	1
<i>Urtica gracilis</i>	tall nettle	May 22 - Aug 28	native	Woodland	3
<i>Tradescantia subaspera</i>	zig-zag spiderwort	May 22 - Oct 9	native	Prairie and Woodland	8
<i>Allium canadense</i>	wild garlic	May 22 - Jun 26	native	Prairie and Woodland	2
<i>Monarda bradburiana</i>	eastern beebalm	May 22 - May 22	native	Woodland	5
<i>Cryptotaenia canadensis</i>	honewort	May 29 - Jul 3	native	Woodland	2
<i>Trifolium campestre</i>	large hop clover	May 29 - Jun 19	introduced	Prairie	*
<i>Baptisia alba</i>	white wild indigo	Jun 5 - Aug 28	native	Prairie	6

<i>Lythrum alatum</i>	winged loosestrife	Jun 5 - Aug 14	native	Prairie	6
<i>Apocynum cannabinum</i>	prairie dogbane	Jun 5 - Jul 10	native	Prairie	3
<i>Stellaria graminea</i>	common stitchwort	Jun 5 - Jun 19	introduced	Prairie	*
<i>Rosa setigera</i>	prairie rose	Jun 5 - Jun 19	native	Prairie	4
<i>Persicaria longiseta</i>	long-bristled knotweed	Jun 5 - Oct 16	introduced	Prairie and Woodland	*
<i>Phytolacca americana</i>	pokeweed	Jun 5 - Aug 21	native	Woodland	2
<i>Heliopsis helianthoides</i>	false sunflower	Jun 19 - Sep 11	native	Prairie and Woodland	5
<i>Geum canadense</i>	white avens	Jun 19 - Aug 14	native	Prairie and Woodland	2
<i>Pycnanthemum tenuifolium</i>	slender mountain mint	Jun 19 - Jul 31	native	Prairie	4
<i>Asclepias tuberosa</i>	butterfly weed	Jun 19 - Jul 10	native	Prairie	5
<i>Melanthium virginicum</i>	bunch flower	Jun 19 - Jun 26	native	Prairie	9
<i>Teucrium canadense</i>	germander	Jun 19 - Sep 11	native	Prairie and Woodland	2
<i>Convolvulus angulatus</i>	hedge bindweed	Jun 19 - Sep 24	native	Prairie	1
<i>Veronicastrum virginicum</i>	culvers root	Jun 19 - Aug 21	native	Prairie	7
<i>Plantago major</i>	plantain	Jun 19 - Jun 19	introduced	Prairie	*
<i>Rudbeckia hirta</i>	black-eyed susan	Jun 19 - Jul 17	native	Prairie	1
<i>Asclepias syriaca</i>	common milkweed	Jun 19 - Jul 17	native	Prairie and Woodland	0
<i>Circaea canadensis</i>	enchanter's nightshade	Jun 19 - Jul 3	native	Woodland	2
<i>Arnoglossum reniforme</i>	great indian plantain	Jun 19 - Jul 17	native	Woodland	8
<i>Hemerocalis sp</i>	Daylily	Jun 19 - Jun 19	introduced	Prairie	*
<i>Phyla lanceolata</i>	fog fruit, frog fruit	Jun 19 - Oct 2	native	Prairie	3

<i>Ratibida pinnata</i>	grey-headed coneflower	Jun 19 - Aug 28	native	Prairie	4
<i>Silphium integrifolium</i>	rosinweed	Jun 19 - Sep 4	native	Prairie	4
<i>Pycnanthemum virginianum</i>	common mountain mint	Jun 19 - Oct 2	native	Prairie	6
<i>Blephilia hirsuta</i>	wood mint	Jun 19 - Sep 4	native	Woodland	7
<i>Solanum carolinense</i>	horse nettle	Jun 19 - Sep 11	native	Prairie and Woodland	0
<i>Monarda fistulosa</i>	wild bergamot	Jun 26 - Aug 7	native	Prairie and Woodland	4
<i>Eryngium yuccifolium</i>	rattlesnake master	Jun 26 - Oct 2	native	Prairie	8
<i>Echinacea purpurea</i>	purple coneflower	Jun 26 - Sep 4	native	Prairie and Woodland	5
<i>Ludwigia alternifolia</i>	seedbox	Jun 26 - Aug 14	native	Prairie	4
<i>Symphotrichum novae-angliae</i>	New England aster	Jun 26 - Nov 6	native	Prairie and Woodland	4
<i>Aesculus parviflora</i>	bottlebrush buckeye	Jun 26 - Jul 10	introduced	Woodland	*
<i>Eutrochium purpureum</i>	Joe-pye weed	Jul 3 - Aug 21	native	Prairie and Woodland	6
<i>Silphium perfoliatum</i>	cup plant	Jul 3 - Sep 18	native	Prairie	3
<i>Vernonia baldwinii</i>	western ironweed	Jul 3 - Aug 21	native	Prairie	2
<i>Commelina communis</i>	common dayflower	Jul 3 - Oct 2	introduced	Woodland	*
<i>Eutrochium fistulosum</i>	Hollow Joe-Pye Weed	Jul 3 - Sep 4	native	Prairie	8
<i>Pycnanthemum pilosum</i>	hairy mountain mint	Jul 10 - Oct 16	native	Prairie	5
<i>Campanulastrum americanum</i>	tall bellflower	Jul 10 - Nov 6	native	Prairie and Woodland	4
<i>Verbena urticifolia</i>	white vervain	Jul 10 - Jul 17	native	Prairie and Woodland	2
<i>Chamaecrista fasciculata</i>	partridge pea	Jul 17 - Oct 16	native	Prairie	2

<i>Rudbeckia subtomentosa</i>	sweet black-eyed susan	Jul 17 - Oct 16	native	Prairie and Woodland	5
<i>Vernonia missurica</i>	Missouri ironweed	Jul 17 - Oct 2	native	Prairie	5
<i>Coreopsis tripteris</i>	tall coreopsis	Jul 17 - Sep 18	native	Prairie	6
<i>Hibiscus moschuetos</i>	swamp rose mallow	Jul 17 - Aug 21	native	Prairie	5
<i>Rudbeckia triloba</i>	brown-eyed susan	Jul 17 - Oct 9	native	Prairie and Woodland	3
<i>Phlox paniculata</i>	garden phlox	Jul 17 - Sep 4	native	Woodland	3
<i>Liatris pycnostachya</i>	prairie blazing star	Jul 17 - Aug 14	native	Prairie	6
<i>Persicaria virginiana</i>	Virginia knotweed	Jul 17 - Oct 9	native	Prairie and Woodland	1
<i>Persicaria hydropiper</i>	waterpepper	Jul 17 - Oct 2	native	Prairie and Woodland	3
<i>Hackelia virginiana</i>	stickseed	Jul 17 - Aug 7	native	Woodland	3
<i>Oxypolis rigidior</i>	cowbane	Jul 24 - Sep 11	native	Prairie and Woodland	7
<i>Euthamia lanceolata</i>	hairy grass-leaved goldenrod	Jul 24 - Sep 24	native	Prairie	3
<i>Eupatorium perfoliatum</i>	common boneset	Jul 24 - Sep 11	native	Prairie	3
<i>Arnoglossum atriplicifolium</i>	pale indian plantain	Jul 31 - Sep 18	native	Prairie and Woodland	4
<i>Helianthus mollis</i>	ashy sunflower	Jul 31 - Sep 18	native	Prairie	6
<i>Asclepias incarnata</i>	swamp milkweed	Jul 31 - Sep 4	native	Prairie	4
<i>Agrimonia parviflora</i>	swamp agrimony	Jul 31 - Sep 11	native	Prairie and Woodland	5
<i>Verbesina alternifolia</i>	wingstem	Jul 31 - Oct 16	native	Prairie and Woodland	4
<i>Hibiscus lasiocarpus</i>	rose mallow	Jul 31 - Sep 24	native	Prairie	5

<i>Strophostyles leiosperma</i>	small wild bean	Jul 31 - Sep 4	native	Prairie	2
<i>Rudbeckia laciniata</i>	wild golden glow	Jul 31 - Sep 18	native	Woodland	4
<i>Cynanchum laeve</i>	climbing milkweed	Jul 31 - Aug 21	native	Prairie	0
<i>Prunella vulgaris</i>	self-heal	Jul 31 - Oct 9	native	Prairie	1
<i>Elephantopus carolinianus</i>	elephants foot	Jul 31 - Sep 24	native	Prairie and Woodland	3
<i>Ageratina altissima</i>	white snakeroot	Jul 31 - Oct 16	native	Prairie and Woodland	2
<i>Sium suave</i>	water parsnip	Aug 7 - Sep 11	native	Prairie	6
<i>Solidago gigantea</i>	late goldenrod	Aug 7 - Oct 16	native	Woodland	3
<i>Desmodium spp</i>	tick trefoil	Aug 7 - Sep 24	native	Prairie and Woodland	3-4
<i>Amphicarpaea bracteata</i>	hog peanut	Aug 7 - Sep 4	native	Prairie and Woodland	4
<i>Laportea canadensis</i>	wood nettle	Aug 7 - Sep 4	native	Woodland	4
<i>Senna marilandica</i>	Maryland senna	Aug 7 - Aug 21	native	Prairie and Woodland	4
<i>Impatiens capensis</i>	orange jewelweed	Aug 7 - Sep 24	native	Prairie and Woodland	3
<i>Carduus nutans</i>	nodding thistle	Aug 7 - Aug 7	introduced	Woodland	*
<i>Oenothera biennis</i>	common evening primrose	Aug 14 - Oct 16	native	Prairie	0
<i>Ambrosia trifida</i>	giant ragweed	Aug 14 - Sep 11	native	Prairie and Woodland	0
<i>Vernonia gigantea</i>	tall ironweed	Aug 14 - Sep 18	native	Woodland	6
<i>Hypericum muticum</i>	dwarf St. John's-wort	Aug 14 - Aug 14	native	Prairie	4
<i>Lactuca canadensis</i>	wild lettuce	Aug 14 - Aug 14	native	Prairie	3
<i>Physostegia virginiana</i>	obedient plant	Aug 14 - Oct 9	native	Prairie	5
<i>Cuscuta campestris</i>	prairie dodder	Aug 14 - Sep 18	native	Prairie	4

<i>Ruellia humilis</i>	wild petunia	Aug 14 - Aug 14	native	Woodland	3
<i>Lactuca floridana</i>	blue lettuce	Aug 21 - Sep 18	native	Prairie and Woodland	3
<i>Conoclinium coelestinum</i>	mistflower	Aug 21 - Oct 16	native	Prairie and Woodland	3
<i>Sicyos angulatus</i>	bur cucumber	Aug 21 - Sep 11	native	Prairie and Woodland	4
<i>Pilea pumila</i>	clearweed	Aug 21 - Sep 4	native	Woodland	4
<i>Solidago altissima</i>	tall goldenrod	Aug 28 - Oct 30	native	Prairie and Woodland	1
<i>Helenium autumnale</i>	sneezeweed	Aug 28 - Nov 6	native	Prairie and Woodland	5
<i>Cirsium discolor</i>	field thistle	Aug 28 - Sep 24	native	Prairie and Woodland	3
<i>Ambrosia artemisiifolia</i>	common ragweed	Sep 4 - Sep 11	native	Prairie	0
<i>Bidens aristosa</i>	tickseed sunflower	Sep 4 - Oct 16	native	Prairie and Woodland	1
<i>Apios americana</i>	groundnut	Sep 4 - Sep 4	native	Prairie	6
<i>Humulus scandens</i>	Japanese Hops	Sep 4 - Sep 11	introduced	Prairie and Woodland	*
<i>Agalinis tenuifolia</i>	slender false foxglove	Sep 4 - Sep 24	native	Prairie	4
<i>Chelone obliqua</i>	rose turtlehead	Sep 4 - Oct 9	native	Prairie and Woodland	10
<i>Bidens frondosa</i>	common beggars ticks	Sep 4 - Oct 9	native	Prairie and Woodland	2
<i>Lycopus americanus</i>	common water horehound	Sep 11 - Sep 11	native	Prairie	4
<i>Lobelia siphilitica</i>	great blue lobelia	Sep 11 - Oct 2	native	Prairie	4
<i>Gentiana andrewsii</i>	closed gentian	Sep 11 - Nov 6	native	Prairie	10

<i>Helianthus hirsutus</i>	oblong sunflower	Sep 11 - Sep 11	native	Prairie	4
<i>Eupatorium serotinum</i>	late boneset	Sep 11 - Sep 11	native	Prairie	1
<i>Symphyotrichum pilosum</i>	hairy aster	Sep 18 - Nov 6	native	Prairie and Woodland	0
<i>Helianthus tuberosus</i>	Jerusalem artichoke	Sep 18 - Sep 24	native	Prairie	3
<i>Symphyotrichum praealtum</i>	willow aster	Sep 18 - Oct 30	native	Prairie and Woodland	6
<i>Helianthus maximiliani</i>	Maximilian sunflower	Sep 18 - Oct 2	native	Prairie	5
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	Sep 18 - Oct 16	native	Prairie and Woodland	3
<i>Helianthus grosseserratus</i>	sawtooth sunflower	Sep 18 - Sep 24	native	Prairie and Woodland	4
<i>Symphyotrichum lanceolatum</i>	panicled aster	Sep 24 - Oct 30	native	Prairie and Woodland	3
<i>Symphyotrichum drummondii</i>	Drummond aster	Sep 24 - Oct 16	native	Woodland	4
<i>Gentiana x curtisii</i>	plain x prairie gentian hybrid	Oct 2 - Oct 2	native	Prairie	8