

2023 Litzsinger Road Ecology Center Phenology Report

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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.

For the two “edge-only” transects between the prairie and woodlands, we only record the flowering species between the mowed path and the tree line or up to 1 m into the prairie.

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 2020



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 2020



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

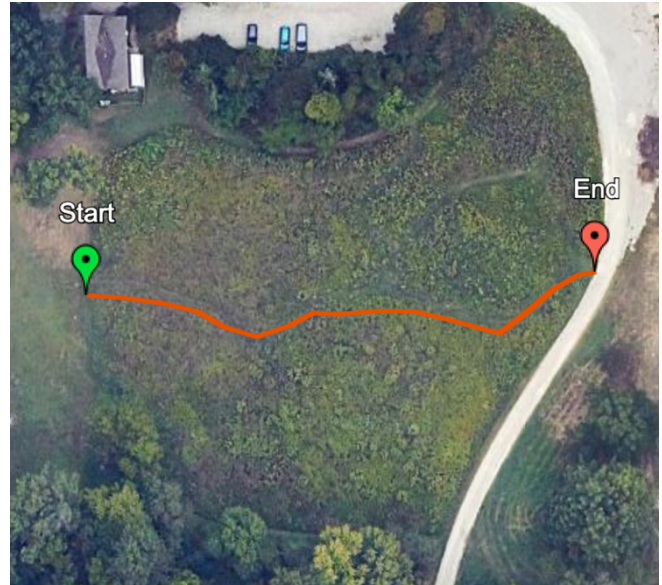
Semi-open bottomland woodland. Primary canopy species are box elder (*Acer negundo*), sycamore (*Platanus occidentalis*), American elm (*Ulmus americana*), and hackberry (*Celtis occidentalis*). Heavily impacted by seasonal flooding from Deer Creek.



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



North Edge

Transect Length = 70 m

Edge-only habitat between the North Prairie and North Woods.. Some flooding impact during very high water events. High disturbance from mowing and foot traffic.



South Edge

Transect length = 146 m

Edge-only habitat between the
South Prairie and Nursery Woods.

Very little impact from flooding.

High disturbance from mowing and
foot traffic.



Results

The 2023 phenology study season lasted 37 weeks, from March 20 to November 6. A total of 2,458 observations representing 214 species were recorded.

See Appendix A for the complete species list.

Table 1. Summary of 2023 phenology sampling effort and species composition.

Metric	Value
Total Flowering Plant Observations	2,458
Sampling Period (weeks)	37
Total Species	214
Native Species	174 (81.3%)

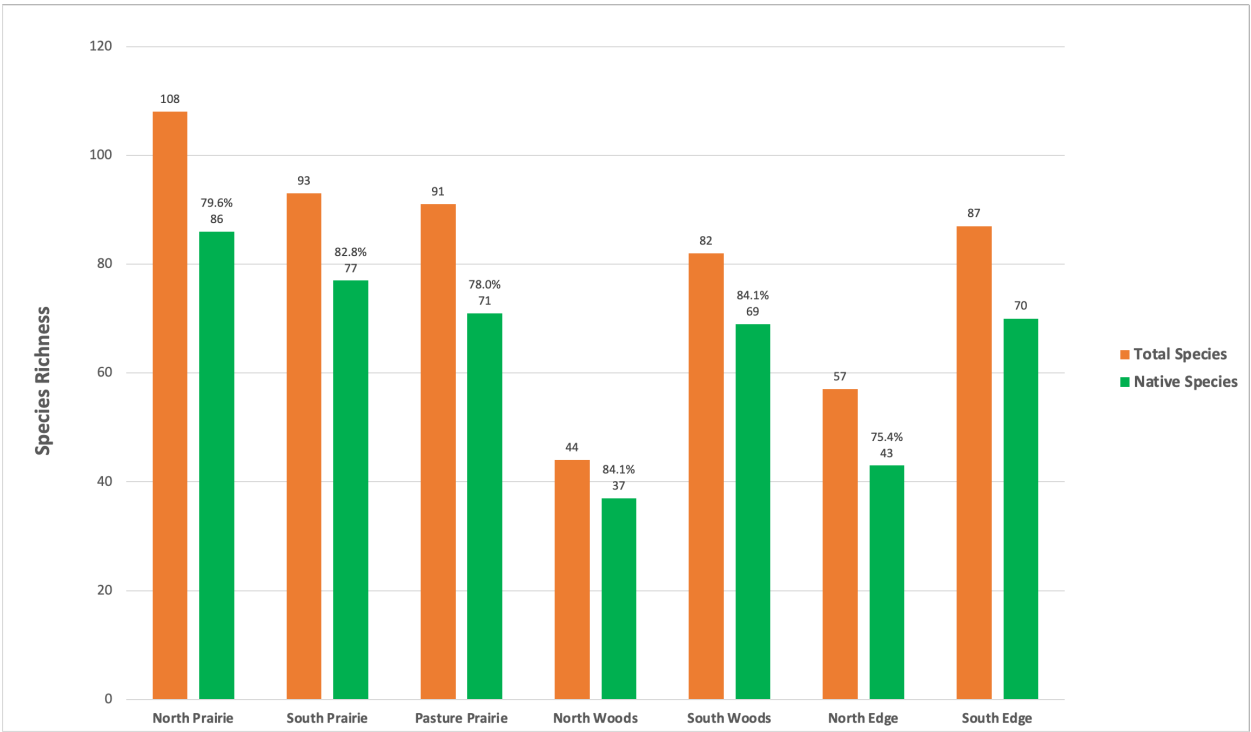


Figure 1. Species richness and native species representation across transects. Bars show total species richness and native species richness for each transect. Percent values indicate the proportion of native species relative to total species richness within each transect. Differences among transects 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	86	3.95
South Prairie	77	4.27
Pasture Prairie	71	3.72
North Woods	37	3.31
South Woods	69	4.16
North Edge	43	2.98
South Edge	70	3.94

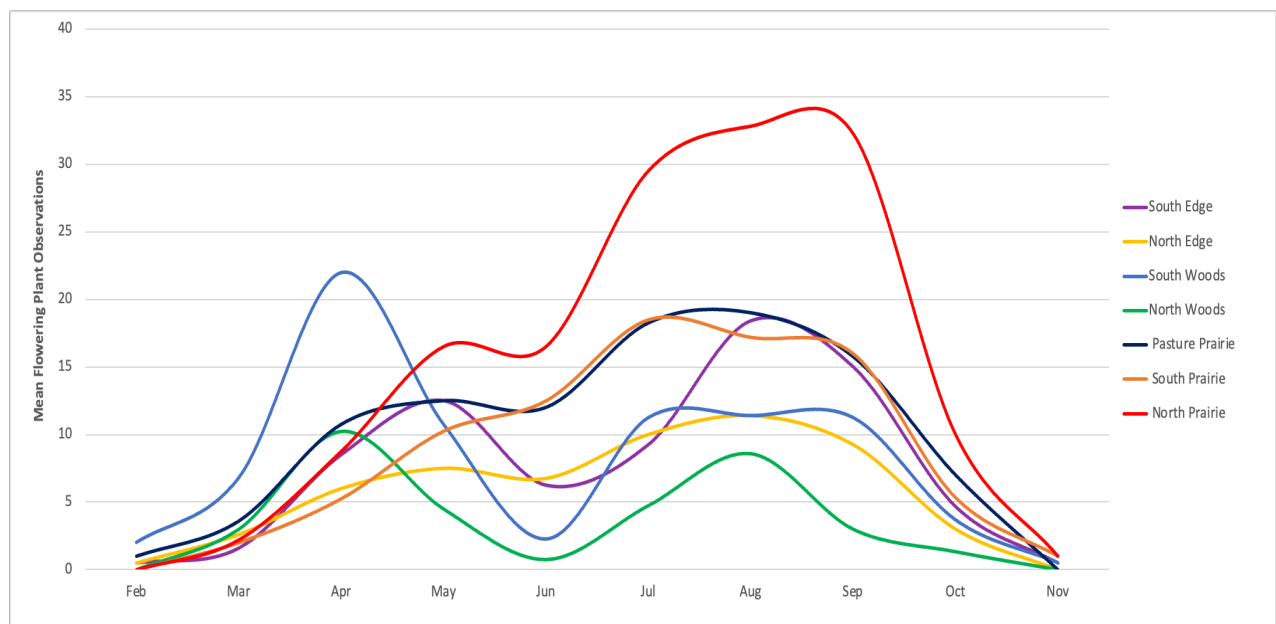


Figure 2. Seasonal patterns in flowering plant observations across habitats during the 2023 phenology season. Lines represent seven monitoring transects through the prairie, woodland and edge-only habitats. Values represent the mean number of flowering plant observations per sampling event within each month. Monthly means were used to account for variation in sampling frequency and allow comparison of seasonal flowering activity among transects.

Appendix A. 2023 Species Inventory and Ecological Characteristics.

This table includes all recorded species, their observed flowering periods, habitat associations, origin, and coefficients of conservatism (C-value) used in analyses. Introduced species are not given a C-value and are represented with an asterisk.

“Origin” indicates whether a species is native to the region or introduced via human activity.

Habitat is listed as “Edge” if the species was only observed within the North Edge or South Edge transects.

Species	Common name	Observed Flowering Period	Origin	Habitat	C-value
<i>Galanthus nivalis</i>	snowdrops	Feb 16 - Mar 23	introduced	Woodland	*
<i>Cardamine hirsuta</i>	hairy bitter cress	Feb 16 - Apr 13	introduced	Prairie and Woodland	*
<i>Ficaria verna</i>	lesser celandine	Feb 23 - Apr 13	introduced	Prairie and Woodland	*
<i>Narcissus pseudo-narcissus</i>	daffodil	Feb 23 - Apr 6	introduced	Prairie and Woodland	*
<i>Acer saccharum</i>	sugar maple	Feb 23 - Mar 2	native	Edge	5
<i>Hamamelis vernalis</i>	vernal witch hazel	Feb 23 - Mar 16	native	Edge	7
<i>Erigenia bulbosa</i>	harbringer of spring	Mar 2 - Mar 23	native	Woodland	6
<i>Corylus americana</i>	american hazelnut	Mar 2 - Mar 16	native	Edge	4
<i>Glechoma hederacea</i>	creeping charlie	Mar 9 - Jun 1	introduced	Prairie and Woodland	*
<i>Lindera benzoin</i>	spicebush	Mar 9 - Mar 30	native	Woodland	5
<i>Lamium purpureum</i>	purple dead nettle	Mar 9 - Apr 20	introduced	Prairie and Woodland	*
<i>Vinca minor</i>	common periwinkle	Mar 16 - May 4	introduced	Woodland	*
<i>Claytonia virginica</i>	spring beauty	Mar 16 - Apr 27	native	Woodland	3
<i>Enemion biternatum</i>	false rue anemone	Mar 16 - Apr 27	native	Woodland	5
<i>Taraxacum officinale</i>	common dandelion	Mar 23 - Aug 24	introduced	Prairie and Woodland	*
<i>Mertensia virginica</i>	virginia bluebells	Mar 23 - Apr 27	native	Woodland	6
<i>Sanguinaria canadensis</i>	bloodroot	Mar 23 - Mar 30	native	Woodland	5
<i>Viola sororia</i>	hairy wood violet	Mar 30 - May 4	native	Prairie and Woodland	2
<i>Barbarea vulgaris</i>	yellow rocket	Apr 6 - May 11	introduced	Prairie	*
<i>Ranunculus abortivus</i>	small-flowered buttercup	Apr 6 - May 4	native	Prairie and Woodland	1
<i>Trifolium repens</i>	white clover	Apr 6 - Sep 28	introduced	Prairie and Woodland	*
<i>Ribes missouriense</i>	wild gooseberry	Apr 6 - May 4	native	Woodland	3
<i>Collinsia verna</i>	blue-eyed mary	Apr 6 - May 11	native	Woodland	7

<i>Trillium recurvatum</i>	red trillium	Apr 6 - May 4	native	Woodland	6
<i>Stylophorum diphyllum</i>	celandine poppy	Apr 6 - Apr 27	native	Woodland	7
<i>Trillium viride</i>	wood trillium	Apr 6 - Apr 27	native	Woodland	7
<i>Ranunculus hispidus</i>	swamp buttercup	Apr 6 - Apr 27	native	Woodland	4
<i>Cercis canadensis</i>	redbud	Apr 6 - Apr 13	native	Edge	3
<i>Prunus americana</i>	wild plum	Apr 6 - Apr 6	native	Edge	4
<i>Veronica serpyllifolia</i>	thyme-leaf speedwell	Apr 13 - Aug 10	introduced	Prairie	*
<i>Asarum reflexum</i>	wild ginger	Apr 13 - May 24	native	Woodland	6
<i>Phlox divaricata</i>	wild sweet william	Apr 13 - May 11	native	Woodland	4
<i>Nothoscordum bivalve</i>	false garlic	Apr 13 - Apr 13	native	Prairie	4
<i>Chaerophyllum procumbens</i>	wild chervil	Apr 13 - Apr 27	native	Woodland	2
<i>Stellaria media</i>	common chickweed	Apr 13 - Apr 13	introduced	Woodland	*
<i>Polemonium reptans</i>	jacobs ladder	Apr 13 - May 4	native	Woodland	6
<i>Asimina triloba</i>	pawpaw	Apr 13 - May 4	native	Woodland	5
<i>Potentilla indica</i>	indian strawberry	Apr 13 - May 11	introduced	Woodland	*
<i>Alliaria petiolata</i>	garlic mustard	Apr 13 - Apr 27	introduced	Prairie and Woodland	*
<i>Viola pubescens</i>	downy yellow violet	Apr 13 - Apr 20	native	Woodland	5
<i>Arisaema triphyllum</i>	Jack-in-the-Pulpit	Apr 13 - May 4	native	Woodland	6
<i>Packera obovata</i>	round-leaved ragwort	Apr 13 - May 11	native	Woodland	4
<i>Geranium maculatum</i>	wild geranium	Apr 13 - May 4	native	Woodland	5
<i>Cerastium glomeratum</i>	clammy chickweed	Apr 13 - Jul 26	introduced	Prairie	*
<i>Veronica arvensis</i>	corn speedwell	Apr 13 - May 4	introduced	Prairie	*
<i>Oxalis dillenii</i>	yellow wood sorrel	Apr 13 - Aug 24	native	Prairie and Woodland	0
<i>Lamium amplexicaule</i>	henbit	Apr 13 - Apr 13	introduced	Prairie	*
<i>Malus sp</i>	crabapple	Apr 13 - Apr 13	introduced	Edge	*
<i>Prunus serotina</i>	wild black cherry	Apr 13 - Apr 13	native	Edge	2
<i>Sassafras albidum</i>	sassafras	Apr 13 - Apr 27	native	Edge	2
<i>Pedicularis canadensis</i>	lousewort	Apr 20 - Sep 7	native	Prairie	5
<i>Cerastium fontanum</i>	mouse-eared chickweed	Apr 20 - Apr 20	introduced	Prairie	*
<i>Vicia sativa</i>	common vetch	Apr 20 - May 24	introduced	Prairie	*
<i>Erigeron philadelphicus</i>	marsh fleabane	Apr 20 - May 18	native	Prairie and Woodland	3
<i>Ornithogalum umbellatum</i>	star-of-bethlehem	Apr 20 - May 4	introduced	Prairie and Woodland	*

<i>Podophyllum peltatum</i>	may apple	Apr 20 - May 4	native	Woodland	4
<i>Galium aparine</i>	annual bedstraw	Apr 20 - May 11	native	Prairie and Woodland	0
<i>Tradescantia ernestiana</i>	Ernest's spiderwort	Apr 20 - May 11	native	Prairie and Woodland	8
<i>Phacelia purshii</i>	miami mist	Apr 20 - May 11	native	Woodland	4
<i>Osmorhiza longistylis</i>	smooth sweet cicely	Apr 20 - May 4	native	Prairie and Woodland	3
<i>Aesculus glabra</i>	Ohio buckeye	Apr 20 - May 11	native	Woodland	5
<i>Zizia aurea</i>	golden alexanders	Apr 20 - May 18	native	Prairie and Woodland	5
<i>Geum vernum</i>	spring avens	Apr 20 - May 4	native	Prairie	3
<i>Aesculus pavia</i>	red buckeye	Apr 20 - May 11	native	Edge	7
<i>Camassia scilloides</i>	wild hyacinth	Apr 27 - May 4	native	Prairie	6
<i>Packera glabella</i>	butterweed	Apr 27 - Jun 8	native	Prairie and Woodland	1
<i>Rubus flagellaris</i>	common dewberry	Apr 27 - May 24	native	Prairie	3
<i>Tradescantia virginiana</i>	virginia spiderwort	Apr 27 - May 11	native	Woodland	6
<i>Amsonia illustris</i>	shining blue star	Apr 27 - May 24	native	Prairie	7
<i>Rumex altissimus</i>	pale dock	Apr 27 - Jun 15	native	Prairie	2
<i>Capsella bursa-pastoris</i>	shepherd's purse	Apr 27 - May 4	introduced	Prairie	*
<i>Lonicera maackii</i>	amur honeysuckle	May 4 - May 24	introduced	Prairie	*
<i>Potentilla simplex</i>	common cinquefoil	May 4 - May 24	native	Prairie	3
<i>Hydrophyllum virginianum</i>	virginia waterleaf	May 4 - May 11	native	Woodland	4
<i>Viola striata</i>	cream violet	May 4 - May 4	native	Woodland	3
<i>Tradescantia ohiensis</i>	common spiderwort	May 4 - Jul 26	native	Prairie and Woodland	3
<i>Valerianella radiata</i>	beaked corn salad	May 4 - May 11	native	Prairie	0
<i>Rubus sp</i>	blackberry	May 11 - Jun 15	native	Prairie	2
<i>Amorpha fruticosa</i>	indigo bush	May 11 - Jun 1	native	Prairie	6
<i>Vicia villosa</i>	hairy vetch	May 11 - Jun 8	introduced	Prairie	*
<i>Arisaema dracontium</i>	green dragon	May 11 - May 18	native	Woodland	6
<i>Iodanthus pinnatifidus</i>	purple rocket	May 11 - Jun 8	native	Woodland	7
<i>Medicago lupulina</i>	black medick	May 11 - Jul 13	introduced	Prairie	*
<i>Iris virginica</i>	southern blue flag	May 18 - Jun 8	native	Prairie	6
<i>Allium canadense</i>	wild garlic	May 18 - Jun 22	native	Prairie and Woodland	2
<i>tradescantia subaspera</i>	zig-zag spiderwort	May 18 - Oct 26	native	Woodland	8

<i>Achillea gracilis</i>	yarrow	May 18 - Jul 13	native	Prairie	1
<i>erigeron annuus</i>	annual fleabane	May 24 - Aug 31	native	Prairie and Woodland	1
<i>Thalictrum dasycarpum</i>	purple meadow rue	Jun 1 - Jun 8	native	Prairie	4
<i>Penstemon digitalis</i>	foxglove beard tongue	May 24 - Jul 13	native	Prairie	3
<i>Heliopsis helianthoides</i>	false sunflower	Jun 1 - Sep 21	native	Prairie	5
<i>Asclepias tuberosa</i>	butterfly weed	Jun 8 - Aug 3	native	Prairie	5
<i>Solanum carolinense</i>	horse nettle	Jun 8 - Sep 28	native	Prairie	0
<i>Asclepias syriaca</i>	common milkweed	Jun 1 - Jul 13	native	Prairie	0
<i>Lythrum alatum</i>	winged loosestrife	Jun 8 - Aug 10	native	Prairie	6
<i>Rosa palustris</i>	swamp rose	Jun 8 - Jun 8	native	Prairie	7
<i>Cryptotaenia canadensis</i>	honestwort	Jun 8 - Jul 20	native	Woodland	2
<i>Ruellia strepens</i>	wild petunia	Jun 1 - Jun 22	native	Edge	3
<i>Swida drummondii</i>	rough-leaved dogwood	May 24 - Jun 8	native	Edge	2
<i>Stellaria graminea</i>	common stitchwort	May 24 - Jun 15	introduced	Prairie	*
<i>Trifolium dubium</i>	little hop clover	Jun 8 - Jun 8	introduced	Edge	*
<i>Baptisia alba</i>	Daylily	Jun 1 - Sep 21	introduced	Prairie	*
<i>Trifolium hybridum</i>	alsike clover	May 24 - Jun 8	introduced	Prairie	*
<i>Rudbeckia hirta</i>	black-eyed susan	Jun 8 - Jul 13	native	Prairie	1
<i>Urtica gracilis</i>	tall nettle	Jun 8 - Sep 7	native	Woodland	3
<i>Sanicula canadensis</i>	black snakeroot	Jun 8 - Jun 8	native	Woodland	3
<i>Melanthium virginicum</i>	bunch flower	Jun 8 - Jul 6	native	Prairie	9
<i>Lysimachia nummularia</i>	creeping jenny	Jun 8 - Jun 8	introduced	Edge	*
<i>Lonicera japonica</i>	japanese honeysuckle	May 24 - Jun 1	introduced	Prairie	*
<i>Iris fulva</i>	copper iris	May 24 - Jun 1	native	Edge	9
<i>Trifolium pratense</i>	red clover	Jun 1 - Aug 3	introduced	Prairie	*
<i>Pycnanthemum tenuifolium</i>	slender mountain mint	Jun 15 - Sep 28	native	Prairie	4
<i>Geum canadense</i>	white avens	Jun 15 - Aug 24	native	Prairie and Woodland	2
<i>Apocynum cannabinum</i>	prairie dogbane	Jun 15 - Jul 13	native	Prairie	3
<i>Rosa setigera</i>	prairie rose	Jun 15 - Jun 22	native	Prairie	4
<i>Convolvulus arvensis</i>	field bindweed	Jun 15 - Sep 28	introduced	Prairie	*
<i>Asclepias sullivantii</i>	Sullivant's milkweed	Jun 15 - Jul 6	native	Prairie	8
<i>Veronicastrum virginicum</i>	culvers root	Jun 15 - Sep 21	native	Prairie	7

<i>Phyla lanceolata</i>	fog fruit, frog fruit	Jun 15 - Oct 19	native	Prairie	3
<i>Verbascum blattaria</i>	moth mullein	Jun 22 - Jun 22	introduced	Prairie	*
<i>Pycnanthemum virginianum</i>	common mountain mint	Jun 22 - Sep 21	native	Prairie	6
<i>Teucrium canadense</i>	germander	Jun 22 - Sep 21	native	Prairie and Woodland	2
<i>Monarda fistulosa</i>	wild bergamot	Jun 22 - Aug 10	native	Prairie	4
<i>Symphyotrichum novae-angliae</i>	new england aster	Jun 22 - Oct 26	native	Prairie	4
<i>Ludwigia alternifolia</i>	seedbox	Jun 22 - Aug 24	native	Prairie and Woodland	4
<i>Silphium integrifolium</i>	rosinweed	Jun 22 - Aug 24	native	Prairie	4
<i>Ratibida pinnata</i>	grey-headed coneflower	Jun 22 - Aug 10	native	Prairie	4
<i>Blephilia hirsuta</i>	wood mint	Jun 22 - Oct 12	native	Woodland	7
<i>Pycnanthemum pilosum</i>	hairy mountain mint	Jul 6 - Oct 19	native	Prairie	5
<i>Eryngium yuccifolium</i>	rattlesnake master	Jul 6 - Aug 24	native	Prairie	8
<i>Coreopsis tripteris</i>	tall coreopsis	Jul 6 - Sep 28	native	Prairie	6
<i>Phlox paniculata</i>	garden phlox	Jul 6 - Aug 31	native	Prairie and Woodland	3
<i>Verbena urticifolia</i>	white vervain	Jul 6 - Sep 21	native	Prairie and Woodland	2
<i>Echinacea purpurea</i>	purple coneflower	Jul 6 - Sep 28	native	Prairie	5
<i>Vernonia baldwinii</i>	western ironweed	Jul 6 - Sep 14	native	Prairie	2
<i>Silphium perfoliatum</i>	cup plant	Jul 6 - Sep 14	native	Prairie	3
<i>Liatris pycnostachya</i>	prairie blazing star	Jul 6 - Jul 20	native	Prairie	6
<i>Vernonia missurica</i>	missouri ironweed	Jul 13 - Oct 12	native	Prairie and Woodland	5
<i>Ageratina altissima</i>	white snakeroot	Jul 13 - Oct 19	native	Prairie and Woodland	2
<i>Eutrochium purpureum</i>	Joe-pye weed	Jul 13 - Aug 31	native	Prairie and Woodland	6
<i>Verbena hastata</i>	blue vervain	Jul 13 - Jul 20	native	Prairie	4
<i>Persicaria longiseta</i>	long-bristled knotweed	Jul 13 - Oct 26	introduced	Prairie and Woodland	*
<i>Scutellaria incana</i>	downy skullcap	Jul 13 - Aug 3	native	Prairie and Woodland	5
<i>Desmodium sp</i>	tick trefoil	Jul 13 - Sep 28	native	Prairie and Woodland	3-4
<i>Campanulastrum americanum</i>	tall bellflower	Jul 13 - Nov 2	native	Prairie and Woodland	4
<i>Prunella vulgaris</i>	self-heal	Jul 20 - Aug 31	native	Prairie	1
<i>Rudbeckia subtomentosa</i>	sweet black-eyed susan	Jul 20 - Oct 26	native	Prairie	5
<i>Hackelia virginiana</i>	stickseed	Jul 20 - Aug 10	native	Woodland	3

<i>Persicaria virginiana</i>	virginia knotweed	Jul 20 - Sep 28	native	Prairie and Woodland	1
<i>Agrimonia parviflora</i>	swamp agrimony	Jul 20 - Sep 28	native	Prairie	5
<i>Arnoglossum atriplicifolium</i>	pale indian plantain	Jul 20 - Sep 14	native	Prairie	4
<i>Cynanchum laeve</i>	climbing milkweed	Jul 20 - Aug 24	native	Prairie	0
<i>Rudbeckia triloba</i>	brown-eyed susan	Jul 26 - Oct 26	native	Prairie and Woodland	3
<i>Euthamia lanceolata</i>	hairy grass-leaved goldenrod	Jul 26 - Sep 28	native	Prairie	3
<i>Asclepias incarnata</i>	swamp milkweed	Jul 26 - Aug 24	native	Prairie	4
<i>Lycopus americanus</i>	common water horehound	Jul 26 - Sep 14	native	Prairie	4
<i>Silphium laciniatum</i>	compass plant	Jul 26 - Jul 26	native	Prairie	6
<i>Eupatorium perfoliatum</i>	common boneset	Jul 26 - Sep 21	native	Prairie	3
<i>Oxypolis rigidior</i>	cowbane	Jul 26 - Sep 21	native	Prairie	7
<i>Commelina communis</i>	common dayflower	Jul 26 - Sep 21	introduced	Woodland	*
<i>Laportea canadensis</i>	wood nettle	Jul 26 - Sep 7	native	Woodland	4
<i>Eutrochium fistulosum</i>	Hollow Joe-Pye Weed	Jul 26 - Sep 28	native	Prairie and Woodland	8
<i>Lobelia inflata</i>	Indian tobacco	Jul 26 - Aug 31	native	Edge	3
<i>Hypericum mutilum</i>	dwarf St. John's wort	Jul 26 - Aug 10	native	Prairie	4
<i>Rudbeckia laciniata</i>	wild golden glow	Jul 26 - Sep 7	native	Woodland	4
<i>Helianthus mollis</i>	ashy sunflower	Aug 3 - Sep 7	native	Prairie	6
<i>Lobelia siphilitica</i>	great blue lobelia	Aug 3 - Sep 28	native	Prairie and Woodland	4
<i>Impatiens capensis</i>	orange jewelweed	Aug 3 - Sep 28	native	Prairie	3
<i>Hibiscus moschuetos</i>	swamp rose mallow	Aug 3 - Sep 14	native	Prairie	5
<i>Sium suave</i>	water parsnip	Aug 3 - Sep 14	native	Prairie	6
<i>Hibiscus lasiocarpus</i>	rose mallow	Aug 3 - Sep 28	native	Prairie	5
<i>Verbesina alternifolia</i>	wingstem	Aug 3 - Sep 28	native	Prairie and Woodland	4
<i>Solidago gigantea</i>	late goldenrod	Aug 3 - Aug 24	native	Woodland	3
<i>Helianthus grosseserratus</i>	sawtooth sunflower	Aug 3 - Sep 28	native	Prairie	4
<i>Oenothera biennis</i>	common evening primrose	Aug 10 - Oct 26	native	Prairie	0
<i>Chamaecrista fasciculata</i>	partridge pea	Aug 10 - Sep 21	native	Prairie	2
<i>Plantago major</i>	plantain	Aug 10 - Aug 10	introduced	Prairie	*
<i>Liriope sp</i>	lilyturf	Aug 10 - Sep 7	introduced	Edge	*
<i>Elephantopus carolinianus</i>	elephants foot	Aug 10 - Sep 28	native	Prairie and Woodland	3

<i>Lactuca canadensis</i>	wild lettuce	Aug 10 - Aug 10	native	Prairie	3
<i>Solidago altissima</i>	tall goldenrod	Aug 10 - Oct 26	native	Prairie	1
<i>Viburnum dentatum</i>	southern arrow-wood	Aug 10 - Sep 7	native	Edge	10
<i>Amphicarpaea bracteata</i>	hog peanut	Aug 10 - Aug 31	native	Edge	4
<i>Lobelia cardinalis</i>	cardinal flower	Aug 10 - Sep 28	native	Edge	6
<i>Eupatorium serotinum</i>	late boneset	Aug 10 - Sep 28	native	Edge	1
<i>Persicaria hydropyroides</i>	smartweed	Aug 10 - Sep 28	native	Woodland	4
<i>Lactuca floridana</i>	blue lettuce	Aug 17 - Sep 28	native	Woodland	3
<i>Silphium terebinthinaceum</i>	prairie dock	Aug 17 - Aug 31	native	Prairie	5
<i>Senna marilandica</i>	maryland senna	Aug 17 - Aug 17	native	Prairie	4
<i>Helenium autumnale</i>	sneezeweed	Aug 24 - Oct 19	native	Prairie	5
<i>Ipomoea sp</i>	morning glory	Aug 24 - Aug 24	introduced	Prairie	*
<i>Ambrosia trifida</i>	giant ragweed	Aug 24 - Sep 14	native	Prairie and Woodland	0
<i>Chelone obliqua</i>	rose turtlehead	Aug 24 - Oct 12	native	Prairie	10
<i>Fallopia scandens</i>	climbing false buckwheat	Aug 31 - Sep 14	native	Woodland	3
<i>Strophostyles leiosperma</i>	small wild bean	Aug 31 - Aug 31	native	Prairie	2
<i>Cirsium discolor</i>	field thistle	Aug 31 - Sep 14	native	Prairie	3
<i>Conoclinium coelestinum</i>	mistflower	Aug 31 - Oct 26	native	Prairie and Woodland	3
<i>Ambrosia artemisiifolia</i>	common ragweed	Sep 7 - Sep 7	native	Prairie	0
<i>Bidens aristosa</i>	tickseed sunflower	Sep 7 - Oct 12	native	Prairie	1
<i>Humulus scandens</i>	Japanese Hops	Sep 7 - Sep 21	introduced	Prairie	*
<i>Gentiana andrewsii</i>	closed gentian	Sep 7 - Nov 16	native	Prairie	10
<i>Helianthus tuberosus</i>	jerusalem artichoke	Sep 7 - Sep 28	native	Prairie	3
<i>Bidens frondosa</i>	common beggars ticks	Sep 7 - Sep 28	native	Woodland	2
<i>Cuscuta campestris</i>	prairie dodder	Sep 7 - Sep 28	native	Woodland	4
<i>Gentiana x curtisii</i>	plain x prairie gentian hybrid	Sep 14 - Sep 28	native	Prairie	8
<i>Symphyotrichum praealtum</i>	willow aster	Sep 14 - Oct 26	native	Prairie	6
<i>Symphyotrichum lateriflorum</i>	side-flowering aster	Sep 14 - Oct 26	native	Prairie and Woodland	3
<i>Pedicularis lanceolata</i>	swamp lousewort	Sep 14 - Oct 12	native	Prairie	9
<i>Sicyos angulatus</i>	bur cucumber	Sep 14 - Sep 14	native	Woodland	4
<i>Agalinis tenuifolia</i>	slender false foxglove	Sep 14 - Oct 26	native	Prairie	4
<i>Symphyotrichum pilosum</i>	hairy aster	Sep 21 - Oct 26	native	Prairie	0

<i>Helianthus maximiliani</i>	Maximilian sunflower	Sep 21 - Sep 28	native	Prairie	5
<i>Symphyotrichum lanceolatum</i>	panicled aster	Sep 21 - Nov 2	native	Prairie and Woodland	3
<i>Symphyotrichum drummondii</i>	Drummond aster	Oct 12 - Oct 12	native	Woodland	4