

Report on 2016 Phenology Observations

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During the 2016 phenology season, from Mar 8-Nov 11 (37 weeks), a total of 3,963 observations of 273 species were recorded.

Table 1. Transects in the 2016 LREC phenology study.

Transect	Habitat Type	Length (m)
North Prairie	Wet-Mesic Prairie	200
North Woods	Riparian Woods	180
North Edge	Prairie/Woodland Transition	130
South Prairie	Wet-Mesic Prairie	160
South Woods	Riparian Woods	200
Pasture Prairie	Wet-Mesic Prairie	100
Mulch Woods	Riparian Woods	90
South Edge	Prairie/Woodland Transition	120

Table 2. Observation and species count by transect

Transect	observations	species count
North Prairie	730	130
South Prairie	551	117
Pasture Prairie	639	129
North Woods	445	105
South Woods	402	87
North Edge	459	88
South Edge	467	114

Table 3. List of species recorded during the 2016 phenology season. Species names in all caps are non-native.

Species	Common name	Habitat
Hamamelis vernalis	Ozark Witch Hazel	Edge
GALANTHUS NIVALIS	Snowdrops	Woodland
RANUNCULUS FICARIA	Lesser Celandine	Prairie,Woodland,Edge
CARDAMINE HIRSUTA	Hoary Bitter Cress	Prairie,Woodland,Edge
LAMIUM PURPUREUM	Dead Nettle	Prairie,Woodland,Edge
Claytonia virginica	Spring Beauty	Woodland,Edge
Enemion biternatum	False Rue Anemone	Woodland
Viola sororia	Hairy Wood Violet	Prairie,Woodland,Edge
Phlox divaricata	Wild Sweet William	Prairie,Woodland,Edge
Trillium sessile	Wake Robin	Woodland
Asarum canadense	Wild Ginger	Woodland
Chaerophyllum procumbens	Wild Chervil	Woodland
Aesculus glabra	Ohio Buckeye	Woodland,Edge
ALLIARIA PETIOLATA	Garlic Mustard	Prairie,Woodland
Galium aparine	Annual Bedstraw	Woodland,Edge
ORNITHOGALUM UMBELLATUM	Star of Bethlehem	Prairie,Woodland,Edge
Podophyllum peltatum	Mayapple	Woodland,Edge
STELLARIA MEDIA	Common Chickweed	Prairie,Woodland,Edge
Staphylea trifolia	American Bladdernut	Woodland
TARAXACUM OFFICINALE	Common Dandelion	Prairie,Woodland,Edge
Trillium recurvatum	Purple Trillium	Woodland
GLECHOMA HEDERACEA	Creeping Charlie	Prairie,Woodland,Edge
LAMIUM AMPLEXICAULE	Henbit	Prairie,Woodland,Edge
Packera glabella	Butterweed	Prairie,Woodland
Packera obovata	Round-Leaved Groundsel	Woodland
Arisaema dracontium	Green Dragon	Woodland
Ellisia nyctelea	Aunt Lucy	Woodland
Lepidium virginicum	Pepperweed	Prairie,Woodland
Erigeron pulchellus	Robin's Plantain	Prairie,Woodland,Edge
Sisyrinchium angustifolium	Pointed Blue-Eyed Grass	Prairie,Woodland,Edge
Oxalis dillenii	Yellow Wood Sorrel	Prairie,Woodland,Edge
POLYGONUM CESPITOSUM	Creeping Smartweed	Prairie,Woodland,Edge
Cryptotaenia canadensis	Honewort	Woodland,Edge

<i>Erigeron annuus</i>	Annual Fleabane	Prairie,Woodland,Edge
MEDICAGO LUPULINA	Black Medic	Prairie,Woodland,Edge
<i>Tradescantia subaspera</i>	Broad-Leaved Spiderwort / Zigzag Spiderwort	Prairie,Woodland
<i>Blephilia hirsuta</i>	Wood Mint	Prairie,Woodland,Edge
TRIFOLIUM REPENS	White Clover	Prairie,Woodland,Edge
<i>Eutrochium pupureum</i>	Joe Pye Weed	Prairie,Woodland,Edge
<i>Rudbeckia triloba</i>	Brown-Eyed Susan	Prairie,Woodland,Edge
<i>Ageratina altissima</i>	White Snakeroot	Prairie,Woodland,Edge
<i>Geum canadense</i>	White Avens	Prairie,Woodland,Edge
<i>Phytolacca americana</i>	Pokeweed	Woodland
<i>Campanulastrum americanum</i>	American Bellflower	Prairie,Woodland
<i>Chasmanthium latifolium</i>	Creek Oats	Prairie,Woodland,Edge
COMMELINA COMMUNIS	Common Dayflower	Woodland
<i>Diarhena americana</i>	American Beak Grass	Woodland,Edge
<i>Elymus hystrix</i>	Bottlebrush Grass	Woodland,Edge
<i>Elymus virginicus</i>	Virginia Wild Rye	Prairie,Woodland,Edge
<i>Juglans nigra</i>	Black Walnut	Woodland,Edge
<i>Teucrium canadense</i>	Germander	Prairie,Woodland,Edge
<i>Tradescantia ohiensis</i>	Common Spiderwort	Prairie,Woodland,Edge
<i>Impatiens capensis</i>	Orange Jewelweed	Prairie,Woodland,Edge
<i>Polygonum virginianum</i>	Virginia Knotweed / Jumpseed	Prairie,Woodland,Edge
<i>Conoclinium coelestinum</i>	Mist Flower	Woodland
<i>Desmodium perplexum</i>	Beggar's Lice	Prairie,Woodland,Edge
<i>Oxalis stricta</i>	Common Wood Sorrel	Prairie,Woodland,Edge
<i>Polygonum punctatum</i>	Smartweed	Prairie,Woodland,Edge
<i>Verbesina alternifolia</i>	Wingstem	Prairie,Woodland,Edge
<i>Verbena urticifolia</i>	White Vervain	Prairie,Woodland,Edge
<i>Agrimonia paraviflora</i>	Swamp Agrimony	Prairie,Woodland,Edge
<i>Laportea canadensis</i>	Wood Nettle	Woodland
<i>Solidago</i> sp.	Goldenrod	Woodland
PERILLA FRUTESCENS	Beefsteak Plant	Woodland
<i>Solidago altissima</i>	Tall Goldenrod	Prairie,Woodland,Edge
<i>Symphyotrichum pilosum</i>	Hairy Aster	Prairie,Woodland,Edge
<i>Symphyotrichum lanceolatum</i>	Panicled Aster	Prairie,Woodland,Edge
BARBAREA VULGARIS	Yellow Rocket	Prairie,Edge
DUCHESNEA INDICA	Indian Strawberry	Prairie,Woodland,Edge

Hydrophyllum virginianum	Virginia Waterleaf	Woodland,Edge
STELLARIA GRAMINEA	Common Stitchwort	Prairie,Edge
VICIA SATIVA	Common Vetch	Prairie,Edge
Zizia aurea	Golden Alexander	Prairie,Woodland,Edge
VERONICA SERPYLLIFOLIA	Thyme-leaf Speedwell	Prairie,Edge
Ranunculus abortivus	Littleleaf Buttercup	Prairie,Woodland,Edge
Rubus flagellaris	Common Dewberry	Prairie,Woodland,Edge
Stellaria longifolia	Longleaf Starwort	Prairie,Edge
Polygonum pensylvanicum	Pennsylvania Smartweed	Prairie,Woodland,Edge
Ruellia strepens	Wild Petunia	Prairie,Edge
Erigeron strigosus	Prairie/Daisy Fleabane	Prairie,Woodland,Edge
Solanum carolinense	Horse Nettle	Prairie,Edge
Heliopsis helianthoides	False Sunflower	Prairie,Edge
Phyla lanceolata	Fog Fruit	Prairie,Woodland,Edge
Tripsacum dactyloides	Gama Grass	Prairie,Edge
DAUCUS CAROTA	Queen Anne's Lace	Prairie,Edge
MELILOTUS OFFICINALIS	Sweetclover	Prairie,Woodland,Edge
Monarda fistulosa	Wild Bergamot	Prairie,Edge
Parthenium integrifolium	Wild Quinine	Edge
Dalea candida	White Prairie Clover	Prairie,Woodland,Edge
Ratibida pinnata	Grey Headed Coneflower	Prairie,Edge
Calystegia sepium	Hedge Bindweed	Prairie,Edge
Pycnanthemum virginianum	Common Mountain Mint	Prairie,Edge
Verbesina helianthoides	Wingstem	Edge
Phlox paniculata	Perennial Phlox	Prairie,Woodland,Edge
Silphium perfoliatum	Cup Plant	Prairie,Edge
Vernonia baldwinii	Western Ironweed	Prairie,Woodland,Edge
Arnoglossum atriplicifolium	Pale Indian Plantain	Prairie,Woodland,Edge
Pycnanthemum tenuifolium	Slender Mountain Mint	Prairie,Edge
Rudbeckia subtomentosa	Sweet Coneflower	Prairie,Edge
Sium suave	Water Parsnip	Prairie,Edge
Tridens flavus	Purpletop	Edge
Coreopsis tripteris	Tall Coreopsis	Prairie,Edge
Elephantopus carolinianus	Elephant Foot	Prairie,Woodland,Edge
Agalinis tenuifolia	Slender False Foxglove	Prairie,Edge
Ambrosia trifida	Giant Ragweed	Prairie,Woodland,Edge

<i>Apios americana</i>	Groundnut	Prairie,Edge
CONVOLVULUS ARVENSIS	Field Bindweed	Prairie,Edge
<i>Vernonia missurica</i>	Missouri Ironweed	Prairie,Woodland,Edge
<i>Rudbeckia laciniata</i>	Goldenglow	Woodland,Edge
<i>Vitis cinerea</i>	Winter Grape	Edge
<i>Elymus canadensis</i>	Canada Wild Rye	Prairie,Woodland,Edge
<i>Pedicularis lanceolata</i>	Swamp Betony	Prairie,Edge
<i>Sicyos angulatus</i>	Bur Cucumber	Woodland,Edge
<i>Helianthus tuberosus</i>	Jerusalem Artichoke	Prairie,Edge
<i>Chelone obliqua</i>	Rose Turtlehead	Prairie,Edge
<i>Symphyotrichum novae-angliae</i>	New England Aster	Prairie,Edge
<i>Symphyotrichum lateriflorum</i>	Side-Flowering Aster	Prairie,Woodland,Edge
<i>Symphyotrichum oblongifolium</i>	Aromatic Aster	Prairie,Edge
<i>Erigeron philadelphicus</i>	Marsh Fleabane	Prairie
<i>Amsonia illustris</i>	Shining Bluestar	Prairie
<i>Pedicularis canadensis</i>	Wood Betony	Prairie
<i>Carex</i> spp.	Sedge	Prairie
<i>Iris virginica shrevii</i>	Blue Flag Iris	Prairie,Edge
<i>Rumex altissimus</i>	Pale Dock	Prairie
<i>Penstemon digitalis</i>	Foxglove Beardtongue	Prairie,Edge
<i>Achillea millefolium</i>	Yarrow	Prairie
<i>Dichanthelium clandestinum</i>	Deer Tongue Grass	Prairie
<i>Iris cristata</i>	Crested Iris	Prairie,Edge
<i>Scirpus pendulus</i>	Nodding Bulrush	Prairie
<i>Thalictrum revolutum</i>	Waxy Meadow Rue	Prairie
TRIFOLIUM PRATENSE	Red Clover	Prairie
<i>Apocynum cannabinum</i>	Prairie Dogbane	Prairie
<i>Asclepias syriaca</i>	Common Milkweed	Prairie
<i>Baptisia alba</i>	White Wild Indigo	Prairie
<i>Lythrum alatum</i>	Winged Loosestrife	Prairie
<i>Asclepias tuberosa</i>	Butterfly Milkweed	Prairie
<i>Silphium integrifolium</i>	Rosinweed	Prairie
<i>Veratrum virginicum</i>	Virginia Bunchflower	Prairie
<i>Ludwigia alternifolia</i>	Bushy Seedbox	Prairie,Edge
<i>Rudbeckia hirta</i>	Black-Eyed Susan	Prairie,Edge
<i>Verbena stricta</i>	Hoary Vervain	Prairie

<i>Hypericum punctatum</i>	Spotted St. John's Wort	Prairie
IPOMOEAE HEDERACEAE	Ivyleaf Morning-glory	Prairie
<i>Phlox pilosa</i>	Sand Prairie Phlox	Prairie
<i>Pycnanthemum verticillatum</i> v. <i>pilosum</i>	Hairy Mountain Mint	Prairie
<i>Veronicastrum virginicum</i>	Culver's Root	Prairie,Edge
<i>Convolvulus</i> sp.	Bindweed	Prairie,Edge
<i>Hibiscus lasiocarpus</i>	Rose Mallow	Prairie,Edge
<i>Cyperus esculentus</i>	Yellow Nutsedge	Prairie,Edge
<i>Echinacea purpurea</i>	Purple Coneflower	Prairie,Woodland,Edge
<i>Eryngium yuccifolium</i>	Rattlesnake Master	Prairie
<i>Senna marilandica</i>	Maryland Senna	Prairie,Woodland,Edge
<i>Amphicarpaea bracteata</i>	American Hog Peanut	Prairie,Edge
<i>Andropogon gerardii</i>	Big Bluestem	Prairie,Edge
<i>Lobelia inflata</i>	Indian Tobacco	Prairie,Woodland,Edge
<i>Phlox maculata</i>	Sweet William Phlox	Prairie
<i>Silene regia</i>	Royal Catchfly	Prairie
<i>Asclepias incarnata</i>	Swamp Milkweed	Prairie
<i>Euthamia graminifolia</i>	Flat-top Goldenrod	Prairie,Edge
<i>Lycopus americanus</i>	American Bugleweed	Prairie
<i>Polygonum hydropiperoides</i>	Mild Water Pepper	Prairie
<i>Sporobolus heterolepis</i>	Prairie Dropseed	Prairie
<i>Oenothera biennis</i>	Common Evening Primrose	Prairie
<i>Cynanchum laeve</i>	Honeyvine Milkweed	Prairie,Woodland
<i>Chamaecrista fasciculata</i>	Partridge Pea	Prairie,Edge
<i>Ambrosia artemisiifolia</i>	Common Ragweed	Prairie
<i>Cuscuta pentagona</i>	Field Dodder	Prairie
<i>Helenium autumnale</i>	Sneezeweed	Prairie
<i>Sorghastrum nutans</i>	Indian Grass	Prairie
<i>Cuscuta</i> sp.	Dodder	Prairie
<i>Strophostyles leiosperma</i>	Trailing Wild Bean	Prairie,Edge
<i>Bidens aristosa</i>	Swamp Marigold	Prairie
<i>Gentiana andrewsii</i>	Closed Gentian	Prairie,Edge
<i>Cirsium discolor</i>	Field Thistle	Prairie
<i>Solidago speciosa</i>	Showy Goldenrod	Prairie,Edge
<i>Symphotrichum praealtum</i>	Willow Aster	Prairie
<i>Lindera benzoin</i>	Spice Bush	Woodland

VINCA MINOR	Periwinkle	Woodland
NARCISSUS PSEUDONARCISSUS	Daffodil	Woodland,Edge
Mertensia virginica	Virginia Bluebells	Woodland,Edge
Cardamine concatenata	Toothwort	Woodland
Cercis canadensis	Eastern Redbud	Woodland,Edge
Ribes missouriense	Missouri Gooseberry	Woodland
Stylophorum diphyllum	Celandine Poppy	Woodland
Collinsia verna	Blue-Eyed Mary	Woodland,Edge
Ranunculus hispidus	Hispid Buttercup	Prairie,Woodland
Arisaema triphyllum	Jack-in-the-Pulpit	Woodland
Polemonium reptans	Jacob's Ladder	Woodland
LONICERA MAACKII	Bush Honeysuckle	Woodland,Edge
Lactuca canadensis	Wild Lettuce	Woodland
Allium canadense	Wild Garlic	Woodland
Rubus occidentalis	Black Raspberry	Prairie,Woodland,Edge
Sanicula canadensis	Black Snakeroot	Woodland,Edge
Liriodendrom tulipifera	Tulip Tree	Woodland,Edge
Cornus obliqua	Silky Dogwood	Woodland
Blephilia ciliata	Ohio Horsemint	Prairie,Woodland
Circaea lutetiana	Enchanters Nightshade	Prairie,Woodland
Phryma leptostachya	Lopseed	Woodland,Edge
Hackelia virginiana	Stickseed	Woodland
Solidago ulmifolia	Elm-Leaved Goldenrod	Woodland
Solidago rugosa	Cliff Goldenrod	Woodland,Edge
HIBISCUS SYRIACUS	Rose-of-Sharon	Woodland
Lobelia cardinalis	Cardinal Flower	Woodland,Edge
Pilea pumila	Canadian Clearweed	Woodland
Spiranthes cernua	Nodding Ladies Tresses	Woodland
Lactuca floridana	Blue Lettuce	Woodland
Elymus villosus	Silky Wild Rye	Woodland
LACTUCA SERRIOLA	Prickly Lettuce	Woodland
Solidago flexicaulis	Zigzag Goldenrod	Woodland
Fragaria sp.	Strawberry	Prairie,Woodland
Geum vernum	Spring Avens	Prairie,Edge
RUMEX CRISPUS	Curly Dock	Prairie
Panicum virgatum	Switch Grass	Prairie

<i>Desmanthus illinoensis</i>	Illinois Bundle Flower	Prairie
<i>Helianthus mollis</i>	Downy Sunflower	Prairie
TRIFOLIUM DUBIUM	Little Hop Clover	Prairie
<i>Verbena hastata</i>	Blue Vervain	Prairie
<i>Liatris pycnostachya</i>	Prairie Blazing Star	Prairie
<i>Echinacea pallida</i>	Pale Purple Coneflower	Prairie,Edge
<i>Liatris scariosa</i>	Eastern Blazing Star	Prairie
<i>Arnoglossum plantagineum</i>	Prairie Indian Plantain	Prairie
<i>Dalea pupurea</i>	Purple Prairie Clover	Prairie
<i>Prunella vulgaris</i> var. <i>lanceolata</i>	Self-heal	Prairie,Woodland,Edge
<i>Carex muskingumensis</i>	Palm Sedge	Prairie
<i>Impatiens pallida</i>	Pale Touch-Me-Not	Prairie,Woodland
<i>Helianthus grosseserratus</i>	Sawtooth Sunflower	Prairie
<i>Physostegia virginiana</i>	False Dragonhead / Obedient Plant	Prairie
<i>Lobelia siphilitica</i>	Great Blue Lobelia	Prairie,Woodland,Edge
<i>Coreopsis palmata</i>	Prairie Coreopsis	Prairie
<i>Gentiana alba</i>	Plain Gentian	Prairie
<i>Oligoneuron rigidum</i>	Stiff Goldenrod	Prairie
<i>Acer saccharinum</i>	Silver Maple	Edge
<i>Corylus americana</i>	Hazelnut	Edge
<i>Acer negundo</i>	Box Elder	Edge
<i>Prunus americana</i>	Wild Plum	Edge
<i>Aesculus pavia</i>	Red Buckeye	Edge
<i>Sassafras albidum</i>	Sassafras	Edge
<i>Aquilegia canadensis</i>	Columbine	Edge
<i>Physocarpus opulifolius</i>	Ninebark	Edge
<i>Potentilla simplex</i>	Common Cinquefoil	Woodland,Edge
<i>Viburnum dentatum</i>	Southern Arrowwood	Edge
<i>Rubus allegheniensis</i>	Common Blackberry	Edge
LONICERA JAPONICA	Japanese Honeysuckle	Edge
LYSIMACHIA NUMMULARIA	Creeping Jenny / Moneywort	Woodland,Edge
<i>Anemone canadensis</i>	Meadow Anemone	Edge
<i>Hypericum mutilum</i>	Weak/Dwarf St. John's Wort	Edge
<i>Scutellaria incana</i>	Downy Skullcap	Prairie,Woodland,Edge
<i>Viburnum lentago</i>	Nannyberry	Edge
<i>Liatris aspera</i>	Rough Blazing Star	Edge

<i>Monarda bradburiana</i>	Horsemint	Edge
<i>Bidens frondosa</i>	Beggar Ticks	Edge
<i>Nothoscordum bivalve</i>	False Garlic	Prairie
<i>Potentilla arguta</i>	Prairie Cinquefoil	Prairie
<i>Amorpha fruticosa</i>	Indigo Bush	Prairie
<i>Scirpus atrovirens</i>	Dark Green Grass	Prairie
<i>Spigelia marilandica</i>	Indian Pink	Prairie, Woodland
<i>Lespedeza capitata</i>	Round-Headed Bush Clover	Prairie
TRIFOLIUM CAMPESTRE	Large Hop Clover	Prairie
<i>Desmodium canadense</i>	Showy Tick Trefoil	Prairie
<i>Eupatorium perfoliatum</i>	Common Boneset	Prairie
<i>Eupatorium altissimum</i>	Tall Boneset	Prairie
<i>Strophostyles umbellata</i>	Wild Pink Bean	Prairie
<i>Sanguinaria canadensis</i>	Bloodroot	Woodland
ALLIUM CEPA	Wild Onion	Woodland
<i>Asimina triloba</i>	Pawpaw	Woodland
<i>Geranium maculatum</i>	Wild Geranium	Woodland
<i>Phacelia purshii</i>	Miami Mist	Woodland
<i>Viola striata</i>	Pale Violet	Woodland
<i>Cornus florida</i>	Flowering Dogwood	Woodland
<i>Sanicula odorata</i>	Black Snakeroot	Woodland
<i>Iodanthus pinnatifidus</i>	Purple Rocket	Woodland
<i>Liatis spicata</i>	Marsh Blazing Star	Woodland

Figure 1. chart showing the relative bloom period for each species found in the prairie transects.

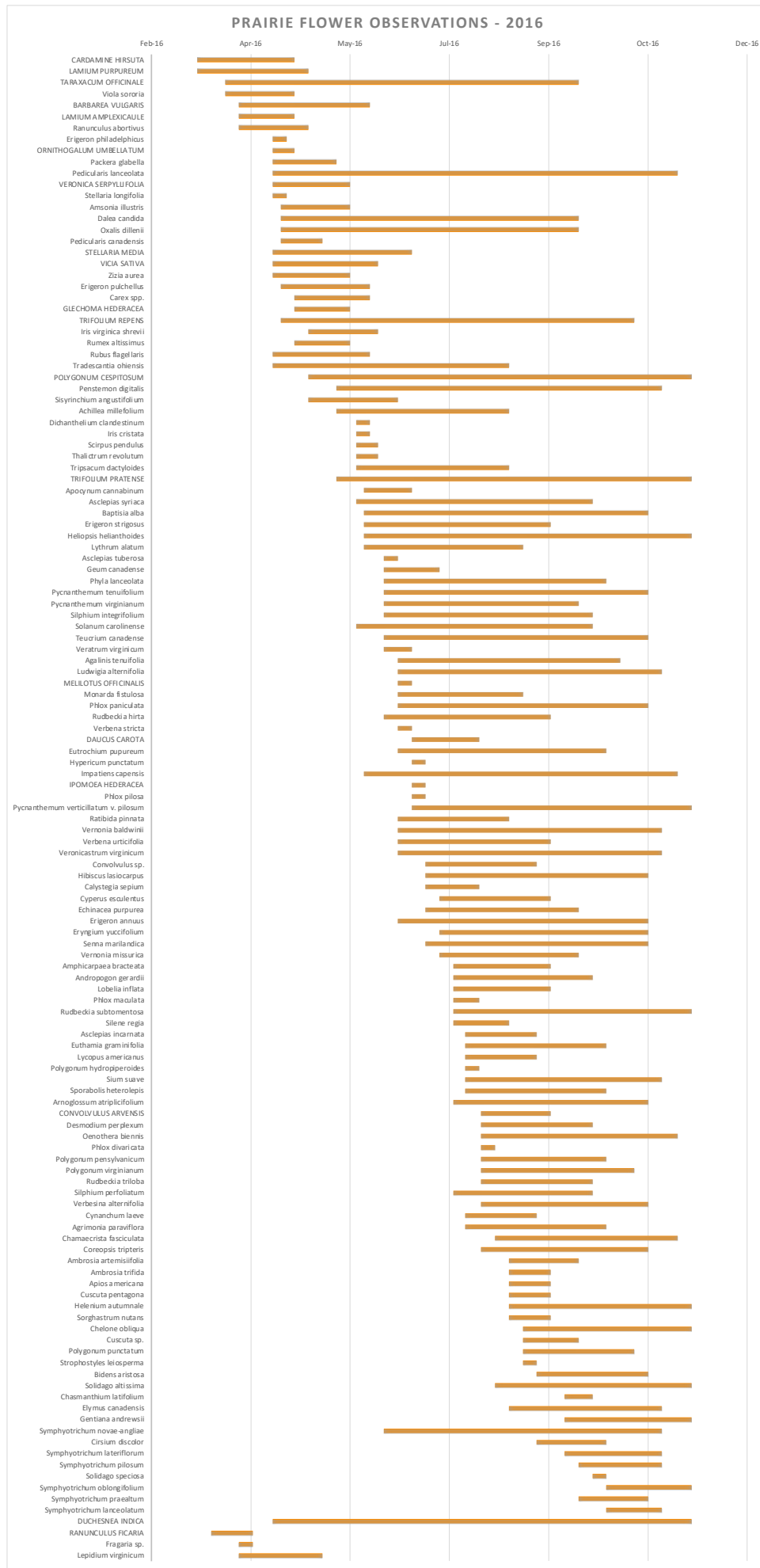


Figure 2. chart showing the relative bloom period for each species found in the woodland transects.

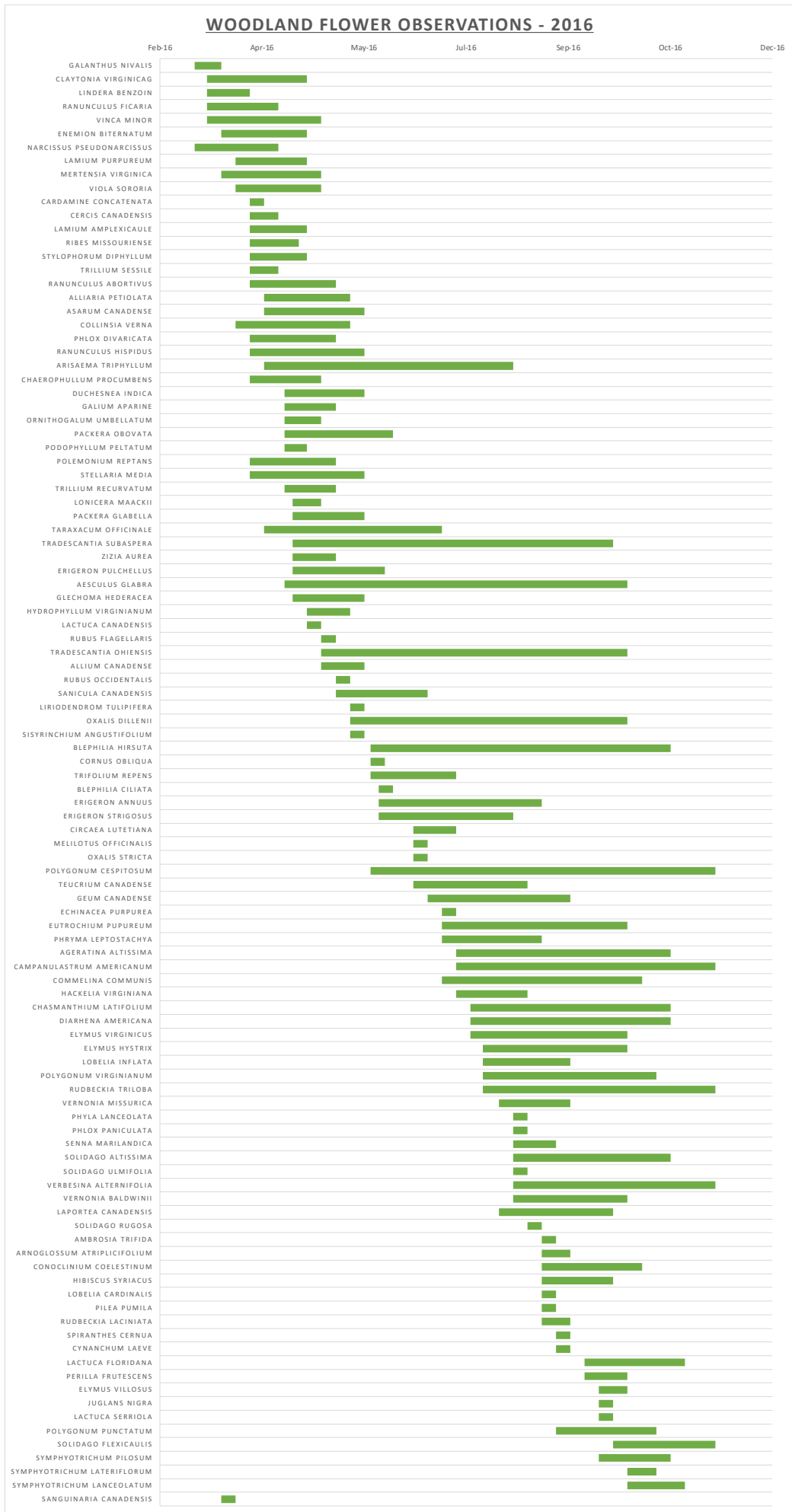


Figure 3. chart showing the relative bloom period for each species found along the edge transects.

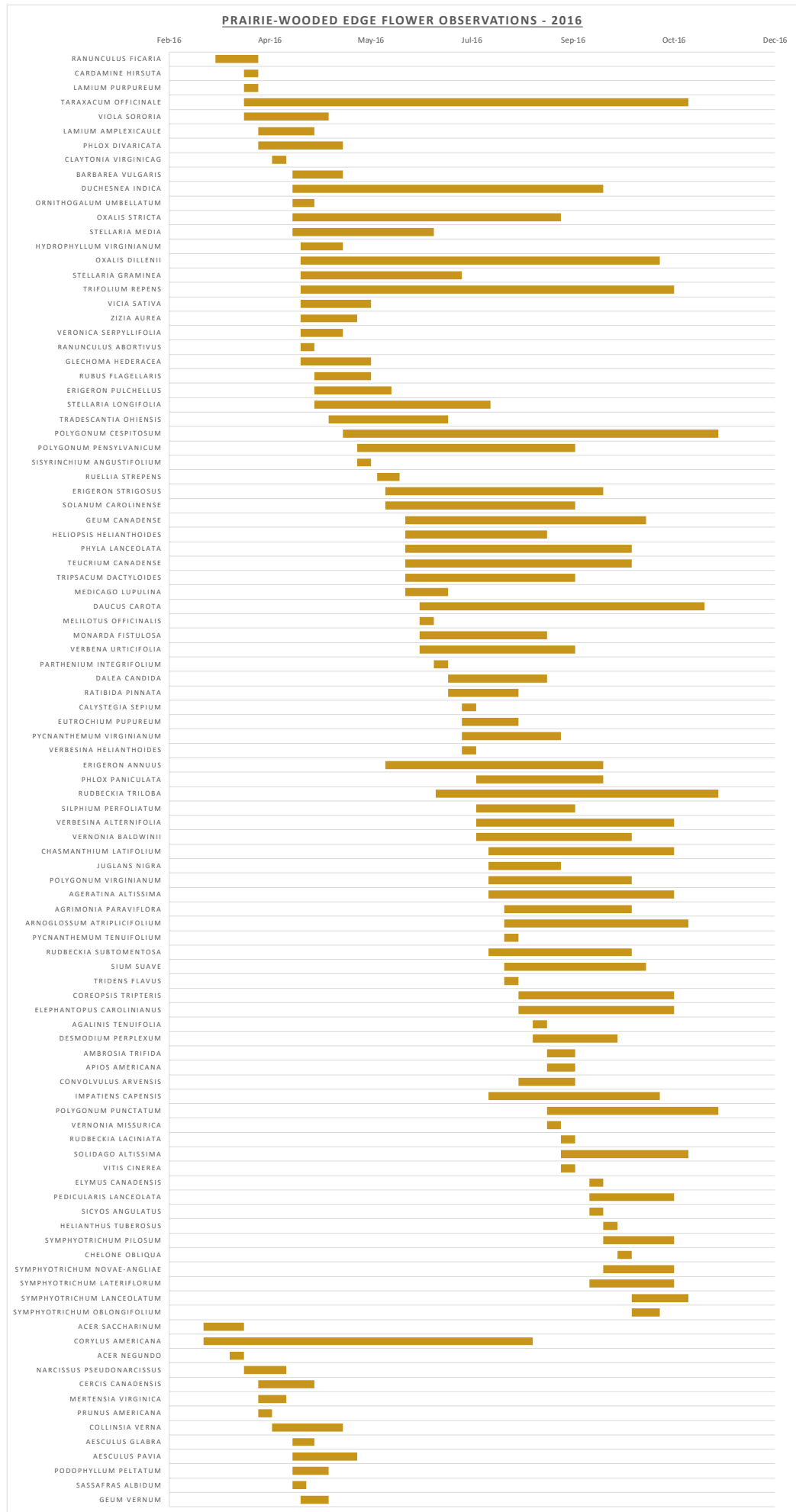


Figure 4. Graph of species observations by transect over time. Each line tracks the number of observations on each transect over the course of the phenology season.

