



Ensuring a future for North America's Cranes

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Species Detection Report

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Master Permit Number: 577 (Caven, Andrew- Crane Trust).
Attention: Mike Fritz, Zoologist, Natural Heritage Program,
Wildlife Division, NGPC

A summary of
the Crane Trust
permitted
activities

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Introduction

During the summer of 2015 we implemented a long-term monitoring plot layout; through set transects establishing survey lines in all parts of the Crane Trust properties with differing soil, vegetation, management practices, and land use histories. These plots consist of two parallel transects: the vegetation line, totaling 100m and the bird and small mammal line, totaling 200m. Due to the complex mosaic of soil types and management histories on the property the total number of sites equals 53 (with an additional four sites for avian point-count surveys only).

In all we conducted 70 avian surveys, 43 vegetation surveys, and 46 small mammal surveys (2740 trap nights; survey numbers as of 12/01/2015). Below is a summary of the detections and methods for avian, vegetation, and small mammal surveys. In addition, incidental detections (seen/collected outside of actual surveys) of vegetation, butterflies, and other animals are listed.

Small Mammals

We used Sherman Box Traps baited with a seed mixture of sterilized (autoclaved) oats, sunflower seeds, and cracked corn. Mealworms were also added in areas suspected or known to contain high proportions of Soricomorpha. Traps were placed every 5m along a 200m set transect with an additional 10 traps placed within 10m of the transect for incidental detections. Small mammals were identified to species when possible; age, sex, and reproductive status of each individual was also recorded when possible. Measurements, such as weight and length, were not recorded unless necessary for identification. Our trapping began in July and ended in October when the nightly low was below 40°F. Total survey trap effort concluded at 2,300 trap nights (trap number*sites trapped). An additional 440 trap nights, focused on a slough on the property to discover individuals marked from the previous year, brought the total trap nights to 2,740 trap nights.

No individual was killed for collection; however, individuals that died were collected. Total trap death equaled 10 individuals (an additional one individual was pulled from the trap by a Mesocarnivore and killed and is not part of this analysis) or 3.3% (Table 1). All of these deaths were Soricomorpha, which are prone to trap death from starvation due to high metabolism. Out of all Soricomorpha captured only 24% died in the trap (which is significantly lower than found in the literature)¹. Presumably, this is due to the addition of mealworms, and careful timing of trap set up/pick up.

Table 1. Small Mammals Detected at the Crane Trust

Scientific Name	Common Name	No. Trapped	No. Dead in trap
<i>Cyphotis parva</i>	Least Shrew	5	3
<i>Blarina</i> spp. (<i>brevicauda</i> or <i>hylophaga</i>)	Northern Short-tailed Shrew or Elliot's Shrew	24	3
<i>Ictidomys tridecemlineatus</i>	Thirteen-lined Ground Squirrel	1	0
<i>Microtus ochrogaster</i>	Prairie Vole	27	0
<i>Microtus pennsylvanicus</i>	Meadow Vole	47	0
<i>Mus musculus</i>	House Mouse	1	0
<i>Peromyscus leucopus</i>	White-footed Mouse	56	0
<i>Peromyscus maniculatus</i>	Deer Mouse	83	0
<i>Reithrodontomys megalotis</i>	Western Harvest Mouse	34	0
<i>Sorex</i> spp. (<i>cinereus</i> or <i>haydeni</i>)	Masked Shrew or Prairie Shrew	13	4
<i>Zapus hudsonius</i>	Meadow Jumping Mouse	5	0

¹ Do, R., Shonfield, J., & McAdam, A. G. (2013). Reducing accidental shrew mortality associated with small-mammal livetrapping II: a field experiment with bait supplementation. Journal of Mammalogy, 94(4), 754-760.

Birds

We conducted 1/8 mile-long (200m) moving surveys along set transects to be completed in 15 minutes, and stationary focal point surveys to also be completed in 15 minutes, with both methods starting from the same location. During these surveys all detected species were recorded (detected by sight and/or vocalization). The total number of individual birds detected of each species was recorded. Each bird detection was recorded as within 50m or outside 50m of the transect or focal point. We did not try to estimate the real population based off the number of birds detected, but counted the number of birds detected and treated that as an index for discerning the relative abundance of particular species (Abundant: daily, Common: two to three times per week, Uncommon: two to three times per month, Rare: two to three times per year, Occasional: not every year, Accidental: outside of normal range. For non-resident species the index applies only to migration periods for that species). Surveys were conducted at 50 sites across Crane Trust properties beginning in July (and will continue throughout the winter), thus far totaling (as of 12/01/15) 70 surveys and 185 species. In addition, species were recorded incidentally during other activities when necessary. No individual was taken for collection; however two Soras were found dead and taken for collection (See Table 7).

Table 2. Bird Detections and Abundance at the Crane Trust

Abundance Key: Abundant: daily, Common: two to three times per week, Uncommon: two to three times per month, Rare: two to three times per year, Occasional: not every year, Accidental: outside of normal range.

Common Name	Abundance	Common name	Abundance	Common Name	Abundance
American Avocet	Rare	Blue-gray Gnatcatcher	Accidental	Common Merganser	Common
American Bittern	Rare	Blue-winged Teal	Abundant	Common Nighthawk	Rare
American Coot	Common	Blue-winged Warbler	Accidental	Common Yellowthroat	Abundant
American Crow	Uncommon	Bobolink	Abundant	Cooper's Hawk	Uncommon
American Goldfinch	Abundant	Brewer's Blackbird	Rare	Dark-eyed Junco	Uncommon
American Kestrel	Common	Broad-winged Hawk	Uncommon	Dickcissel	Abundant
American Robin	Abundant	Brown Creeper	Common	Double-crested Cormorant	Common
American Tree Sparrow	Abundant	Brown Thrasher	Rare	Downy Woodpecker	Uncommon
American White Pelican	Uncommon	Brown-headed Cowbird	Abundant	Dunlin	Occasional
American Wigeon	Uncommon	Buff-breasted Sandpiper	Uncommon	Eared Grebe	Rare
American Woodcock	Rare	Bufflehead	Uncommon	Eastern Bluebird	Rare
Bald Eagle	Uncommon	Cackling Goose	Common	Eastern Kingbird	Abundant
Baltimore Oriole	Uncommon	Canada Goose	Abundant	Eastern Meadowlark	Rare
Bank Swallow	Common	Canvasback	Uncommon	Eastern Phoebe	Uncommon
Barn Swallow	Abundant	Cattle Egret	Uncommon	Eastern Screech-Owl	Rare
Bell's Vireo	Uncommon	Cedar Waxwing	Uncommon	Eastern Wood-Pewee	Rare
Belted Kingfisher	Uncommon	Chimney Swift	Rare	Eurasian Colored-Dove	Uncommon
Black Tern	Rare	Chipping Sparrow	Rare	European Starling	Abundant
Black-capped Chickadee	Uncommon	Clay-colored Sparrow	Uncommon	Field Sparrow	Common
Black-crowned Night-Heron	Rare	Cliff Swallow	Abundant	Forster's Tern	Rare
Black-throated Green Warbler	Uncommon	Common Goldeneye	Uncommon	Fox Sparrow	Uncommon
Blue Jay	Common	Common Grackle	Uncommon	Franklin's Gull	Common

Common Name	Abundance
Gadwall	Rare
Golden-crowned Kinglet	Uncommon
Grasshopper Sparrow	Abundant
Gray Catbird	Common
Great Blue Heron	Common
Great Crested Flycatcher	Uncommon
Great Egret	Rare
Great Horned Owl	Uncommon
Greater Prairie-Chicken	Uncommon
Greater Scaup	Uncommon
Greater White-fronted Goose	Common
Greater Yellowlegs	Common
Green Heron	Rare
Green-winged Teal	Common
Hairy Woodpecker	Uncommon
Harris's Sparrow	Rare
Henslow's Sparrow	Uncommon
Hermit Thrush	Rare
Herring Gull	Uncommon
Horned Lark	Rare
House Finch	Uncommon
House Sparrow	Common
House Wren	Common
Hudsonian Godwit	Rare
Indigo Bunting	Rare
Killdeer	Abundant
Lark Bunting	Rare
Lark Sparrow	Rare
Le Conte's Sparrow	Common
Least Sandpiper	Rare
Least Tern	Common
Lesser Scaup	Common
Lesser Yellowlegs	Common
Lincoln's Sparrow	Common
Loggerhead Shrike	Rare
Long-billed Dowitcher	Rare
Mallard	Abundant
Marsh Wren	Uncommon
Merlin	Rare
Mississippi Kite	Accidental
Common name	Abundance
Mourning Dove	Common
Nashville Warbler	Common
Nelson's Sparrow	Rare
Northern Bobwhite	Abundant
Northern Cardinal	Common
Northern Flicker	Common
Northern Harrier	Abundant
Northern Pintail	Abundant
Northern Rough-winged Swallow	Uncommon
Northern Shoveler	Common
Northern Shrike	Rare
Orange-crowned Warbler	Rare
Orchard Oriole	Common
Osprey	Common
Pectoral Sandpiper	Rare
Philadelphia Vireo	Rare
Pied-billed Grebe	Uncommon
Pine Siskin	Rare
Piping Plover	Uncommon
Prairie Falcon	Rare
Red-bellied woodpecker	Uncommon
Red-eyed Vireo	Uncommon
Redhead	Uncommon
Red-headed Woodpecker	Common
Red-tailed Hawk	Abundant
Red-winged Blackbird	Abundant
Ring-billed Gull	Common
Ring-necked Duck	Uncommon
Ring-necked Pheasant	Common
Rock Pigeon	Uncommon
Rose-breasted Grosbeak	Rare
Ross's Goose	Common
Rough-legged Hawk	Rare
Ruby-crowned Kinglet	Common
Ruby-throated Hummingbird	Occasional
Ruddy Duck	Common
Rusty Blackbird	Rare
Sandhill Crane	Abundant
Savannah Sparrow	Common
Say's Phoebe	Rare
Common Name	Abundance
Sedge Wren	Common
Semipalmated Plover	Uncommon
Semipalmated Sandpiper	Uncommon
Sharp-shinned hawk	Rare
Sharp-tailed Grouse	Rare
Snow Goose	Abundant
Solitary Sandpiper	Occasional
Song Sparrow	Abundant
Sora	Rare
Spotted Sandpiper	Common
Spotted Towhee	Uncommon
Stilt Sandpiper	Occasional
Swainson's Hawk	Uncommon
Swamp Sparrow	Uncommon
Tree Swallow	Uncommon
Turkey Vulture	Common
Upland Sandpiper	Common
Vesper Sparrow	Uncommon
Virginia Rail	Rare
Warbling Vireo	Rare
Western Kingbird	Uncommon
Western Meadowlark	Abundant
Western Sandpiper	Rare
White-breasted Nuthatch	Uncommon
White-crowned Sparrow	Rare
White-faced Ibis	Uncommon
White-rumped Sandpiper	Rare
White-throated Sparrow	Uncommon
Whooping Crane	Occasional
Wild Turkey	Rare
Willet	Rare
Willow Flycatcher	Uncommon
Wilson's Phalarope	Rare
Wilson's Snipe	Uncommon
Wood Duck	Uncommon
Yellow Warbler	Abundant
Yellow-headed Blackbird	Rare
Yellow-rumped Warbler	Uncommon
Yellow-throated Vireo	Occasional

Fish

We chose two sloughs on our property that had been flooded this winter and spring to seine based on the previous year's surveys. Two sites were seined on one slough and one site on the other. Each survey consisted of seven to eight runs, totaling ~150m of the slough. Using a net sized to the general width of the slough channel we ran the net at the slough bottom capturing as many fish as possible. We then dumped those fish into a 5 gallon bucket for identification and counting purposes. No individuals were collected.

Table 3. Fish Detected at the Crane Trust

Scientific Name	Common Name	No. Caught and Released
<i>Ameiurus melas</i>	Black Bullhead	6
<i>Hybognathus hankinsoni</i>	Brassy Minnow	39
<i>Culaea inconstans</i>	Brook Stickleback	616
<i>Ictalurus punctatus</i>	Channel Catfish	9
<i>Cyprinus carpio</i>	Common Carp	94
<i>Etheostoma exile</i>	Iowa Darter	1
<i>Etheostoma nigrum</i>	Johnny Darter	1
<i>Pimephales promelas</i>	Fathead Minnow	3
<i>Lepomis cyanellus</i>	Green Sunfish	1
<i>Micropterus salmonides</i>	Largemouth Bass	2
<i>Gambusia affinis</i>	Western Mosquitofish	2674
<i>Fundulus kansae</i>	Northern Plains Killifish	1
<i>Fundulus sciadicus</i>	Plains Topminnow	411
<i>Carpioles carpio</i>	River Carpsucker	12

Vegetation

Any plants in excellent condition, in fruit or flower (ideally both), were collected for the Crane Trust herbarium. We recorded the area where the plant was found to the nearest transect, the date it was collected, and its relative abundance in the area. We collected 372 specimens in 2015 and verified 46 specimens previously collected in the herbarium (collected 1982-1989; see Table 4).

Additionally, vegetation surveys using both point-line intercept (every two meters) and quadrat (0.5m x 1.0m every 10m) methods along a 100m permanently marked transect were conducted. Surveys began in July and ended in early October with the first frost. These surveys increased our knowledge of the plant species currently present across the property (See Table 5).

Table 4. Plant Specimens Collected for the Crane Trust Herbarium.

Date	Family	Scientific Name	Common Name	Location	Collector	ID'd by
6/10/2015	Asteraceae	<i>Leucanthemum vulgare</i> Lam.	Ox-eye daisy	SW Mormon paddock	J. Wiese	J. Wiese & A. Caven
6/10/2015	Asteraceae	<i>Leucanthemum vulgare</i> Lam.	Ox-eye daisy	SW Mormon paddock	J. Wiese	J. Wiese & A. Caven
6/9/2015	Cyperaceae	<i>Cyperus lupulinus</i> (Spreng.) Marcks	Great Plains flatsedge	E. Ruge paddock	A. Caven	A. Caven
6/9/2015	Cyperaceae	<i>Schoenoplectus acutus</i> (Muhl. Ex Bigelow) A. Love & D. Love	Hardstem bulrush	Alda farms pasture	A. Caven & J. Wiese	J. Wiese & A. Caven
6/9/2015	Cyperaceae	<i>Scirpus pallidus</i> (Britton) Fernald	Cloaked bulrush	Alda farms pasture	J. Wiese	J. Wiese
6/9/2015	Cyperaceae	<i>Scirpus pallidus</i> (Britton) Fernald	Cloaked bulrush	Alda farms pasture	J. Wiese	J. Wiese
6/9/2015	Poaceae	<i>Phalaris arundinacea</i> L.	Reed canary grass	Alda farms pasture	J. Wiese	J. Wiese
6/9/2015	Boraginaceae	<i>Onosmodium molle</i> Michx.	False gromwell	South Brown paddock	J. Wiese	J. Wiese & A. Caven
6/10/2015	Liliaceae	<i>Asparagus officinalis</i> L.	Garden asparagus	NE Mormon paddock	A. Caven & J. Wiese	J. Wiese
6/9/2015	Fabaceae	<i>Lotus tenuis</i> Waldst. & Kit. ex Willd.	Narrowleaf trefoil	W. Mormon paddock	J. Wiese & A. Caven	J. Wiese & A. Caven
6/9/2015	Fabaceae	<i>Lotus tenuis</i> Waldst. & Kit. ex Willd.	Narrowleaf trefoil	W. Mormon paddock	J. Wiese & A. Caven	J. Wiese & A. Caven
6/9/2015	Lamiaceae	<i>Prunella vulgaris</i> L.	Common selfheal	South Brown paddock	J. Wiese	J. Wiese
6/9/2015	Ranunculaceae	<i>Delphinium virescens</i> Nutt.	Prairie larkspur	E. Ruge paddock	A. Caven & J. Wiese	J. Wiese
6/10/2015	Onagraceae	<i>Calylophus serrulatus</i> (Nutt.) P.H. Raven	Yellow sundrops	NE side of SW Mormon paddock	A. Caven	A. Caven
6/9/2015	Solanaceae	<i>Physalis hispida</i> (Waterf.) Cronquist	Prairie groundcherry	SE Mormon paddock	J. Wiese	A. Caven
5/22/2015	Malvaceae	<i>Callirhoe alcaeoides</i> (Michx.) A. Gray	Pink/pale poppy mallow	Ruge paddock	T. Smith	A. Caven
5/22/2015	Brassicaceae	<i>Sisymbrium loeselii</i> L.	Small tumbleweed mustard		A. Caven	J. Wiese
5/25/2015	Poaceae	<i>Poa pratensis</i> L.	Kentucky bluegrass	Ruge paddock	A. Caven	A. Caven
5/27/2015	Poaceae	<i>Poa pratensis</i> L.	Kentucky bluegrass	Ruge paddock	A. Caven	A. Caven
5/27/2015	Cyperaceae	<i>Carex pellita</i> Muhl. ex Willd.	Woolly Sedge	Prairie Dog paddock	A. Caven & J. Wiese	A. Caven
5/26/2015	Cyperaceae	<i>Carex eleocharis</i> L.H. Bailey		Office Pasture paddock	A. Caven & J. Wiese	A. Caven
6/4/2015	Euphorbiaceae	<i>Euphorbia spathulata</i> Lam.	Warty Spurge	South Brown paddock	J. Wiese	J. Wiese
6/3/2015	Liliaceae	<i>Allium canadense</i> var. <i>canadense</i>	Wild onion/meadow garlic	NE of Plover Pond	J. Wiese	J. Wiese
5/24/2015	Poaceae	<i>Alopecurus pratensis</i> L.	Meadow foxtail	Office Pasture paddock	A. Caven	A. Caven

Date	Family	Scientific Name	Common Name	Location	Collector	ID'd by
6/10/2015	Cyperaceae	<i>Carex crawei</i> C. Dewey	Crawe's Sedge	Office Pasture paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/10/2015	Cyperaceae	<i>Carex emoryi</i> C. Dewey	Emory's Sedge	Office Pasture paddock	A. Caven & J. Wiese	A. Caven
5/26/2015	Iridaceae	<i>Sisyrinchium campestre</i> E.P. Bicknell	Blue-eye grass	Ruge paddock, near S. treeline	A. Caven	A. Caven & J. Wiese
6/4/2015	Poaceae	<i>Vulpia octoflora</i> (Walter) Rydb.	Six-weeks fescue	South Brown paddock	A. Caven	A. Caven
5/28/2015	Convolvulaceae	<i>Convolvulus arvensis</i> L.	Field bindweed	N. of Lean-to, W. Prairie Dog paddock	J. Wiese & A. Caven	J. Wiese
6/1/2015	Apiaceae	<i>Conium maculatum</i> L.	Poison hemlock	NW. Prairie Dog paddock	J. Wiese	J. Wiese
6/1/2015	Rosaceae	<i>Potentilla recta</i> L.	Sulfur cinquefoil	N. of lab	J. Wiese	J. Wiese
5/26/2015	Plantaginaceae	<i>Plantago virginica</i> L.	Virginia plantain	Ruge paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/1/2015	Elaeagnaceae	<i>Elaeagnus angustifolia</i> L.	Russian-olive	N. of Lean-to, W. Prairie Dog Paddock	J. Wiese	J. Wiese
5/26/2015	Plantaginaceae	<i>Plantago patagonica</i> var. <i>patagonica</i> Jacq.	Wholly plantain	Ruge paddock	J. Wiese & A. Caven	J. Wiese
5/20/2015	Caryophyllaceae	<i>Cerastium brachypodium</i> (Engelm. ex A. Gray) B.L. Robins	Chickweed		A. Caven	A. Caven
6/1/2015	Salicaceae	<i>Populus deltoides</i> Bartr. ex Marsh	Plains/eastern cottonwood	N. of Lean-to, W. Prairie Dog paddock	J. Wiese	J. Wiese
6/1/2015	Commelinaceae	<i>Tradescantia bracteata</i> J.K. Small	Bracted spiderwort	N. of Prairie Dog paddock	J. Wiese	J. Wiese
6/1/2015	Moraceae	<i>Morus alba</i> L.	White mulberry	N. of Lean-to, W. Prairie Dog paddock	J. Wiese	J. Wiese
5/13/2015	Brassicaceae	<i>Hesperis matronalis</i> L.	Dame's rocket	Ruge paddock & Hwy 30 off site	A. Caven	A. Caven
5/26/2015	Asteraceae	<i>Achillea millefolium</i> L.	Yarrow	Shoemaker Island	A. Caven	A. Caven
5/26/2015	Poaceae	<i>Dactylis glomerata</i> L.	Orchard grass	Office Pasture paddock	A. Caven	A. Caven
5/28/2015	Boraginaceae	<i>Lithospermum incisum</i> Lehm.	Fringed pacoon		T. Smith	A. Caven
5/22/2015	Commelinaceae	<i>Tradescantia bracteata</i> J.K. Small	Bracted spiderwort	E. of bunkhouse	J. Wiese	J. Wiese
6/1/2015	Vitaceae	<i>Vitis riparia</i> Michx.	Riverbank grape	N. of Lean-to, W. Prairie Dog paddock	J. Wiese	J. Wiese
6/1/2015	Brassicaceae	<i>Chorispora tenella</i> (Pallas) DC.	Blue mustard	N. of lab	J. Wiese	J. Wiese
6/1/2015	Fabaceae	<i>Amorpha fruticosa</i> L.	Wild indigo	N. of Lean-to, W. Prairie Dog paddock	J. Wiese	J. Wiese
6/4/2015	Plantaginaceae	<i>Plantago patagonica</i> Jacq. var. <i>spinulosa</i> (Decne.) A. Gray	Wholly plantain	W. of Visitor's Center, across road	J. Wiese & A. Caven	J. Wiese
6/4/2015	Asteraceae	<i>Packera plattensis</i> (Nutt.) W.A. Webber & A. Love	Prairie ragwort	South Brown paddock	A. Caven & J. Wiese	J. Wiese & A. Caven
6/2/2015	Fabaceae	<i>Vicia villosa</i> Roth	Winter/hairy vetch	Whooping Crane Drive	J. Wiese	J. Wiese
6/2/2015	Ranunculaceae	<i>Anemone canadensis</i> L.	Meadow windflower/anemone	Calving Pasture paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
5/25/2015	Equisetaceae	<i>Equisetum laevigatum</i> A. Braun	Smooth scouring rush	South Brown paddock	A. Caven & J. Wiese	A. Caven
6/2/2015	Poaceae	<i>Hordeum pusillum</i> Nutt.	Little barley	Crane Trust Headquarters & South Brown paddock	J. Wiese	A. Caven
5/25/2015	Poaceae	<i>Hordeum pusillum</i> Nutt.	Little barley	Shoemaker Island	A. Caven	A. Caven
5/28/2015	Chenopodiaceae	<i>Chenopodium pratericola</i> Rybd.	Desert goosefoot	Prairie Dog paddock	A. Caven	J. Wiese
5/28/2015	Juncaceae	<i>Juncus articus</i> Willd. var. <i>balticus</i> (Willd.) Trautv.	Baltic rush	Prairie Dog paddock	J. Wiese & A. Caven	A. Caven
6/5/2015	Plantaginaceae	<i>Plantago lanceolata</i> L.	Narrowleaf plantain	Visitor's Center Paddock	J. Wiese & A. Caven	J. Wiese & A. Caven
6/5/2015	Plantaginaceae	<i>Plantago lanceolata</i> L.	Narrowleaf plantain	Visitor's Center Paddock	J. Wiese & A. Caven	J. Wiese & A. Caven

Date	Family	Scientific Name	Common Name	Location	Collector	ID'd by
6/5/2015	Scrophulariaceae	<i>Penstemon grandiflorus</i> Nutt.	Shell-leaf penstemon	Visitor's Center Paddock	J. Wiese	J. Wiese
6/9/2015	Poaceae	<i>Elymus smithii</i> (Rybd.) A. Love	Western wheatgrass	Alda farms pasture	A. Caven	A. Caven
6/5/2015	Fabaceae	<i>Melilotus officinalis</i> (L.) Lam.	Yellow sweetclover	Visitor's Center Paddock	J. Wiese & A. Caven	J. Wiese
6/5/2015	Fabaceae	<i>Melilotus albus</i> Medik.	White sweetclover	Visitor's Center Paddock	J. Wiese & A. Caven	J. Wiese
5/22/2015	Hydrophyllaceae	<i>Ellisa nyctelea</i> (L.) L.	Aunt Lucy	Ruge paddock & Hwy 30 off site	A. Caven	A. Caven & J. Wiese
5/22/2015	Asteraceae	<i>Erigeron philadelphicus</i> L.	Philadelphia fleabane	Ruge paddock	A. Caven	J. Wiese
6/29/2015	Asclepiadaceae	<i>Asclepias verticillata</i> L.	Whorled milkweed	South Brown paddock	J. Wiese	J. Wiese
6/29/2015	Caprifoliaceae	<i>Symphoricarpos occidentalis</i> Hook.	Western snowberry	South Brown paddock	J. Wiese & A. Caven	J. Wiese
6/23/2015	Asteraceae	<i>Carduus nutans</i> L.	Nodding plumeless thistle	North East Mormon paddock	A. Caven & J. Wiese	J. Wiese
6/23/2015	Asteraceae	<i>Carduus nutans</i> L.	Nodding plumeless thistle	North East Mormon paddock	A. Caven & J. Wiese	J. Wiese
6/23/2015	Asteraceae	<i>Erigeron philadelphicus</i> L.	Philadelphia fleabane	NW Mormon paddock	K. King & J. Wiese	J. Wiese
6/29/2015	Lamiaceae	<i>Nepeta cataria</i> L.	Catnip	South Brown paddock	J. Wiese	J. Wiese
6/23/2015	Asteraceae	<i>Cirsium flodmanii</i> (Rybd.) Arthur	Flodman's thistle	NW Mormon paddock	J. Wiese & A. Caven	J. Wiese
6/29/2015	Cyperaceae	<i>Carex praegracilis</i> W. Boott	Clustered fieldsedge	Office Pasture paddock	A. Caven	A. Caven & J. Wiese
4/18/2015	Asteraceae	<i>Taraxacum officinale</i> F.H. Wigg.	Common dandelion	Near bunkhouse	A. Caven	A. Caven
4/18/2015	Lamiaceae	<i>Lamium amplexicaule</i> L.	Henbit deadnettle	Near bunkhouse	A. Caven	A. Caven
4/22/2015	Poaceae	<i>Poa pratensis</i> L.	Kentucky bluegrass	Big slough	A. Caven	A. Caven
4/29/2015	Oxalidaceae	<i>Oxalis dillenii</i> Jacq.	Slender yellow wood sorrel	Pasture near office	A. Caven	A. Caven
4/18/2015	Ranunculaceae	<i>Anemone caroliniana</i> Walter	Carolina anemone	Big slough	A. Caven	A. Caven
6/23/2015	Iridaceae	<i>Sisyrinchium campestre</i> E.P. Bicknell	Prairie blue-eyed grass	North West Mormon paddock	A. Caven & J. Wiese	A. Caven
6/23/2015	Lythraceae	<i>Lythrum alatum</i> Pursh	Winged loosestrife	North West Mormon paddock	A. Caven & J. Wiese	J. Wiese
5/19/2015	Fumariaceae	<i>Fumaria officinalis</i> L.	Drug fumitory	River viewing area	R. McLean	A. Caven & J. Wiese
5/5/2015	Liliaceae	<i>Hypoxis hirsuta</i> (L.) Coville	Common goldstar	Shoemaker Island	A. Caven	A. Caven
4/16/2015	Violaceae	<i>Viola missouriensis</i> Greene	Missouri violet	Shoemaker Island	A. Caven	A. Caven
4/16/2015	Brassicaceae	<i>Descurainia pinnata</i> (Walter) Britton	Western tansymustard	Shoemaker Island	A. Caven	A. Caven
5/19/2015	Fabaceae	<i>Vicia villosa</i> Roth	Winter/hairy vetch	West Ruge paddock	A. Caven	J. Wiese & A. Caven
6/23/2015	Asclepiadaceae	<i>Asclepias speciosa</i> Torr.	Showy milkweed	Shoemaker Island	J. Wiese	J. Wiese
6/23/2015	Fabaceae	<i>Pediomelum argophyllum</i> (Pursh) J. Grimes	Silverleaf Indian breadroot/surfpea	SW Mormon paddock	J. Wiese	J. Wiese
6/23/2015	Fabaceae	<i>Pediomelum argophyllum</i> (Pursh) J. Grimes	Silverleaf Indian breadroot/surfpea	SW Mormon paddock	J. Wiese	J. Wiese
6/23/2015	Cyperaceae	<i>Carex gravida</i> L.H. Bailey	Heavy sedge	NW Mormon paddock	A. Caven & J. Wiese	A. Caven
6/22/2015	Apocynaceae	<i>Apocynum cannabinum</i> L.	Hemp dogbane/Indian hemp	SW Mormon paddock	J. Wiese & A. Caven	J. Wiese
6/22/2015	Apocynaceae	<i>Apocynum cannabinum</i> L.	Hemp dogbane/Indian hemp	SW Mormon paddock	J. Wiese & A. Caven	J. Wiese
6/17/2015	Bignoniaceae	<i>Catalpa speciosa</i> (Warder) Warder ex. Englem.	Northern catalpa	E Mormon	J. Wiese & A. Caven	J. Wiese
6/17/2015	Fabaceae	<i>Trifolium pratense</i> L.	Red clover	NE Mormon paddock	A. Caven & K. King	A. Caven

Date	Family	Scientific Name	Common Name	Location	Collector	ID'd by
6/19/2015	Asteraceae	<i>Conyza canadensis</i> (L.) Conquist	Canadian horseweed	Visitor's Center Paddock	A. Caven & J. Wiese	A. Caven
6/23/2015	Equisetaceae	<i>Equisetum fluviatile</i> L.	Water horsetail	NW Mormon paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
7/8/2015	Cyperaceae	<i>Cyperus squarrosus</i> L.	Bearded flatsedge	Near office	J. Wiese	J. Wiese & A. Caven
6/29/2015	Poaceae	<i>Chloris verticillata</i> Nutt.	Tumble windmill grass	Office Pasture paddock	A. Caven	A. Caven & J. Wiese
7/7/2015	Poaceae	<i>Calamovilfa longifolia</i> (Hook.) Scribn.	Prairie sandreed	South Brown paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/22/2015	Cyperaceae	<i>Scirpus atrovirens</i> Willd.	Green bullrush	NW Mormon paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/23/2015	Juncaceae	<i>Juncus arcticus</i> Willd. var. <i>balticus</i> (Willd.) Trautv.	Arctic rush	NW Mormon paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/17/2015	Cyperaceae	<i>Eleocharis compressa</i> Sull.	Flatstem spikerush	NW Mormon paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/22/2015	Juncaceae	<i>Juncus nodosus</i> L.	Knotted rush	NW Mormon paddock	A. Caven	A. Caven & J. Wiese
6/23/2015	Verbenaceae	<i>Verbena stricta</i> Vent.	Hoary verbena	North of office	J. Wiese	J. Wiese
7/2/2015	Euphorbiaceae	<i>Euphorbia maculata</i> L. aka. <i>Chamaesyce maculata</i> (L.) Small	Spotted sandmat	Near lab	A. Caven & J. Wiese	A. Caven & J. Wiese
7/1/2015	Lamiaceae	<i>Pycnanthemum virginianum</i> (L.) T. Dur. & B.D. Jacks. ex B.L. Rob. & Fernald	Virginia mountain mint	Office Pasture paddock	A. Caven	J. Wiese & A. Caven
7/7/2015	Cyperaceae	<i>Cyperus schweinitzii</i> Torr.	Schweinitz's flatsedge	South Brown paddock	A. Caven & J. Wiese	A. Caven
6/23/2015	Asteraceae	<i>Ratibida columnifera</i> (Nutt.) Wooton & Standl.	Upright prairie coneflower	NE Mormon paddock	A. Caven & J. Wiese	J. Wiese & A. Caven
6/5/2015	Plantaginaceae	<i>Plantago lanceolata</i> L.	Narrowleaf plantain	Visitor's Center Paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/5/2015	Plantaginaceae	<i>Plantago lanceolata</i> L.	Narrowleaf plantain	Visitor's Center Paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/22/2015	Juncaginaceae	<i>Triglochin maritima</i> L.	Seaside arrow grass	NW Mormon paddock	A. Caven & J. Wiese	J. Wiese & A. Caven
4/6/2015	Brassicaceae	<i>Chorispora tenella</i> (Pallas) DC.	Crossflower	Shoemaker Island	A. Caven	A. Caven
4/6/2015	Brassicaceae	<i>Thlaspe arvense</i> L.	Field pennycress	Shoemaker Island	A. Caven	A. Caven
4/10/2015	Scrophulariaceae	<i>Veronica polita</i> Fr.	Grey field speedwell	Staff quarters	A. Caven	A. Caven
6/23/2015	Verbenaceae	<i>Verbena bracteata</i> Cav. ex Lag. & Rodr.	Bracted vervain	NW Mormon paddock	J. Wiese	J. Wiese
6/22/2015	Apiaceae	<i>Cicuta maculata</i> L.	Spotted water hemlock	NW Mormon paddock	J. Wiese	J. Wiese
6/22/2015	Sparganiaceae	<i>Sparganium eurycarpum</i> Engelm.	Broadfruit burr-reed	NW Mormon paddock	J. Wiese	J. Wiese
7/1/2015	Verbenaceae	<i>Verbena hastata</i> L.	Swamp/blue vervain	Office Pasture paddock	A. Caven & J. Wiese	J. Wiese & A. Caven
7/1/2015	Cyperaceae	<i>Eleocharis wolfii</i> (A. Gray) A. Gray ex Britton	Wolf's spikerush	Office Pasture paddock	A. Caven	A. Caven
7/1/2015	Poaceae	<i>Paspalum setaceum</i> Michx.	Thin paspalum	Office Pasture paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
7/7/2015	Fabaceae	<i>Dalea candida</i> Michx. ex Willd.	White prairie clover	South Brown paddock	J. Wiese & A. Caven	J. Wiese & A. Caven
5/22/2015	Asteraceae	<i>Packera plattensis</i> (Nutt.) W.A. Webber & A. Love	Prairie groundsel	Alda	J. Wiese	J. Wiese
7/7/2015	Asteraceae	<i>Artemisia ludoviciana</i> Nutt.	White sagebrush	South Brown paddock	J. Wiese & A. Caven	J. Wiese
7/9/2015	Rosaceae	<i>Rubus occidentalis</i> L.	Black raspberry	South Brown paddock	J. Wiese and A. Caven	J. Wiese
7/10/2015	Lythraceae	<i>Lythrum salicaria</i> L.	Purple loosestrife	Plover Pond	J. Wiese	J. Wiese
7/10/2015	Fabaceae	<i>Desmanthus illinoensis</i> (Michx.) MacMill. ex B.L. Rob. & Fernald	Illinois bundleflower	Plover Pond	J. Wiese	J. Wiese
7/10/2015	Fabaceae	<i>Dalea purpurea</i> Vent.	Purple prairie clover	Plover Pond	J. Wiese	J. Wiese

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7/10/2015	Asteraceae	<i>Silphium integrifolium</i> Michx.	Rosenweed	Plover Pond	J. Wiese	J. Wiese
7/7/2015	Euphorbiaceae	<i>Croton texensis</i> (Klotzsch) Mull. Arg.	Texas croton	South Brown paddock	A. Caven & J. Wiese	A. Caven
6/23/2015	Cyperaceae	<i>Eleocharis erythropoda</i> Steud.	Bald spikerush	NW Mormon paddock	A. Caven	A. Caven
5/19/2015	Fabaceae	<i>Trifolium pratense</i> L.	Red clover	West Ruge paddock	A. Caven	A. Caven
5/19/2015	Asteraceae	<i>Tragopogon dubius</i> Scop.	Yellow salsify	West Ruge paddock	A. Caven	A. Caven
7/13/2015	Cyperaceae	<i>Cyperus schweinitzii</i> Torr.	Schweinitz's flatsedge	Prairie Dog paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/12/2015	Poaceae	<i>Dactylis glomerata</i> L.	Orchard grass	Whooping Crane Drive	A. Caven	A. Caven
6/1/2015	Poaceae	<i>Hordeum jubatum</i> L.	Foxtail barley	Calving Pasture paddock	J. Wiese	A. Caven & J. Wiese
5/26/2015	Poaceae	<i>Poa pratensis</i> L.	Kentucky bluegrass		A. Caven	A. Caven
5/22/2015	Commelinaceae	<i>Tradescantia bracteata</i> J.K. Small	Bracted spiderwort	Office area	J. Wiese	J. Wiese
5/22/2015	Fabaceae	<i>Medicago lupulina</i> L.	Black medic	Office area	J. Wiese	J. Wiese
6/9/2015	Cyperaceae	<i>Schoenoplectus tabernaemontani</i> (C.C. Gmel.)	Softstem bulrush	Alda farms pasture	A. Caven & J. Wiese	J. Wiese & A. Caven
6/9/2015	Plantaginaceae	<i>Plantago virginica</i> L.	Virginia plantain	South Brown paddock	A. Caven	A. Caven
6/9/2015	Poaceae	<i>Bromus japonicus</i> Thunb.	Japanese brome	South Brown paddock	J. Wiese	A. Caven
6/9/2015	Polygonaceae	<i>Rumex altissimus</i> Alph. Wood	Pale dock	Rugi	J. Wiese & A. Caven	J. Wiese
6/9/2015	Polygonaceae	<i>Rumex altissimus</i> Alph. Wood	Pale dock	Rugi	J. Wiese & A. Caven	J. Wiese
6/10/2015	Brassicaceae	<i>Sisymbrium loeselii</i> L.	Tallheadge mustard	SW Mormon paddock	J. Wiese & A. Caven	A. Caven & J. Wiese
5/22/2015	Brassicaceae	<i>Sisymbrium loeselii</i> L.	Tallheadge mustard	SW Mormon paddock	J. Wiese & A. Caven	A. Caven & J. Wiese
6/9/2015	Poaceae	<i>Panicum oligosanthes</i> (Schult.) var. <i>scribnerianum</i> (Nash) Gould	Scribner's panicum	South Brown paddock	J. Wiese & A. Caven	A. Caven
8/12/2015	Malvaceae	<i>Hibiscus trionum</i> L.	Flower-of-an-hour	SW Mormon paddock	A. Caven	A. Caven
8/12/2015	Malvaceae	<i>Hibiscus trionum</i> L.	Flower-of-an-hour	SW Mormon paddock	A. Caven	A. Caven
8/5/2015	Verbenaceae	<i>Verbena urticifolia</i> L.	White/nettleleaf verbena	Office area	A. Caven	A. Caven & J. Wiese
7/31/2015	Verbenaceae	<i>Verbena urticifolia</i> L.	White/nettleleaf verbena	Office pasture woodland	A. Caven	A. Caven & J. Wiese
8/4/2015	Asteraceae	<i>Arctium minus</i> (Hill) Bernh.	Common burdock	Alda farms pasture	J. Wiese & A. Caven	J. Wiese & A. Caven
7/28/2015	Liliaceae	<i>Maianthemum stellatum</i> (L.) Link	Starry fasle Solomon's seal	Within Ro3 site	A. Caven	A. Caven
8/7/2015	Rubiaceae	<i>Galium circaeans</i> Michx. var. <i>hypomalacum</i> Fernald	Woods bedstraw	Calving pasture paddock	A. Caven	A. Caven & J. Wiese
8/7/2015	Rubiaceae	<i>Galium circaeans</i> Michx. var. <i>hypomalacum</i> Fernald	Woods bedstraw	Calving pasture paddock	A. Caven	A. Caven & J. Wiese
7/21/2015	Elaeagnaceae	<i>Sheperdia argentea</i> (Pursh) Nutt.	Silver buffalo berry	South meadow paddock	A. Caven & J. Wiese	A. Caven
8/7/2015	Euphorbiaceae	<i>Euphorbia davidii</i> Subils	Western toothed spurge	Calving Pasture paddock	J. Wiese	J. Wiese
8/18/2015	Juncaceae	<i>Juncus torreyi</i> Coville	Torrey's rush	Middle pasture paddock	J. Wiese	A. Caven & J. Wiese
8/18/2015	Juncaceae	<i>Juncus torreyi</i> Coville	Torrey's rush	Middle pasture paddock	J. Wiese	A. Caven & J. Wiese
7/21/2015	Poaceae	<i>Eragrostis spectabilis</i> (Pursh) Steud.	Purple lovegrass	Rugi paddock	A. Caven	A. Caven & J. Wiese
7/20/2015	Scrophulariaceae	<i>Penstemon gracilis</i> Nutt.	Slender beardtongue	West Mormon paddock	J. Wiese	A. Caven
8/12/2015	Cyperaceae	<i>Cyperus strigosus</i> L.	False nutsedge	SW Mormon paddock	A. Caven	A. Caven

Date	Family	Scientific Name	Common Name	Location	Collector	ID'd by
8/6/2015	Cyperaceae	<i>Eleocharis compressa</i> Sull.	Compressed spikerush	Alda farms pasture	A. Caven	A. Caven
8/6/2015	Lamiaceae	<i>Lycopus americanus</i> Muhl. ex W. Barton	American water-horehound	Alda farms pasture	J. Wiese	J. Wiese & A. Caven
8/4/2015	Cyperaceae	<i>Eleocharis palustris</i> (L.) Roem. & Schultes/ <i>E. macrostachya</i> Britton	Common spikerush/hairgrass	Alda farms pasture	A. Caven	A. Caven
8/7/2015	Amaranthaceae	<i>Froelichia gracilis</i> (Hook.) Moq.	Slender snakecotton	Calving Pasture paddock	J. Wiese	J. Wiese & A. Caven
7/31/2015	Poaceae	<i>Festuca subverticillata</i> (Pers.) E. Alexeev	nodding fescue	Office pasture woodland	A. Caven	A. Caven
8/7/2015	Boraginaceae	<i>Hechelia virginiana</i> (L.) I.M. Johnst.	Stickseed	Calving Pasture paddock	A. Caven & J. Wiese	A. Caven
8/7/2015	Solanaceae	<i>Solanum ptychanthum</i> Dunal	Black nightshade	Calving Pasture paddock	J. Wiese	J. Wiese
7/21/2015	Rosaceae	<i>Geum canadense</i> Jacq.	Yellow avens	Ruge paddock	A. Caven & J. Wiese	A. Caven
8/7/2015	Euphorbiaceae	<i>Euphorbia marginata</i> Pursh	Snow-on-the-mountain	Calving Pasture paddock	J. Wiese	J. Wiese
8/19/2015	Poaceae	<i>Dichanthelium acuminatum</i> (Sw.) Gould & C.A. Clark/ <i>Pancium ovale</i> var. <i>praecocius</i> Elliot	Stiffleaf panic grass	Prairie Dog paddock	A. Caven	A. Caven
8/6/2015	Asteraceae	<i>Liatris punctata</i> Hook.	Dotted blazing star/gayfeather	Alda farms pasture	J. Wiese	J. Wiese
8/6/2015	Asteraceae	<i>Liatris punctata</i> Hook.	Dotted blazing star/gayfeather	Alda farms pasture	J. Wiese	J. Wiese
8/27/2015	Poaceae	<i>Sporobolus compositus</i> (Poir.) Merr.	Rough dropseed	West Mormon paddock	A. Caven	A. Caven
8/7/2015	Fabaceae	<i>Strophostyles leiosperma</i> (Torr. & A. Gray) Piper	Slick-seed wild bean	Calving Pasture paddock	J. Wiese	A. Caven
8/7/2015	Fabaceae	<i>Strophostyles leiosperma</i> (Torr. & A. Gray) Piper	Slick-seed wild bean	Calving Pasture paddock	J. Wiese	A. Caven
8/7/2015	Poaceae	<i>Elymus villosus</i> Muhl. Ex. Willd.	Hairy wild rye	Calving Pasture paddock	A. Caven & J. Wiese	A. Caven
8/4/2015	Cyperaceae	<i>Scirpus atrovirens</i> Willd.	Green bullrush	Alda farms pasture	J. Wiese	J. Wiese
8/9/2015	Asteraceae	<i>Iva annua</i>	Marsh-elder	NE Mormon paddock	J. Wiese & A. Caven	J. Wiese & A. Caven
8/17/2015	Poaceae	<i>Muhlenbergia sylvatica</i>	Forest muhly	Calving Pasture Woodland 4	A. Caven	A. Caven
8/17/2015	Poaceae	<i>Muhlenbergia sylvatica</i>	Forest muhly	Calving Pasture Woodland 4	A. Caven	A. Caven
8/20/2015	Asteraceae	<i>Iva annua</i>	Marsh-elder	NE Mormon paddock	J. Wiese & A. Caven	J. Wiese & A. Caven
8/20/2015	Campanulaceae	<i>Lobelia siphilitica</i>	Lobelia, cardinal flower	NE Mormon paddock	A. Caven	A. Caven
8/19/2015	Poaceae	<i>Eragrostis trichodes</i> (Nutt.) A.W. Wood	Sand lovegrass	Prairie Dog paddock	A. Caven	A. Caven
8/19/2015	Poaceae	<i>Eragrostis trichodes</i> (Nutt.) A.W. Wood	Sand lovegrass	Prairie Dog paddock	A. Caven	A. Caven
8/18/2015	Poaceae	<i>Eragrostis spectabilis</i> (Pursh) Steud.	Purple lovegrass	Prairie Dog paddock	J. Wiese & A. Caven	J. Wiese & A. Caven
8/18/2015	Poaceae	<i>Eragrostis spectabilis</i> (Pursh) Steud.	Purple lovegrass	Prairie Dog paddock	J. Wiese & A. Caven	J. Wiese & A. Caven
8/18/2015	Nyctaginaceae	<i>Mirabilis hirsuta</i> (Pursh) MacMill.	Hairy four-o'clock	Prairie Dog paddock	A. Caven	A. Caven
8/18/2015	Nyctaginaceae	<i>Mirabilis hirsuta</i> (Pursh) MacMill.	Hairy four-o'clock	Prairie Dog paddock	A. Caven	A. Caven
8/18/2015	Asteraceae	<i>Ambrosia psilostachya</i> DC.	Western ragweed	Prairie Dog paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
8/18/2015	Poaceae	<i>Cenchrus longispinus</i> (Hack.) Fernald	Mat sandbur	Prairie Dog paddock	J. Wiese	J. Wiese
8/18/2015	Poaceae	<i>Eragrostis cilianensis</i> (All.) Vignolo ex Janch.	Stinkgrass	Prairie Dog paddock	J. Wiese	J. Wiese
8/18/2015	Asteraceae	<i>Conyza canadensis</i> (L.) Conquist	Horseweed	Prairie Dog paddock	J. Wiese	J. Wiese

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8/27/2015	Fabaceae	<i>Trifolium pratense</i> L.	Red clover	West Mormon paddock	A. Caven	J. Wiese
8/7/2015	Rubiaceae	<i>Galium circaeans</i> Michx. var. <i>hypomalacum</i> Fernald	Woods bedstraw	Calving Pasture paddock	A. Caven	A. Caven
8/18/2015	Lamiaceae	<i>Salvia azurea</i> Michx. ex Vahl. var. <i>grandiflora</i> Benth.	Blue salvia	Plover Pond	A. Caven	A. Caven & J. Wiese
8/20/2015	Lamiaceae	<i>Mentha canadensis</i> L./ <i>Mentha arvensis</i> L.	Field mint	North West Mormon paddock	J. Wiese	J. Wiese
8/18/2015	Asteraceae	<i>Cyclachaena xanthifolia</i> Fresen./ <i>Iva xanthifolia</i> Nutt.	Big marsh-elder	Prairie Dog paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
8/18/2015	Fabaceae	<i>Lotus purshianus</i> (Benth.) F. Clements & E. Clements ex Otley	Prairie trefoil	Prairie Dog paddock	A. Caven	A. Caven
8/29/2015*	Cleomaceae	<i>Cleome serrulata</i> Pursh	Rocky Mountain bee plant	Niobrara valley	A. Caven	A. Caven
8/29/2015*	Fabaceae	<i>Pediomelum argophyllum</i> (Pursh) J. Grimes	Silverleaf Indian breadroot/surfpea	NE Game and Parks: Wildcat Hills	A. Caven	A. Caven
8/4/2015	Fabaceae	<i>Astragalus canadensis</i> L.	Canada milk-vetch	Alda farms pasture	A. Caven & J. Wiese	A. Caven & J. Wiese
8/4/2015	Verbenaceae	<i>Phyla lanceolata/Lippia lanceolata</i> Michx.	Fogfruit	Alda farms pasture	J. Wiese	A. Caven & J. Wiese
8/4/2015	Thymelaeaceae	<i>Thymelaea passerina</i> (L.) Coss. & Germ.	Spurge-flax	Alda farms pasture	A. Caven	A. Caven
8/4/2015	Thymelaeaceae	<i>Thymelaea passerina</i> (L.) Coss. & Germ.	Spurge-flax	Alda farms pasture	A. Caven	A. Caven
8/4/2015	Thymelaeaceae	<i>Thymelaea passerina</i> (L.) Coss. & Germ.	Spurge-flax	Alda farms pasture	A. Caven	A. Caven
8/4/2015	Thymelaeaceae	<i>Thymelaea passerina</i> (L.) Coss. & Germ.	Spurge-flax	Alda farms pasture	A. Caven	A. Caven
8/7/2015	Poaceae	<i>Echinochloa crus-galli</i> (L.) P. Beauv.	Barnyard grass	Calving pasture	A. Caven	A. Caven
8/4/2015	Solanaceae	<i>Physalis longifolia</i> Nutt.	Common ground-cherry	Alda farms pasture	A. Caven & J. Wiese	A. Caven & J. Wiese
8/7/2015	Rosaceae	<i>Geum canadense</i> Jacq.	White avens	Calving pasture woodland 4	A. Caven & J. Wiese	A. Caven
8/7/2015	Rosaceae	<i>Geum canadense</i> Jacq.	White avens	Calving pasture woodland 4	A. Caven & J. Wiese	A. Caven
9/9/2015	Asteraceae	<i>Eupatorium altissimum</i> L.	Tall boneset/tall Joe Pye weed	North of offices	J. Wiese	J. Wiese
8/4/2015	Brassicaceae	<i>Rorippa palustris</i> (L.) var. <i>glabra</i> (O.E. Schulz) Roy. L Taylor & MacBryde	Bog yellow-cress	Alda farms pasture	J. Wiese	A. Caven
8/7/2015	Altismataceae	<i>Sagittaria cuneata</i> E. Sheld.	Arrowhead/duck-potato	Calving Pasture Woodland 4	A. Caven & J. Wiese	A. Caven & J. Wiese
8/19/2015	Poaceae	<i>Muhlenbergia asperifolia</i> (Nees. & Meyen ex Trin.) Parodi	Scratchgrass	Prairie Dog paddock	A. Caven	A. Caven
6/19/2015	Fabaceae (Mimosaceae)	<i>Mimosa quadrivalvis</i> L. var. <i>nuttallii</i> (DC. ex Standl.) Beard ex Barneby	Prairie mimosa	Visitor's Center Paddock	J. Wiese	J. Wiese & A. Caven
6/26/2015	Solanaceae	<i>Physalis heterophylla</i> Nees	Clammy ground-cherry	Calving Pasture paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/26/2015	Solanaceae	<i>Physalis heterophylla</i> Nees	Clammy ground-cherry	Calving Pasture paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
7/1/2015	Boraginaceae	<i>Lithospermum incisum</i> Lehm.	Fringed pacoon	South Brown paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
7/16/2015	Asteraceae	<i>Rudbeckia hirta</i> var. <i>pulcherrima</i> Farw.	Black-eyed Susan	South Brown paddock	J. Wiese	J. Wiese
7/9/2015	Ranunculaceae	<i>Clematis virginiana</i> L.	Eastern Virgin's bower	South Brown paddock	J. Wiese	J. Wiese & A. Caven
7/10/2015	Nyctaginaceae	<i>Mirabilis nyctaginea</i> (Michx.) MacMill.	Wild four o'clock	North of office	J. Wiese	J. Wiese
7/15/2015	Rosaceae	<i>Agrimonia parviflora</i> Aiton	Agrimony	South Brown paddock	A. Caven & J. Wiese	A. Caven & J. Wiese

Date	Family	Scientific Name	Common Name	Location	Collector	ID'd by
7/15/2015	Rosaceae	<i>Agrimonia parviflora</i> Aiton	Agrimony	South Brown paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
7/15/2015	Asteraceae	<i>Helianthus pauciflorus</i> Nutt./ <i>Helianthus rigidus</i>	Stiff sunflower	South Brown paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
7/17/2015	Fabaceae	<i>Desmodium illinoense</i> A. Gray	Illinois tick-clover	Visitor's Center Paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
7/17/2015	Lamiaceae	<i>Monarda fistulosa</i> L. var. <i>mollis</i> Benth.	Wild-bergamot	Visitor's Center Paddock	J. Wiese	A. Caven & J. Wiese
7/17/2015	Lamiaceae	<i>Monarda fistulosa</i> L. var. <i>mollis</i> Benth.	Wild-bergamot	Visitor's Center Paddock	J. Wiese	A. Caven & J. Wiese
7/17/2015	Anacardiaceae	<i>Rhus aromatica</i> Aiton/ <i>Rhus trilobata</i>	Fragrant sumac	Visitor's Center Paddock	A. Caven	A. Caven & J. Wiese
7/17/2015	Anacardiaceae	<i>Rhus aromatica</i> Aiton/ <i>Rhus trilobata</i>	Fragrant sumac	Visitor's Center Paddock	A. Caven	A. Caven & J. Wiese
7/14/2015	Iridaceae	<i>Iris pseudacorus</i> L.	Yellow flag iris	South of Visitor's Center	T. Smith	T. Smith
7/21/2015	Asclepiadaceae	<i>Asclepias incarnata</i> L.	Swamp milkweed	Rugi paddock	J. Wiese	J. Wiese
8/4/2015	Malvaceae	<i>Hibiscus laevis</i> All.	Halberd-leaf rose-mallow	Across hiway from Whooping Crane Drive	A. Caven & J. Wiese	A. Caven & J. Wiese
8/4/2015	Malvaceae	<i>Hibiscus laevis</i> All.	Halberd-leaf rose-mallow	Across hiway from Whooping Crane Drive	A. Caven & J. Wiese	A. Caven & J. Wiese
8/4/2015	Malvaceae	<i>Hibiscus laevis</i> All.	Halberd-leaf rose-mallow	Across hiway from Whooping Crane Drive	A. Caven & J. Wiese	A. Caven & J. Wiese
8/4/2015	Asteraceae	<i>Circium arvense</i> (L.) Scop.	Canada thistle	Alda farms pasture	A. Caven & J. Wiese	A. Caven & J. Wiese
8/4/2015	Solanaceae	<i>Solanum carolinense</i> L.	Horse-nettle	Alda farms pasture	A. Caven & J. Wiese	A. Caven & J. Wiese
8/4/2015	Scrophulariaceae	<i>Penstemon gracilis</i> Nutt.	Slender beardtongue	Alda farms pasture	A. Caven & J. Wiese	A. Caven & J. Wiese
8/4/2015	Asteraceae	<i>Coreopsis tinctoria</i> Nutt.	Plains coreopsis/calliopsis	Alda farms pasture	A. Caven & J. Wiese	A. Caven & J. Wiese
8/4/2015	Poaceae	<i>Leersia oryzoides</i> (L.) Sw.	Rice cutgrass	Alda farms pasture	A. Caven & J. Wiese	A. Caven & J. Wiese
8/4/2015	Solanaceae	<i>Physalis virginiana</i> P. Mill.	Virginia ground-cherry	Alda farms pasture	A. Caven & J. Wiese	A. Caven & J. Wiese
7/10/2015	Asteraceae	<i>Grindelia squarrosa</i> (Pursh) Dunal var. <i>squarrosa</i>	Curly cup gumweed	Plover Pond	J. Wiese	J. Wiese
6/19/2015	Asteraceae	<i>Eupatorium altissimum</i> L.	Tall boneset/tall Joe Pye weed	Visitor's Center Paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
7/31/2015	Fabaceae	<i>Amphicarpaea bracteata</i> (L.) Fernald var. <i>comosa</i>	Hog-peanut	Big slough	A. Caven & J. Wiese	A. Caven
7/31/2015	Poaceae	<i>Bromus latiglumis</i> (Shear) A.S. Hitchc.	Hairy woodbrome	Big slough	A. Caven & J. Wiese	A. Caven
7/31/2015	Poaceae	<i>Bromus latiglumis</i> (Shear) A.S. Hitchc.	Hairy woodbrome	Big slough	A. Caven & J. Wiese	A. Caven
7/31/2015	Fabaceae	<i>Desmodium glutinosum</i> (Muhl. ex Willd.) A.W. Wood	Large flowered tick-clover	Big slough	A. Caven & J. Wiese	A. Caven
7/31/2015	Fabaceae	<i>Desmodium glutinosum</i> (Muhl. ex Willd.) A.W. Wood	Large flowered tick-clover	Big slough	A. Caven & J. Wiese	A. Caven
7/31/2015	Fabaceae	<i>Desmodium glutinosum</i> (Muhl. ex Willd.) A.W. Wood	Large flowered tick-clover	Big slough	A. Caven & J. Wiese	A. Caven
7/31/2015	Smilacaceae	<i>Smilax hispida</i> Raf.	Greenbriar/prickly catbriar	Big slough	A. Caven & J. Wiese	J. Wiese
7/31/2015	Urticaceae	<i>Urtica dioica</i> L. subsp. <i>gracilis</i> (Aiton) Selander	Stinging nettle	Big slough	A. Caven & J. Wiese	A. Caven & J. Wiese
7/31/2015	Asteraceae	<i>Rudbeckia laciniata</i> L.	Cutleaf coneflower/goldenglow	Big slough	A. Caven & J. Wiese	A. Caven & J. Wiese
7/31/2015	Phrymaceae	<i>Phryma leptostachya</i> L.	Lopseed	Big slough	A. Caven	A. Caven

Date	Family	Scientific Name	Common Name	Location	Collector	ID'd by
7/31/2015	Onagraceae	<i>Circaea lutetiana</i> L. subsp. <i>canadensis</i> (L.) Asch. & Magnus	Enchanter's-nightshade	Big slough	A. Caven	A. Caven
7/31/2015	Onagraceae	<i>Circaea lutetiana</i> L. subsp. <i>canadensis</i> (L.) Asch. & Magnus	Enchanter's-nightshade	Big slough	A. Caven	A. Caven
7/31/2015	Poaceae	<i>Muhlenbergia sylvatica</i> (Torr.) Torr. ex A. Gray	Forest muhly	Big slough	A. Caven	A. Caven
7/31/2015	Chenopodiaceae	<i>Chenopodium simplex</i> (Torr.) Raf.	Maple-leaf goosefoot	Big slough	A. Caven & J. Wiese	A. Caven & J. Wiese
9/1/2015	Asteraceae	<i>Gutierrezia sarothrae</i> (Pursh) Britton & Rusby	Broom snakeweed	Southwest Mormon	A. Caven	A. Caven
7/10/2015	Asteraceae	<i>Grindelia squarrosa</i> (Pursh) Dunal var. <i>squarrosa</i>	Curly cup gumweed	Plover Pond	J. Wiese	J. Wiese
6/19/2015	Asteraceae	<i>Helianthus pauciflorus</i> Nutt./ <i>Helianthus rigidus</i>	Stiff sunflower	Visitor's Center Paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
7/20/2015	Equisetaceae	<i>Equisetum arvense</i> L.	Field horsetail	South meadow paddock	A. Caven & J. Wiese	A. Caven
7/20/2015	Verbenaceae	<i>Lippia lanceolata</i> Michx.	Northern fogfruit	South meadow paddock	A. Caven & J. Wiese	J. Wiese
7/20/2015	Asteraceae	<i>Vernonia fasciculata</i> Michx.	Ironweed	South meadow paddock	A. Caven & J. Wiese	J. Wiese & A. Caven
7/20/2015	Asteraceae	<i>Vernonia fasciculata</i> Michx.	Ironweed	South meadow paddock	A. Caven & J. Wiese	J. Wiese & A. Caven
7/20/2015	Gentianaceae	<i>Eustoma russellianum</i> (Hook.) G. Don	Prairie gentian/Lisianthus	South meadow paddock	A. Caven & J. Wiese	J. Wiese & A. Caven
7/20/2015	Fabaceae	<i>Dalea purpurea</i> Vent.	Purple prairie clover	South meadow paddock	J. Wiese	J. Wiese
8/7/2015	Fabaceae	<i>Strophostyles leiosperma</i> (Torr. & A. Gray) Piper	Slick-seed wild bean	Calving Pasture paddock	J. Wiese	A. Caven
8/7/2015	Fabaceae	<i>Strophostyles leiosperma</i> (Torr. & A. Gray) Piper	Slick-seed wild bean	Calving Pasture paddock	J. Wiese	A. Caven
9/17/2015	Polygonaceae	<i>Polygonum persicaria</i> L.	Smartweed	East pasture paddock	A. Caven	A. Caven
9/17/2015	Polygonaceae	<i>Polygonum punctatum</i> Elliott	Water smartweed	East pasture paddock	A. Caven	A. Caven
7/27/2015	Orchidaceae	<i>Spiranthes magnicamporum</i> Sheviak	Great Plains lady's tresses orchid	Rugi paddock	A. Caven	A. Caven
8/5/2015	Orchidaceae	<i>Spiranthes magnicamporum</i> Sheviak	Great Plains lady's tresses orchid	Narrows paddock	A. Caven	A. Caven
8/19/2015	Asteraceae	<i>Helenium autumnale</i> L.	Sneezeweed	NE Mormon paddock	J. Wiese & A. Caven	A. Caven
8/31/2015	Asteraceae	<i>Euthamia gymnospermoidea</i> Greene	Golden-top	SE Mormon paddock	A. Caven	A. Caven
9/11/2015	Scrophulariaceae	<i>Agalinis tenuifolia</i> (Vahl) Raf.	Common gerardia	SE Mormon paddock	A. Caven	A. Caven
8/31/2015	Euphorbiaceae	<i>Euphorbia davidii</i> Subils	Western toothed spurge	SE Mormon paddock	A. Caven	A. Caven
9/1/2015	Asteraceae	<i>Eclipta prostrata</i> (L.) L.	Yerba de tajo	SE Mormon paddock	A. Caven	A. Caven
9/11/2015	Asteraceae	<i>Symphyotrichum ericoides</i> L./ <i>Aster ericoides</i>	Heath aster	SE Mormon paddock	A. Caven	A. Caven
9/3/2015	Asteraceae	<i>Helenium autumnale</i> L.	Sneezeweed	NE Mormon paddock	A. Caven	A. Caven
9/3/2015	Cyperaceae	<i>Fimbristylis puberula</i> (Michx.) Vahl	Fimbrary	NE Mormon paddock	A. Caven	A. Caven
9/11/2015	Asteraceae	<i>Symphyotrichum ericoides</i> L./ <i>Aster ericoides</i>	Heath aster	SE Mormon paddock	A. Caven	A. Caven
9/1/2015	Cyperaceae	<i>Cyperus odoratus</i> L. var. <i>squarrosum</i> (Britt.) S. Jones, Wipff, & R. Carter	Rusty flatsedge/fragrant nutsedge	SE Mormon paddock	A. Caven	A. Caven
9/1/2015	Poaceae	<i>Setaria pumila</i> (Poir.) Roem. & Schult./ <i>Setaria glauca</i> L.	Yellow foxtail	SE Mormon paddock	A. Caven	A. Caven
9/11/2015	Scrophulariaceae	<i>Agalinis tenuifolia</i> (Vahl) Raf.	Common gerardia	SE Mormon paddock	A. Caven	A. Caven

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6/26/2015	Lamiaceae	<i>Teucrium canadense</i> L.	American germander	Calving Pasture paddock	J. Wiese	J. Wiese
6/26/2015	Lamiaceae	<i>Teucrium canadense</i> L.	American germander	Calving Pasture paddock	J. Wiese	J. Wiese
6/26/2015	Juncaceae	<i>Juncus tenuis</i> Willd.	Poverty rush	Calving Pasture paddock	A. Caven	A. Caven
6/1/2015	Cyperaceae	<i>Carex gravida</i> L.H. Bailey	Heavy sedge	Calving Pasture paddock	J. Wiese & A. Caven	A. Caven
6/19/2015	Scrophulariaceae	<i>Penstemon tubiflorus</i> Nutt.	Tube penstemon	Visitor's Center Paddock	J. Wiese	J. Wiese
5/20/2015	Caryophyllaceae	<i>Cerastium brachypodium</i> (Engelm. ex A. Gray) B.L. Robins	Chickweed		A. Caven	A. Caven
5/25/2015	Rubiaceae	<i>Galium aparine</i> L.	Cleavers/catchweed bedstraw		A. Caven	A. Caven
5/27/2015	Malvaceae	<i>Callirhoe alcaeoides</i> (Michx.) A. Gray	Pink poppy-mallow	Prairie Dog paddock	A. Caven	A. Caven
5/27/2015	Poaceae	<i>Lollium arundinaceum</i> (Schreb.) S. J. Darbyshire/ <i>Festuca arundinacea</i> / <i>Schedonorus arundinaceus</i>	Tall-fescue	Prairie Dog paddock	A. Caven	A. Caven
5/27/2015	Poaceae	<i>Lollium arundinaceum</i> (Schreb.) S. J. Darbyshire/ <i>Festuca arundinacea</i> / <i>Schedonorus arundinaceus</i>	Tall-fescue	Prairie Dog paddock	A. Caven	A. Caven
6/23/2015	Poaceae	<i>Panicum accuminatum</i> Sw.	Tufted panic-grass	NW Mormon paddock	A. Caven	A. Caven
6/23/2015	Chenopodiaceae	<i>Chenopodium glaucum</i> L.	Oak-leaf goosefoot	NW Mormon paddock	J. Wiese & A. Caven	J. Wiese
5/28/2015	Poaceae	<i>Distichlis spicata</i> (L.) Greene	Saltgrass	Prairie Dog paddock	A. Caven & J. Wiese	A. Caven
4/6/2015	Brassicaceae	<i>Capsella bursa-pastoris</i> (L.) Medik.	Sheperd's purse	Near office	A. Caven	A. Caven
6/23/2015	Ranunculaceae	<i>Ranunculus sceleratus</i> L. var. <i>sceleratus</i>	Cursed crowfoot	NW Mormon paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/23/2015	Polygonaceae	<i>Polygonum aviculare</i> L. complex/ <i>Polygonum arenastrum</i>	Knotweed	NW Mormon paddock	J. Wiese	J. Wiese
5/27/2015	Poaceae	<i>Panicum oligosanthes</i> (Schult.) var. <i>scribnerianum</i> (Nash) Gould	Scribner's panicum	Prairie Dog paddock	A. Caven	A. Caven
5/27/2015	Poaceae	<i>Panicum oligosanthes</i> (Schult.) var. <i>scribnerianum</i> (Nash) Gould	Scribner's panicum	Prairie Dog paddock	A. Caven	A. Caven
5/25/2015	Poaceae	<i>Hesperostipa comata</i> (Trin. & Rupr.) Barkworth/ <i>Stipa comata</i>	Needle-and-thread	Rugi paddock	A. Caven & J. Wiese	A. Caven
6/1/2015	Asteraceae	<i>Erigeron strigosus</i> Muhl. ex Willd.	Daisy fleabane/rough fleabane	Calving Pasture paddock	J. Wiese	J. Wiese
6/26/2015	Equisetaceae	<i>Equisetum fluviatile</i> L.	Water horsetail	Calving Pasture paddock	J. Wiese & A. Caven	A. Caven & J. Wiese
7/7/2015	Asteraceae	<i>Heterotheca villosa</i> (Pursh) Shinners	Golden-aster	South Brown paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/10/2015	Convolvulaceae	<i>Cuscuta glomerata</i> Choisy	Dodder	SE Mormon paddock	J. Wiese & A. Caven	J. Wiese
6/9/2015	Scrophulariaceae	<i>Penstemon digitalis</i> Nutt. ex Sims	Tall white penstemon	Alda farms pasture	J. Wiese	J. Wiese
6/9/2015	Scrophulariaceae	<i>Penstemon digitalis</i> Nutt. ex Sims	Tall white penstemon	Alda farms pasture	J. Wiese	J. Wiese
6/9/2015	Scrophulariaceae	<i>Penstemon digitalis</i> Nutt. ex Sims	Tall white penstemon	Alda farms pasture	J. Wiese	J. Wiese
6/17/2015	Fabaceae	<i>Lotus tenuis</i> Waldst. & Kit. ex Willd.	Narrow-leaf trefoil	Mormon island	J. Wiese	J. Wiese
6/23/2015	Ranunculaceae	<i>Ranunculus longirostris</i> Godron	White water-crowfoot	East Mormon	J. Wiese & A. Caven	A. Caven & J. Wiese
6/22/2015	Lythraceae	<i>Lythrum alatum</i> Pursh	Winged loosestrife	Mormon island	A. Caven	J. Wiese
6/22/2015	Lamiaceae	<i>Pycnanthemum virginianum</i> (L.) T. Dur. & B.D. Jacks. ex B.L. Rob. & Fernald	Virginia mountain mint	Mormon island	J. Wiese	J. Wiese & A. Caven

Date	Family	Scientific Name	Common Name	Location	Collector	ID'd by
6/23/2015	Polygonaceae	<i>Polygonum aviculare L.</i> complex/ <i>Polygonum arenastrum</i>	Knotweed	NW Mormon paddock	J. Wiese	J. Wiese
6/1/2015	Cyperaceae	<i>Carex gravida</i> L.H. Bailey	Heavy sedge	Calving Pasture paddock	J. Wiese & A. Caven	A. Caven
9/24/2015	Poaceae	<i>Sporobolus neglectus</i> Nash	Poverty grass/puffseed dropseed	SW Mormon paddock	A. Caven	A. Caven
9/24/2015	Poaceae	<i>Muhlenbergia racemosa</i> (Michx.) Britton, Sterns, & Poggend.	Marsh muhly	NW Mormon paddock	A. Caven	A. Caven
9/24/2015	Asteraceae	<i>Aster paealtus</i> Pior. var. <i>nebrascensis</i> (Britton) Wiegand/ <i>Symphyotrichum paealtus</i>	Willowleaf aster	NW Mormon paddock	A. Caven	A. Caven
9/24/2015	Asteraceae	<i>Aster paealtus</i> Pior. var. <i>nebrascensis</i> (Britton) Wiegand/ <i>Sympphyotrichum paealtus</i>	Willowleaf aster	NW Mormon paddock	A. Caven	A. Caven
9/16/2015	Asteraceae	<i>Erechtites hieracijfolius</i> (L.) Raf. ex DC.	Fireweed/burnweed	Hay Meadow paddock	A. Caven	A. Caven
6/19/2015	Asteraceae	<i>Helianthus maximiliani</i> Schrad.	Maximilian's sunflower	Visitor's Center Paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/23/2015	Polygonaceae	<i>Polygonum bincorne</i> Raf.	Pink smartweed	NW Mormon paddock	J. Wiese	J. Wiese
6/17/2015	Asteraceae	<i>Rudbeckia hirta</i> var. <i>pulcherrima</i> Farw.	Black-eyed Susan	Mormon island	J. Wiese	
4/?/2015*	Brassicaceae	<i>Alyssum desertorum</i> Staph.	Alyssum	Fort Randall Dam, South Dakota	A. Caven	A. Caven
6/29/2015	Asteraceae	<i>Aster ericoides</i> L./ <i>Symphyotrichum ericoides</i>	Heath aster	Office Pasture paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
5/26/2015	Cyperaceae	<i>Schoenoplectus acutus</i> (Muhl. ex Bigelow) A. Love & D. Love	Hardstem bulrush	Shoemaker Island	A. Caven	A. Caven
6/23/2015	Chenopodiaceae	<i>Chenopodium berlandieri</i> Moq.	Stinking lamb's-quarters	NW Mormon paddock	A. Caven & J. Wiese	J. Wiese
6/23/2015	Fabaceae	<i>Glycyrrhiza lepidota</i> Pursh	Wild licorice	NW Mormon paddock	J. Wiese	J. Wiese
6/?/2015	Onagraceae	<i>Gaura parviflora</i> Dougl. Ex Lehm.	Small-flowered gaura	Near office	A. Caven	A. Caven
6/22/2015	Asteraceae	<i>Ratibida columnifera</i> (Nutt.) Wooton & Standl.	Prairie coneflower	Mormon island	J. Wiese & A. Caven	J. Wiese & A. Caven
6/22/2015	Asteraceae	<i>Ratibida columnifera</i> (Nutt.) Wooton & Standl.	Prairie coneflower	Mormon island	J. Wiese & A. Caven	J. Wiese & A. Caven
5/27/2015	Fabaceae	<i>Trifolium pratense</i> L.	Red clover	Calving Pasture paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/5/2015	Fabaceae	<i>Medicago sativa</i> L.	Alfalfa	Visitor's Center Paddock	J. Wiese	J. Wiese
5/26/2015	Liliaceae	<i>Hypoxis hirsuta</i> (L.) Coville	Yellow star-grass	Shoemaker Island	A. Caven	
5/27/2015	Cyperaceae	<i>Carex brevior</i> (C. Dewey) Mack. Ex Lunell	Shortbeaked sedge	Office Pasture paddock	A. Caven	A. Caven
6/26/2015	Poaceae	<i>Panicum oligosanthes</i> (Schult.) var. <i>scribnerianum</i> (Nash) Gould	Scribner's panicum	Calving Pasture paddock	A. Caven & J. Wiese	A. Caven
6/29/2015	Asteraceae	<i>Solidago canadensis</i> L.	Canada goldenrod/tall goldenrod	Office Pasture paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/29/2015	Asteraceae	<i>Aster ericoides</i> L./ <i>Symphyotrichum ericoides</i>	Heath aster	Office Pasture paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
5/27/2015	Fabaceae	<i>Trifolium pratense</i> L.	Red clover	Calving Pasture paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/26/2015	Boraginaceae	<i>Onosmodium molle</i> Michx. var. <i>occidentalis</i>	False gromwell	Calving Pasture	A. Caven & J. Wiese	A. Caven & J. Wiese
7/8/2015	Boraginaceae	<i>Onosmodium molle</i> Michx. var. <i>occidentalis</i>	False gromwell	South Brown paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/26/2015	Poaceae	<i>Agrostis stolonifera</i> L. var. <i>major</i>	Creeping bentgrass/redtop	Calving Pasture paddock	A. Caven & J. Wiese	A. Caven

Date	Family	Scientific Name	Common Name	Location	Collector	ID'd by
6/26/2015	Poaceae	<i>Agrostis stolonifera</i> L. var. <i>major</i>	Creeping bentgrass/redtop	Calving Pasture paddock	A. Caven & J. Wiese	A. Caven
6/26/2015	Cyperaceae	<i>Carex gravida</i> L.H. Bailey	Heavy sedge	Calving Pasture paddock	J. Wiese & A. Caven	A. Caven & J. Wiese
6/26/2015	Cyperaceae	<i>Carex gravida</i> L.H. Bailey	Heavy sedge	Calving Pasture paddock	J. Wiese & A. Caven	A. Caven & J. Wiese
7/9/2015	Asteraceae	<i>Cirsium altissimum</i> (L.) Hill	Tall thistle	South Brown paddock	A. Caven & J. Wiese	A. Caven & T. Smith
7/9/2015	Asteraceae	<i>Cirsium altissimum</i> (L.) Hill	Tall thistle	South Brown paddock	A. Caven & J. Wiese	A. Caven & T. Smith
6/29/2015	Onagraceae	<i>Gaura parviflora</i> Dougl. ex Lehm.	Velvety gaura	Office Pasture paddock	A. Caven & J. Wiese	A. Caven
6/23/2015	Asteraceae	<i>Ambrosia psilostachya</i> DC.	Western ragweed	Calving Pasture	A. Caven & J. Wiese	A. Caven & J. Wiese
9/11/2015	Euphorbiaceae	<i>Chamaesyce glyptosperma</i> (Engelm.) Small/ <i>Euphorbia glyptosperma</i>	Ribseed sandmat	Big slough	A. Caven	A. Caven
9/11/2015	Scrophulariaceae	<i>Veronica americana</i> Schwein. ex Benth.	American speedwell	Big slough	A. Caven	A. Caven
9/11/2015	Asteraceae	<i>Bidens cernua</i> L.	Nodding beggarstick	Calving Pasture paddock	A. Caven	J. Wiese
9/11/2015	Asteraceae	<i>Bidens cernua</i> L.	Nodding beggarstick	Calving Pasture paddock	A. Caven	J. Wiese
9/11/2015	Brassicaceae	<i>Thlaspi arvense</i> L.	Field pennycress	Calving Pasture	A. Caven	J. Wiese
9/11/2015	Poaceae	<i>Setaria viridis</i> (L.) P. Beauv.	Green bristlegrass	Calving Pasture	A. Caven	J. Wiese
9/24/2015	Asteraceae	<i>Aster paealtus</i> Pior. var. <i>nebrascensis</i> (Britton) Wiegand/ <i>Symphyotrichum paealtus</i>	Willowleaf aster	NW Mormon paddock	A. Caven	A. Caven
10/1/2015	Chenopodiaceae	<i>Chenopodium missouriense</i> Aellen	Missouri goosefoot	SE Mormon paddock	A. Caven	A. Caven
6/23/2015	Poaceae	<i>Eragrostis pectinacea</i> (Michx.) Nees ex Steud. var. <i>pectinacea</i>	Tufted lovegrass	NW Mormon paddock	A. Caven	A. Caven
6/23/2015	Poaceae	<i>Eragrostis pectinacea</i> (Michx.) Nees ex Steud. var. <i>pectinacea</i>	Tufted lovegrass	NW Mormon paddock	A. Caven	A. Caven
10/1/2015	Asteraceae	<i>Bidens bipinnata</i> L.	Spanish needles	SE Mormon paddock	A. Caven	A. Caven
10/1/2015	Chenopodiaceae	<i>Chenopodium standleyanum</i> Aellen	Standley's goosefoot	SE Mormon paddock	A. Caven	A. Caven
9/3/2015	Polygonaceae	<i>Polygonum hydropiperoides</i> Michx.	Swamp smartweed	NE Mormon paddock	A. Caven & J. Wiese	J. Wiese
8/31/2015	Poaceae	<i>Digitaria cognata</i> (Schult.) Pilg.	Fall witchgrass	SE Mormon paddock	A. Caven	A. Caven
8/31/2015	Poaceae	<i>Muhlenbergia racemosa</i> (Michx.) Britton, Sterns, & Poggenb.	Marsh muhly	SE Mormon paddock	A. Caven	A. Caven
10/14/2015	Violaceae	<i>Viola sororia</i> Willd.	Common blue violet	SE Mormon paddock	A. Caven	A. Caven
10/14/2015	Poaceae	<i>Sporobolus neglectus</i> Nash	Puffsheat dropseed	SE Mormon paddock	A. Caven	A. Caven
10/14/2015	Poaceae	<i>Distichlis spicata</i> (L.) Green	Saltgrass	SE Mormon paddock	A. Caven	A. Caven
10/9/2015	Asteraceae	<i>Solidago missouriensis</i> Nutt.	Missouri goldenrod	NW Mormon paddock	A. Caven	A. Caven
6/23/2015	Fabaceae	<i>Glycyrrhiza lepidota</i> Pursh	Wild licorice	NW Mormon paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/22/2015	Asteraceae	<i>Ratibida columnifera</i> (Nutt.) Wooton & Standl.	Prairie coneflower	NW Mormon paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
6/22/2015	Asteraceae	<i>Ratibida columnifera</i> (Nutt.) Wooton & Standl.	Prairie coneflower	NW Mormon paddock	A. Caven & J. Wiese	A. Caven & J. Wiese
9/11/2015	Brassicaceae	<i>Thlaspi arvense</i> L.	Field pennycress	Calving Pasture	A. Caven	J. Wiese
9/11/2015	Poaceae	<i>Setaria viridis</i> (L.) P. Beauv.	Green bristlegrass	Calving Pasture	A. Caven	J. Wiese
6/26/2015	Juncaceae	<i>Juncus interior</i> Wiegand	Inland rush	Calving Pasture paddock	J. Wiese & A. Caven	A. Caven & J. Wiese

Date	Family	Scientific Name	Common Name	Location	Collector	ID'd by
8/8/1989	Poaceae	<i>Sorghastrum nutans</i> (L.) Nash	Indiangrass	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Asteraceae	<i>Solidago canadensis</i> L.	Canada goldenrod/tall goldenrod	Mormon island	K. Ericsson	K. Ericsson
7/8/1982	Orchidaceae	<i>Platathera praeclara</i> Sheviak & M.L. Bowles	Western prairie-fringed orchid	Mormon island	P.J. Currier	P.J. Currier
7/8/1982	Orchidaceae	<i>Platathera praeclara</i> Sheviak & M.L. Bowles	Western prairie-fringed orchid	Mormon island	P.J. Currier	P.J. Currier
8/8/1989	Lamiaceae	<i>Pycnanthemum virginianum</i> (L.) T. Dur. & B.D. Jacks. ex B.L. Rob. & Fernald	Virginia mountain-mint	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Asteraceae	<i>Rudbeckia hirta</i> var. <i>pulcherrima</i> Farw.	Black-eyed Susan	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Lamiaceae	<i>Teucrium canadense</i> L.	Canada germander	Mormon island	K. Ericsson	K. Ericsson
8/31/1983	Scrophulariaceae	<i>Agalinis tenuifolia</i> (Vahl) Raf.	Common gerardia	Mormon island	K. Haugh	K. Haugh
8/31/1983	Scrophulariaceae	<i>Agalinis tenuifolia</i> (Vahl) Raf.	Common gerardia	Mormon island	K. Haugh	K. Haugh
8/8/1989	Fabaceae	<i>Trifolium hybridum</i> L.	Alsike clover	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Fabaceae	<i>Trifolium pratense</i> L.	Red clover	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Verbenaceae	<i>Verbena hastata</i> L.	Common vervain	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Verbenaceae	<i>Verbena stricta</i> Vent.	Hoary verbena	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Asteraceae	<i>Vernonia fasciculata</i> Michx.	Ironweed	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Scrophulariaceae	<i>Bacopa rotundifolia</i> (Michx.) Wettst	Water hyssop	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Poaceae	<i>Panicum virgatum</i> L.	Switchgrass	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Solanaceae	<i>Physalis virginiana</i> P. Mill.	Virginia ground-cherry	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Poaceae	<i>Andropogon gerardii</i> Vitman	Big bluestem	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Apocynaceae	<i>Apocynum cannabinum</i> L.	Hemp dogbane/Indian hemp	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Asteraceae	<i>Aster praealtus</i> Pior. var. <i>nebrascensis</i> (Britton) Wiegand/ <i>Symphyotrichum praealtus</i>	Willowleaf aster	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Asteraceae	<i>Aster ericoides</i> L./ <i>Symphyotrichum ericoides</i>	Heath aster	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Poaceae	<i>Bromus inermis</i> Leyss.	Smooth brome	Mormon island	K. Ericsson	K. Ericsson
8/30/1984	Campanulaceae	<i>Lobelia siphilitica</i> L.	Great blue lobelia	Mormon island	T.E. Labedz	T.E. Labedz
8/8/1989	Poaceae	<i>Hordeum jubatum</i> L.	Foxtail barley	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Polygonaceae	<i>Polygonum punctatum</i> Elliott	Water smartweed	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Fabaceae	<i>Dalea purpurea</i> Vent.	Purple prairie clover	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Fabaceae	<i>Desmanthus illinoensis</i> (Michx.) MacMill. ex B.L. Rob. & Fernald	Illinois bundleflower	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Asteraceae	<i>Eupatorium perfoliatum</i> L.	Boneset	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Asteraceae	<i>Helianthus petiolaris</i> Nutt.	Plains sunflower	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Asteraceae	<i>Iva annua</i> L.	Marsh-elder	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Asteraceae	<i>Liatris punctata</i> Hook.	Dotted blazing star/gayfeather	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Verbenaceae	<i>Lippia lanceolata</i> Michx.	Fogfruit	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Lamiaceae	<i>Lycopus americanus</i> Muhl. ex W. Barton	American water-horehound	Mormon island	K. Ericsson	K. Ericsson

Date	Family	Scientific Name	Common Name	Location	Collector	ID'd by
8/8/1989	Lamiaceae	<i>Lycopus asper</i> Greene	Western water-horehound	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Lamiaceae	<i>Mentha arvensis</i> L.	Field mint	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Lythraceae	<i>Ammania coccinea</i> Rottb.	Toothcup	Mormon island	K. Ericsson	K. Ericsson
9/3/1982	Campanulaceae	<i>Lobelia cardinalis</i> L.	Cardinal flower	Mormon island	P.J. Currier	P.J. Currier
8/8/1989	Poaceae	<i>Spartina pectinata</i> Link	Prairie cordgrass	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Poaceae	<i>Agrostis stolonifera</i> L. var. <i>major</i>	Bentgrass/Redtop	Mormon island	K. Ericsson	K. Ericsson
8/8/1989	Asteraceae	<i>Ambrosia psilostachya</i> DC.	Western ragweed	Mormon island	K. Ericsson	K. Ericsson
6/13/1984	Ranunculaceae	<i>Anemone canadensis</i> L.	Meadow anemone	Mormon island	T.E. Labedz	T.E. Labedz
7/31/1984	Verbenaceae	<i>Verbena stricta</i> Vent.	Hoary verbena	Mormon island	T.E. Labedz	T.E. Labedz
6/28/1984	Ranunculaceae	<i>Delphinium virescens</i> Nutt.	Prairie larkspur	Mormon island	T.E. Labedz	T.E. Labedz
7/31/1984	Asteraceae	<i>Ratibida columnifera</i> (Nutt.) Wooton & Standl.	Prairie coneflower	Mormon island	T.E. Labedz	T.E. Labedz
5/18/1982	Asteraceae	<i>Packera plattensis</i> (Nutt.) W.A. Webber & A. Love	Prairie ragwort	Mormon island	W.S. Whitney	W.S. Whitney
8/8/1989	Alismataceae	<i>Alisma triviale</i> Pursh	Water plantain	Mormon island	K. Ericsson	K. Ericsson

Table 5. Plant Species Detected on the Crane Trust

Families	Scientific Name	Common Name	ID'd by
Aceraceae (Sapindaceae)	<i>Acer negundo</i>	Box elder	Kolstad 1981
Aceraceae (Sapindaceae)	<i>Acer saccharinum</i>	Silver maple	Kolstad 1981
Altismataceae	<i>Alisma subcordatum</i> or <i>Alisma triviale</i>	Water plantain	Kolstad 1981
Altismataceae	<i>Sagittaria cuneata</i>	Arrowhead/duck-potato	Caven 2015
Altismataceae	<i>Sagittaria latifolia</i>	Common arrowhead	Kolstad 1981
Amaranthaceae	<i>Amaranthus arenicola</i>	Sandhills amaranth/pigweed	Kolstad 1981
Amaranthaceae	<i>Amaranthus retroflexus</i>	Rough amaranth/pigweed	Kolstad 1981
Amaranthaceae	<i>Froelichia gracilis</i>	Slender snakecotton	Caven 2015
Anacardiaceae	<i>Rhus glabra</i>	Smooth sumac	Kolstad 1981
Anacardiaceae	<i>Rhus trilobata</i>	Skunkbush sumac	Caven 2015
Anacardiaceae	<i>Toxicodendron radicans</i>	Poison ivy	Kolstad 1981
Apiaceae	<i>Cicuta maculata</i>	Spotted water hemlock	Kolstad 1981
Apiaceae	<i>Conium maculatum</i>	Poison hemlock	Caven 2015
Apiaceae	<i>Daucus carota</i>	Queen's Anne's Lace	Kolstad 1981
Apiaceae	<i>Sanicula canadensis</i>	Canada sanicle	Kolstad 1981
Apiaceae	<i>Sium suave</i>	Water parsnip	Kolstad 1982
Apocynaceae	<i>Apocynum cannabinum</i> or <i>Apocynum sibiricum</i>	Hemp dogbane	Kolstad 1982
Asclepiadaceae	<i>Asclepias incarnata</i>	Swamp milkweed	Kolstad 1981
Asclepiadaceae	<i>Asclepias speciosa</i>	Showy milkweed	Kolstad 1981
Asclepiadaceae	<i>Asclepias sullivantii</i>	Sullivant's milkweed	Caven 2015
Asclepiadaceae	<i>Asclepias syriaca</i>	Common milkweed	Kolstad 1982
Asclepiadaceae	<i>Asclepias verticillata</i>	Whorled milkweed	Kolstad 1981
Asteraceae	<i>Achillea millefolium</i>	Common yarrow	Kolstad 1981
Asteraceae	<i>Ambrosia artemisiifolia</i>	Annual/common ragweed	Kolstad 1981
Asteraceae	<i>Ambrosia psilostachya</i>	Western/cuman ragweed	Kolstad 1981
Asteraceae	<i>Ambrosia trifida</i>	Giant/great ragweed	Kolstad 1981
Asteraceae	<i>Antennaria neglecta</i>	Field pussytoes	Kolstad 1982
Asteraceae	<i>Arctium minus</i>	Lesser burdock	Kolstad 1981
Asteraceae	<i>Artemisia ludoviciana</i>	Silver wormwood/sage/white sage brush	Kolstad 1982
Asteraceae	<i>Bidens bipinnata</i>	Spanish needles	Caven 2015
Asteraceae	<i>Bidens cernua</i>	Nodding beggartick	Kolstad 1982
Asteraceae	<i>Bidens comosa (tripartita)</i>	Threelobed beggartick	Kolstad 1981
Asteraceae	<i>Bidens frondosa</i>	Devil's beggartick	Kolstad 1981
Asteraceae	<i>Brickellia eupatorioides</i>	False boneset	Steinauer 2013
Asteraceae	<i>Carduus nutans</i>	Musk/plumeless thistle	Kolstad 1981
Asteraceae	<i>Cirsium altissimum</i>	Tall Thistle	Caven 2015
Asteraceae	<i>Cirsium arvense</i>	Canada Thistle	Caven 2015
Asteraceae	<i>Cirsium canescens</i>	Platte Thistle	Caven 2015
Asteraceae	<i>Cirsium flodmanii</i>	Flodman's thistle	Kolstad 1981

Families	Scientific Name	Common Name	ID'd by
Asteraceae	<i>Conyza canadensis</i>	Canadian horseweed	Kolstad 1981
Asteraceae	<i>Coreopsis tinctoria</i>	Plains coreopsis/golden tickseed	Kolstad 1981
Asteraceae	<i>Crepis runcinata</i>	Fiddleleaf hawksbeard	Kolstad 1981
Asteraceae	<i>Cyclachaena xanthifolia</i> or <i>Iva xanthifolia</i>	Big marsh-elder/Careless weed	Kolstad 1981
Asteraceae	<i>Echinacea angustifolia</i>	Blacksamson purple coneflower	Kolstad 1981
Asteraceae	<i>Eclipta prostrata</i>	Yerba de tajo/false daisy	Caven 2015
Asteraceae	<i>Erechtites hieraciifolius</i>	Burnweed	Caven 2015
Asteraceae	<i>Erigeron bellidiasterum</i>	Western daisy fleabane	Nagel 1981
Asteraceae	<i>Erigeron philadelphicus</i>	Philadelphia fleabane	Steinauer 2013
Asteraceae	<i>Erigeron strigosus</i>	Prairie fleabane	Kolstad 1981
Asteraceae	<i>Eupatorium altissimum</i>	Tall thoroughwort, tall Joepye weed	Caven 2015
Asteraceae	<i>Eupatorium perfoliatum</i>	Common Boneset	Steinauer 2013
Asteraceae	<i>Euthamia gymnospermoides</i>	Texas goldentop	Kolstad 1981
Asteraceae	<i>Grindelia squarrosa</i>	Curlycup gumweed	Currier 1990
Asteraceae	<i>Gutierrezia sarothrae</i>	Broom snakeweed	Caven 2015
Asteraceae	<i>Helenium autumnale</i>	Common sneezeweed	Kolstad 1981
Asteraceae	<i>Helianthus annuus</i>	Common sunflower	Kolstad 1981
Asteraceae	<i>Helianthus grosseserratus</i>	Saw-tooth sunflower	Kolstad 1981
Asteraceae	<i>Helianthus maximiliani</i>	Maximilian sunflower	Kolstad 1981
Asteraceae	<i>Helianthus pauciflorus</i> or <i>Helianthus rigidus</i>	Stiff sunflower	Steinauer 2013
Asteraceae	<i>Helianthus petiolaris</i>	Plains sunflower	Kolstad 1981
Asteraceae	<i>Helianthus tuberosus</i>	Jerusalem artichoke	Kolstad 1981
Asteraceae	<i>Heliotropis helianthoides</i>	Smooth ox-eye	Kolstad 1981
Asteraceae	<i>Heterotheca villosa</i>	Lemon false golden aster	Kolstad 1982
Asteraceae	<i>Iva annua</i>	Annual marsh elder	Kolstad 1981
Asteraceae	<i>Lactuca canadensis</i>	Canada wild lettuce	Kolstad 1981
Asteraceae	<i>Lactuca serriola</i>	Prickley lettuce	Kolstad 1981
Asteraceae	<i>Lactuca tatarica</i> or <i>Lactuca oblongifolia</i>	Blue lettuce	Kolstad 1981
Asteraceae	<i>Leucanthemum vulgare</i> or <i>Chrysanthemum leucanthemum</i>	Ox-eye daisy	Kolstad 1981
Asteraceae	<i>Liatris punctata</i>	Blazing star	Kolstad 1982
Asteraceae	<i>Liatris pycnostachya</i>	Prairie blazing star	Kolstad 1981
Asteraceae	<i>Packera plattensis</i>	Prairie ragwort	Kolstad 1981
Asteraceae	<i>Ratibida columnifera</i>	Prairie coneflower	Kolstad 1981
Asteraceae	<i>Rudbeckia hirta</i>	Black-eye susan	Kolstad 1981
Asteraceae	<i>Rudbeckia laciniata</i>	Cutleaf Coneflower	Caven 2015
Asteraceae	<i>Silphium integrifolium</i>	Wholeleaf rosinweed	Kolstad 1982
Asteraceae	<i>Solidago canadensis</i>	Canada goldenrod	Kolstad 1981
Asteraceae	<i>Solidago gigantea</i>	Giant goldenrod	Kolstad 1982
Asteraceae	<i>Solidago graminifolia</i> or <i>Euthamia gymnospermoides</i>	Texas goldentop	Kolstad 1981
Asteraceae	<i>Solidago missouriensis</i>	Missouri goldenrod	Kolstad 1981
Asteraceae	<i>Solidago rigida</i> or <i>Oligoneuron rigidum</i>	Rigid/stiff goldenrod	Kolstad 1981

Families	Scientific Name	Common Name	ID'd by
Asteraceae	<i>Symphyotrichum ericoides</i> or <i>Aster ericoides</i>	White heath aster	Kolstad 1981
Asteraceae	<i>Symphyotrichum praealtum</i> or <i>Aster praealtum</i>	Willowleaf aster	Kolstad 1982
Asteraceae	<i>Symphyotrichum simplex</i> or <i>Symphyotrichum lanceolatum</i> , <i>Aster lanceolatum</i>	White panicle aster	Kolstad 1982
Asteraceae	<i>Taraxacum officinale</i>	Dandelion	Kolstad 1981
Asteraceae	<i>Tragopogon dubius</i>	Goatsbeard/yellow salsify	Kolstad 1982
Asteraceae	<i>Vernonia baldwinii</i>	Western ironweed	Kolstad 1982
Asteraceae	<i>Vernonia fasciculata</i>	Prairie ironweed	Kolstad 1981
Asteraceae	<i>Xanthium strumarium</i>	Rough cocklebur	Kolstad 1981
Bignoniaceae	<i>Catalpa speciosa</i>	Northern catalpa	Caven 2015
Boraginaceae	<i>Hackelia virginiana</i>	Stickseed/Beggar's Lice	Caven 2015
Boraginaceae	<i>Lithospermum incisum</i>	Narrowleaf stoneseed	Kolstad 1981
Boraginaceae	<i>Onosmodium molle</i> or <i>Onosmodium bejariense</i>	False gromwell	Kolstad 1982
Brassicaceae	<i>Capsella bursa-pastoris</i>	Shepherd's purse	Kolstad 1982
Brassicaceae	<i>Chorispora tenella</i>	Blue mustard/crossflower	Kolstad 1981
Brassicaceae	<i>Descurainia pinnata</i>	Western tansy mustard	Kolstad 1981
Brassicaceae	<i>Descurainia sophia</i>	Flaxweed	Kolstad 1981
Brassicaceae	<i>Hesperis matronalis</i>	Dame's rocket	Caven 2015
Brassicaceae	<i>Lepidium densiflorum</i>	Peppergrass	Kolstad 1981
Brassicaceae	<i>Rorippa palustris</i>	Tall hedge mustard	Kolstad 1981
Brassicaceae	<i>Sisymbrium loeselii</i>	Bog yellow cress/small tumbleweed mustard	Kolstad 1982
Brassicaceae	<i>Thlaspi arvense</i>	Field penny cress	Kolstad 1981
Brassicaceae	<i>Turritis glabra</i> or <i>Arabis glabra</i>	Tower/rocket mustard	Kolstad 1982
Cactaceae	<i>Opuntia fragilis</i>	Brittle prickley pear	Caven 2015
Campanulaceae	<i>Lobelia cardinalis</i>	Cardinal flower	Kolstad 1982
Campanulaceae	<i>Lobelia siphilitica</i>	Great blue lobelia	Kolstad 1981
Campanulaceae	<i>Lobelia spicata</i>	Palespike lobelia	Kolstad 1981
Campanulaceae	<i>Triodanis perfoliata</i>	Looking glass	Kolstad 1982
Cannabaceae	<i>Cannabis sativa</i>	Marijuana	Kolstad 1982
Capparaceae	<i>Cleome serrulata</i>	Rocky Mountain beeplant	Kolstad 1981
Caprifoliaceae	<i>Sambucus canadensis</i> or <i>Sambucus nigra</i> ssp. <i>canadensis</i>	Elderberry	Kolstad 1981
Caprifoliaceae	<i>Symporicarpos occidentalis</i>	Western snowberry	Kolstad 1982
Caryophyllaceae	<i>Cerastium brachypodium</i>	Chickweed	Caven 2015
Caryophyllaceae	<i>Silene antirrhina</i>	Sleepy catchfly	Kolstad 1982
Celastraceae	<i>Celastrus scandens</i>	Climbing bittersweet	Kolstad 1981
Chenopodiaceae	<i>Chenopodium album</i>	Lamb's-quarters	Kolstad 1981
Chenopodiaceae	<i>Chenopodium berlandieri</i> var. <i>zschackei</i>	Stinking Lamb's Quarters	Caven 2015
Chenopodiaceae	<i>Chenopodium glaucum</i>	Oak-leaved goosefoot	Kolstad 1982
Chenopodiaceae	<i>Chenopodium missouriense</i>	Missouri goosefoot	Kolstad 1981
Chenopodiaceae	<i>Chenopodium pratericola</i>	Desert goosefoot	Steinauer 2013
Chenopodiaceae	<i>Chenopodium simplex</i>	Mapleleaf goosefoot	Caven 2015

Families	Scientific Name	Common Name	ID'd by
Chenopodiaceae	<i>Chenopodium standleyanum</i>	Standley's goosefoot	Currier 1990
Chenopodiaceae	<i>Cycloloma atriplicifolium</i>	Winged pigweed	Kolstad 1981
Chenopodiaceae	<i>Kochia scoparia</i> or <i>Bassia scoparia</i>	Mexican fireweed	Nagel 1981
Commelinaceae	<i>Tradescantia bracteata</i>	Spiderwort	Kolstad 1981
Commelinaceae	<i>Tradescantia occidentalis</i>	Prairie spiderwort	Kolstad 1982
Convolvulaceae	<i>Calystegia sepium</i>	Hedge bindweed	Kolstad 1981
Convolvulaceae	<i>Convolvulus arvensis</i>	Field bindweed	Kolstad 1981
Convolvulaceae	<i>Ipomoea purpurea</i>	Tall morning-glory	Kolstad 1981
Cornaceae	<i>Cornus drummondii</i>	Rough-leaved dogwood	Kolstad 1981
Cucurbitaceae	<i>Echinocystis lobata</i>	Wild cucumber	Kolstad 1981
Cupressaceae	<i>Juniperus virginiana</i>	Red Cedar	Kolstad 1981
Cuscutaceae (Convolvulaceae)	<i>Cuscuta glomerata</i>	Cluster/rope dodder	Kolstad 1981
Cyperaceae	<i>Bolboschoenus fluviatilis</i>	Water sedge	Kolstad 1981
Cyperaceae	<i>Bolboschoenus maritimus</i>	Woodland sedge	Kolstad 1982
Cyperaceae	<i>Carex aquatilis</i>	Fescue sedge	Kolstad 1981
Cyperaceae	<i>Carex blanda</i>	Eastern woodland sedge	Kolstad 1981
Cyperaceae	<i>Carex brevior</i>	Shortbeaked sedge	Kolstad 1981
Cyperaceae	<i>Carex cracwei</i>	Crake's sedge	Caven 2015
Cyperaceae	<i>Carex eleocharis</i> or <i>Carex duriuscula</i>	Needleleaf sedge	Kolstad 1981
Cyperaceae	<i>Carex emoryi</i> or <i>Carex stricta</i> var. <i>elongata</i>	Emory's sedge	Caven 2015
Cyperaceae	<i>Carex gravida</i>	Heavy sedge	Kolstad 1981
Cyperaceae	<i>Carex hallii</i>	Deer sedge	Kolstad 1981
Cyperaceae	<i>Carex lanuginose</i> or <i>Carex lasiocarpa</i>	Woollyfruit sedge	Kolstad 1981
Cyperaceae	<i>Carex meadii</i>	Mead's sedge	Kolstad 1981
Cyperaceae	<i>Carex molesta</i>	Troublesome sedge	Kolstad 1981
Cyperaceae	<i>Carex pellita</i>	Woolly sedge	Caven 2015
Cyperaceae	<i>Carex praegracilis</i>	Clustered flatsedge	Kolstad 1981
Cyperaceae	<i>Carex scoparia</i>	Broom sedge	Kolstad 1981
Cyperaceae	<i>Carex stipata</i>	Awlfruit sedge	Kolstad 1981
Cyperaceae	<i>Carex vulpinoidea</i>	Fox sedge	Kolstad 1981
Cyperaceae	<i>Cyperus aristatus</i>	Bearded flatsedge	Kolstad 1981
Cyperaceae	<i>Cyperus esculentus</i>	Yellow nutsedge	Kolstad 1981
Cyperaceae	<i>Cyperus fuscus</i>	Brown Flatsedge	Caven 2015
Cyperaceae	<i>Cyperus lupulinus</i>	Great Plains flatsedge	Caven 2015
Cyperaceae	<i>Cyperus odoratus</i>	Fragrant flatsedge	Caven 2015
Cyperaceae	<i>Cyperus schweinitzii</i>	Schweinitz's flatsedge	Kolstad 1981
Cyperaceae	<i>Cyperus squarrosus</i>	Small/bearded flatsedge	Caven 2015
Cyperaceae	<i>Cyperus strigosus</i>	False nutsedge/umbrella sedge	Caven 2015
Cyperaceae	<i>Eleocharis acicularis</i>	Needle spikerush	Kostad 1981
Cyperaceae	<i>Eleocharis compressa</i>	Flatstem spikerush	Kostad 1981
Cyperaceae	<i>Eleocharis engelmannii</i>	Engelmann's spikerush	Kolstad 1981

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Cyperaceae	<i>Eleocharis erythropoda</i>	Bald spikerush	Kolstad 1981
Cyperaceae	<i>Eleocharis palustris</i> or <i>Eleocharis macrostachya</i>	Common spikerush	Kolstad 1981
Cyperaceae	<i>Eleocharis wolfii</i>	Hair-grass	Caven 2015
Cyperaceae	<i>Fimbristylis puberula</i>	Hairy fimbry	Kolstad 1981
Cyperaceae	<i>Schoenoplectus acutus</i>	Hard-stem bulrush	Caven 2015
Cyperaceae	<i>Schoenoplectus pungens</i>	Common threesquare	Kolstad 1981
Cyperaceae	<i>Schoenoplectus tabernaemontani</i> or <i>Schoenoplectus validus</i>	Soft-stem bulrush	Caven 2015
Cyperaceae	<i>Scirpus atrovirens</i>	Green bulrush	Kolstad 1981
Cyperaceae	<i>Scirpus pallidus</i>	Cloaked bulrush	Caven 2015
Elaeagnaceae	<i>Elaeagnus angustifolia</i>	Russian olive	Kolstad 1981
Elaeagnaceae	<i>Shepherdia argentea</i>	Silver buffaloberry	Kolstad 1982
Equisetaceae	<i>Equisetum arvense</i>	Field horsetail	Kolstad 1981
Equisetaceae	<i>Equisetum fluviatile</i>	Water horsetail	Caven 2015
Equisetaceae	<i>Equisetum laevigatum</i>	Smooth horsetail	Kolstad 1981
Euphorbiaceae	<i>Croton texensis</i>	Texas croton	Kolstad 1981
Euphorbiaceae	<i>Euphorbia davidii</i>	Western toothed-spurge	Caven 2015
Euphorbiaceae	<i>Euphorbia dentata</i>	Toothed spurge	Kolstad 1982
Euphorbiaceae	<i>Euphorbia esula</i>	Russian leafy spurge	Caven 2015
Euphorbiaceae	<i>Euphorbia glyptosperma</i> or <i>Chamaesyce glyptosperma</i>	Ribseed sandmat spurge	Kolstad 1983
Euphorbiaceae	<i>Euphorbia maculata</i> or <i>Chamaesyce maculata</i>	Prostrate spurge/spotted sandmat	Caven 2015
Euphorbiaceae	<i>Euphorbia marginata</i>	Snow-on-the-mountain	Caven 2015
Euphorbiaceae	<i>Euphorbia spathulata</i> or <i>Euphorbia arkansana/Euphorbia obtusata</i>	Warty spurge	Caven 2015
Fabaceae	<i>Amorpha canescens</i>	Leadplant	Caven 2015
Fabaceae	<i>Amorpha fruticosa</i>	Indigo bush	Kolstad 1982
Fabaceae	<i>Amphicarpaea bracteata</i> var. <i>comosa</i>	Hog Peanut	Caven 2015
Fabaceae	<i>Apios americana</i>	Ground nut	Kolstad 1982
Fabaceae	<i>Astragalus canadensis</i>	Canada milkvetch	Kolstad 1981
Fabaceae	<i>Astragalus missouriensis</i>	Missouri milkvetch	Caven 2015
Fabaceae	<i>Chamaecrista fasciculata</i>	Partridge pea	Caven 2015
Fabaceae	<i>Dalea candida</i>	White prairie clover	Kolstad 1982
Fabaceae	<i>Dalea purpurea</i> or <i>Petalostemon purpureum</i>	Purple prairie clover	Kolstad 1981
Fabaceae	<i>Desmodium glutinosum</i>	Wood Tick-Clover	Kolstad 1983
Fabaceae	<i>Desmodium illinoense</i>	Illinoise Tick-Clover	Caven 2015
Fabaceae	<i>Gleditsia triacanthos</i>	Honey locust	Kolstad 1982
Fabaceae	<i>Glycyrrhiza lepidota</i>	American/wild licorice	Kolstad 1981
Fabaceae	<i>Lespedeza capitata</i>	Roundhead lespedeza	Kolstad 1982
Fabaceae	<i>Lotus corniculatus</i>	Bird's foot trefoil	Kolstad 1981
Fabaceae	<i>Lotus purshianus</i> or <i>Lotus unifoliolatus</i>	American bird's-foot trefoil	Kolstad 1981
Fabaceae	<i>Lotus tenuis</i>	Narrowleaf trefoil	Caven 2015
Fabaceae	<i>Medicago lupulina</i>	Black medic	Kolstad 1981
Fabaceae	<i>Medicago sativa</i>	Alfalfa	Kolstad 1981

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Fabaceae	<i>Melilotus albus</i>	White sweet clover	Kolstad 1981
Fabaceae	<i>Melilotus officinalis</i>	Yellow sweet clover	Kolstad 1981
Fabaceae	<i>Pediomelum argophyllum</i>	Silver-leaf scurf-pea	Caven 2015
Fabaceae	<i>Strophostyles leiosperma</i>	Smoothseed wild fuzzbean	Kolstad 1981
Fabaceae	<i>Trifolium hybridum</i>	Alsike clover	Kolstad 1982
Fabaceae	<i>Trifolium pratense</i>	Red clover	Kolstad 1981
Fabaceae	<i>Trifolium repens</i>	White clover	Kolstad 1982
Fabaceae	<i>Vicia villosa</i>	Hairy vetch	Caven 2015
Fabaceae (Mimosaceae)	<i>Desmanthus illinoensis</i>	Illinois bundle-flower	Kolstad 1982
Fabaceae (Mimosaceae)	<i>Mimosa nuttallii</i>	Prairie mimosa	Caven 2015
Fumaraceae	<i>Fumaria officinalis</i>	Common/western fumitory	Caven 2015
Gentianaceae	<i>Eustoma grandiflorum</i> or <i>Eustoma exaltatum</i> / <i>Eustoma russellianum</i>	Catchfly prairie gentian	Kolstad 1981
Hydrophyllaceae	<i>Ellisia nyctelea</i>	Waterpod/aunt lucy	Kolstad 1981
Iridaceae	<i>Iris pseudacorus</i>	Yellow flag iris	Caven 2015
Iridaceae	<i>Sisyrinchium angustifolium</i> or <i>Sisyrinchium montanum</i>	Narrowleaf blue-eyed grass	Kolstad 1982
Iridaceae	<i>Sisyrinchium campestre</i>	Prairie blue-eyed grass	Kolstad 1982
Juncaceae	<i>Juncus balticus</i> or <i>Juncus articus</i>	Baltic rush	Kolstad 1982
Juncaceae	<i>Juncus bufonius</i>	Toad rush	Kolstad 1982
Juncaceae	<i>Juncus dudleyi</i>	Dudley rush	Kolstad 1981
Juncaceae	<i>Juncus interior</i>	Inland rush	Caven 2015
Juncaceae	<i>Juncus nodosus</i>	Knotted rush	Kolstad 1981
Juncaceae	<i>Juncus tenuis</i>	Poverty rush	Caven 2015
Juncaceae	<i>Juncus torreyi</i>	Torrey's rush	Kolstad 1981
Juncaceae	<i>Juncus validus</i>	Roundhead rush	Kolstad 1981
Juncaginaceae	<i>Triglochin maritimum</i>	Arrowgrass	Kolstad 1981
Lamiaceae	<i>Glechoma hederacea</i>	Ground ivy	Caven 2015
Lamiaceae	<i>Hedeoma hispida</i>	Rough false pennyroyal	Kolstad 1981
Lamiaceae	<i>Lamium amplexicaule</i>	Henbit/deadnettle	Caven 2015
Lamiaceae	<i>Lycopus americanus</i>	American bungleweed/whorehound	Kolstad 1981
Lamiaceae	<i>Lycopus asper</i>	Rough bungleweed	Kolstad 1981
Lamiaceae	<i>Mentha arvensis</i> or <i>Mentha canadensis</i>	Field mint	Kolstad 1982
Lamiaceae	<i>Monarda fistulosa</i>	Wild bergamot	Kolstad 1981
Lamiaceae	<i>Nepeta cataria</i>	Catnip	Kolstad 1981
Lamiaceae	<i>Prunella vulgaris</i>	Common selfheal	Kolstad 1981
Lamiaceae	<i>Pycnanthemum virginianum</i>	Virginia mountain mint	Kolstad 1981
Lamiaceae	<i>Salvia azurea</i>	Blue pitcher's sage	Caven 2015
Lamiaceae	<i>Scutellaria lateriflora</i>	Blue skullcap	Kolstad 1982
Lamiaceae	<i>Stachys pilosa</i>	Hedge nettle	Kolstad 1982
Lamiaceae	<i>Teucrium canadense</i>	Canada germander	Kolstad 1981
Liliaceae (Amaryllidaceae)	<i>Allium canadense</i>	/meadow garlic	Kolstad 1981
Liliaceae (Amaryllidaceae)	<i>Allium textile</i>	White wild/textile onion	Kolstad 1981

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Lilliaceae (Asparagaceae)	<i>Asparagus officinalis</i>	Asparagus	Kolstad 1981
Lilliaceae (Asparagaceae)	<i>Maianthemum stellatum</i>	False Solomon's seal	Kolstad 1981
Lilliaceae (Hypoxidaceae)	<i>Hypoxis hirsuta</i>	Yellow stargrass/goldstar	Kolstad 1981
Lythraceae	<i>Ammannia coccinea</i>	Redstem tooth-cup	Kolstad 1982
Lythraceae	<i>Ammannia robusta</i>	Grand redstem tooth-cup	Currier 1990
Lythraceae	<i>Lythrum alatum</i>	Winged loosestrife	Kolstad 1983
Lythraceae	<i>Lythrum salicaria</i>	Purple loosestrife	Kolstad 1981
Malvaceae	<i>Callirhoe alcaeoides</i>	Pink/light poppy mallow	Kolstad 1981
Malvaceae	<i>Callirhoe involucrata</i>	Purple poppy mallow	Kolstad 1981
Malvaceae	<i>Hibiscus laevis</i> or <i>Hibiscus militaris</i>	Halberd-leaf Rose-Mallow	Caven 2015
Malvaceae	<i>Hibiscus trionum</i>	Flower-of-an-hour	Kolstad 1981
Malvaceae	<i>Malva neglecta</i>	Common mallow	Kolstad 1981
Moraceae	<i>Morus alba</i>	White mulberry	Kolstad 1982
Moraceae	<i>Morus rubra</i>	Red mulberry	Caven 2015
Nyctaginaceae	<i>Mirabilis hirsuta</i>	Hairy four-o'clock	Kolstad 1981
Nyctaginaceae	<i>Mirabilis linearis</i>	Narrowleaf four-o'clock	Kolstad 1982
Nyctaginaceae	<i>Mirabilis nyctaginea</i>	Wild four-o'clock	Kolstad 1981
Oleaceae	<i>Fraxinus pennsylvanica</i>	Green ash	Kolstad 1981
Onagraceae	<i>Circaeа lutetiana</i> ssp. <i>canadensis</i>	Enchanter's Nightshade	Caven 2015
Onagraceae	<i>Gaura parviflora</i>	Velvety gaura	Kolstad 1981
Onagraceae	<i>Ludwigia palustris</i>	Water purslane/marsh seedbox	Kolstad 1981
Onagraceae	<i>Oenothera biennis</i>	Common evening primrose	Kolstad 1981
Onagraceae	<i>Oenothera laciniata</i>	Cutleaf evening primrose	Kolstad 1982
Onagraceae	<i>Oenothera pallida</i>	Pale evening primrose	Kolstad 1982
Onagraceae	<i>Oenothera serrulata</i> or <i>Calylophus serrulatus</i>	Yellow sundrops	Caven 2015
Orchidaceae	<i>Platanthera leucophaea</i>	P. Fringed Orchid	Kolstad 1982
Orchidaceae	<i>Spiranthes cernua</i>	Ladies-tresses orchid	Kolstad 1982
Orchidaceae	<i>Spiranthes magnicamporum</i>	Great Plains Ladies' Tresses Orchid	Caven 2015
Oxalidaceae	<i>Oxalis dillenii</i>	Slender yellow woodsorrel	Kolstad 1981
Phrymaceae	<i>Phryma leptostachya</i>	America Lopseed	Caven 2015
Plantaginaceae	<i>Plantago eriopoda</i>	Alkali plantain	Kolstad 1981
Plantaginaceae	<i>Plantago lanceolate</i> or <i>Plantago altissima</i>	Narrow-leaf plantain	Caven 2015
Plantaginaceae	<i>Plantago major</i>	Common plantain	Kolstad 1981
Plantaginaceae	<i>Plantago patagonica</i> var. <i>patagonica</i> or <i>Plantago purshii</i>	Woolly plantain	Kolstad 1981
Plantaginaceae	<i>Plantago patagonica</i> var. <i>spinulosa</i> or <i>Plantago spinulosa</i>	Woolly buckhorn plantain	Caven 2015
Plantaginaceae	<i>Plantago virginica</i>	Virginia plantain	Caven 2015
Poaceae	<i>Agropyron cristatum</i>	Crested wheatgrass	Caven 2015
Poaceae	<i>Agrostis stolonifera</i>	Creeping bentgrass/redtop	Kolstad 1982
Poaceae	<i>Alopecurus aequalis</i>	Shortawn foxtail	Kolstad 1982

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Poaceae	<i>Alopecurus arundinaceus</i>	Creeping Meadow Foxtail	Caven 2015
Poaceae	<i>Alopecurus pratensis</i>	Meadow foxtail	Currier 1990
Poaceae	<i>Andropogon gerardii</i>	Big bluestem	Kolstad 1982
Poaceae	<i>Andropogon hallii</i>	Sand bluestem	Kolstad 1981
Poaceae	<i>Aristida oligantha</i>	Prairie threeawn	Kolstad 1982
Poaceae	<i>Avena fatua</i>	Wild oats	Kolstad 1982
Poaceae	<i>Bouteloua curtipendula</i>	Side-oats grama	Nagel 1981
Poaceae	<i>Bouteloua dactyloides</i>	Buffalo grass	Nagel 1981
Poaceae	<i>Bouteloua gracilis</i>	Blue grama	Kolstad 1982
Poaceae	<i>Bouteloua hirsuta</i>	Hairy grama	Kolstad 1982
Poaceae	<i>Bromus inermis</i>	Smooth brome	Kolstad 1981
Poaceae	<i>Bromus japonicas</i> or <i>Bromus arvensis</i>	Japanese brome	Kolstad 1981
Poaceae	<i>Bromus latiglumis</i>	Hairy Woodbrome	Caven 2015
Poaceae	<i>Bromus tectorum</i>	Downy brome/Cheatgrass	Kolstad 1981
Poaceae	<i>Calamagrostis stricta</i>	Slimstem reedgrass	Kolstad 1981
Poaceae	<i>Calamovilfa longifolia</i>	Prairie sandreed	Kolstad 1981
Poaceae	<i>Cenchrus longispinus</i>	Field/mat sandbur	Kolstad 1981
Poaceae	<i>Chloris verticillata</i>	Tumble windmill grass	Nagel 1981
Poaceae	<i>Dactylis glomerata</i>	Orchardgrass	Currier 1990
Poaceae	<i>Digitaria sanguinalis</i>	Hairy crabgrass	Kolstad 1981
Poaceae	<i>Distichlis spicata</i>	Seashore saltgrass	Kolstad 1981
Poaceae	<i>Echinochloa crus-galli</i>	Barnyard grass	Kolstad 1981
Poaceae	<i>Eleusine indica</i>	Indian goosegrass	Kolstad 1981
Poaceae	<i>Elyhordeum macounii</i>	Macoun's barley	Currier 1990
Poaceae	<i>Elymus canadensis</i>	Canada wildrye	Kolstad 1981
Poaceae	<i>Elymus repens</i>	Quackgrass	Kolstad 1981
Poaceae	<i>Elymus trachycaulus</i>	Slender wheatgrass	Kolstad 1981
Poaceae	<i>Elymus villosus</i>	Hairy Wildrye	Caven 2015
Poaceae	<i>Elymus virginicus</i>	Virginia wildrye	Kolstad 1981
Poaceae	<i>Eragrostis ciliaris</i>	Stinkgrass	Kolstad 1981
Poaceae	<i>Eragrostis pectinacea</i>	Tufted/Carolina lovegrass	Kolstad 1981
Poaceae	<i>Eragrostis spectabilis</i>	Purple lovegrass	Kolstad 1981
Poaceae	<i>Eragrostis trichodes</i>	Sand lovegrass	Caven 2015
Poaceae	<i>Festuca subverticillata</i>	Nodding fescue	Caven 2015
Poaceae	<i>Glyceria striata</i>	Fowl managrass	Kolstad 1981
Poaceae	<i>Hesperostipa comata</i> or <i>Stipa comata</i>	Needle-and-thread	Kolstad 1981
Poaceae	<i>Hesperostipa spartea</i>	Porcupine grass	Kolstad 1982
Poaceae	<i>Hierochloe odorata</i>	Sweetgrass	Kolstad 1981
Poaceae	<i>Hordeum jubatum</i>	Foxtail barley	Kolstad 1981
Poaceae	<i>Hordeum pusillum</i>	Little barley	Kolstad 1981
Poaceae	<i>Koeleria macrantha</i>	Prairie Junegrass	Kolstad 1981
Poaceae	<i>Leersia oryzoides</i>	Rice Cutgrass	Caven 2015

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Poaceae	<i>Leersia virginica</i>	Whitegrass	Kolstad 1982
Poaceae	<i>Muhlenbergia asperifolia</i>	Scratchgrass	Kolstad 1983
Poaceae	<i>Muhlenbergia mexicana</i>	Wirestem muhly	Kolstad 1981
Poaceae	<i>Muhlenbergia racemosa</i>	Marsh muhly	Kolstad 1982
Poaceae	<i>Muhlenbergia sylvatica</i>	Forest muhly	Kolstad 1983
Poaceae	<i>Panicum acuminatum</i> or <i>Dichanthelium acuminatum/Panicum lanuginosum</i>	Western panicgrass	Kolstad 1985
Poaceae	<i>Panicum capillare</i>	Witchgrass	Kolstad 1984
Poaceae	<i>Panicum dichotomiflorum</i>	Fall panicgrass	Currier 1990
Poaceae	<i>Panicum oligosanthes</i> or <i>Dichanthelium oligosanthes</i>	Small panicgrass	Kolstad 1982
Poaceae	<i>Panicum virgatum</i>	Switchgrass	Kolstad 1982
Poaceae	<i>Panicum wilcoxianum</i> or <i>Dichanthelium wilcoxianum</i>	Wilcox panic grass	Steinauer 2013
Poaceae	<i>Pascopyrum smithii</i> or <i>Elymus smithii</i>	Western wheatgrass	Kolstad 1982
Poaceae	<i>Paspalum setaceum</i>	Thin paspalum	Kolstad 1982
Poaceae	<i>Phalaris arundinacea</i>	Reed canarygrass	Kolstad 1982
Poaceae	<i>Phleum pratense</i>	Timothy	Kolstad 1982
Poaceae	<i>Poa pratensis</i>	Kentucky bluegrass	Kolstad 1982
Poaceae	<i>Polygonum monspeliacum</i>	Rabbitfoot grass	Kolstad 1982
Poaceae	<i>Schedonorus arundinaceus</i> or <i>Festuca arundinacea/Lolium arundinaceum</i>	Tall fescue	Caven 2015
Poaceae	<i>Schedonorus pratensis</i>	Meadow fescue	Kolstad 1982
Poaceae	<i>Schizachyrium scoparium</i>	Little bluestem	Kolstad 1982
Poaceae	<i>Setaria pumila</i> or <i>Setaria glauca</i>	Yellow foxtail	Kolstad 1982
Poaceae	<i>Sorghastrum nutans</i>	Indian-grass	Kolstad 1982
Poaceae	<i>Spartina pectinata</i>	Prairie cordgrass	Kolstad 1982
Poaceae	<i>Sphenopholis obtusata</i>	Prairie wedgescale	Kolstad 1982
Poaceae	<i>Sporobolus airoides</i>	Alkali sacaton	Kolstad 1982
Poaceae	<i>Sporobolus compositus</i>	Rough dropseed	Kolstad 1982
Poaceae	<i>Sporobolus cryptandrus</i>	Sand dropseed	Kolstad 1982
Poaceae	<i>Sporobolus neglectus</i>	Puffsheath Dropseed	Caven 2015
Poaceae	<i>Triplasis purpurea</i>	Purple sandgrass	Kolstad 1982
Poaceae	<i>Vulpia octoflora</i>	Six-weeks fescue	Kolstad 1982
Polygonaceae	<i>Polygonum arenastrum</i> or <i>Polygonum aviculare</i>	Common knotweed	Kolstad 1981
Polygonaceae	<i>Polygonum bincorne</i>	Pink smartweed	Caven 2015
Polygonaceae	<i>Polygonum coccineum</i> or <i>Polygonum amphibium</i>	Swamp smartweed	Kolstad 1981
Polygonaceae	<i>Polygonum convolvulus</i>	Wild buckwheat/black bindweed	Kolstad 1981
Polygonaceae	<i>Polygonum lapathifolium</i>	Pale smartweed	Kolstad 1982
Polygonaceae	<i>Polygonum persicaria</i>	Smartweed	Kolstad 1981
Polygonaceae	<i>Polygonum punctatum</i>	Water/dotted smartweed	Kolstad 1981
Polygonaceae	<i>Rumex latissimus</i> or <i>Rumex britannica/ellipticus</i>	Pale dock	Caven 2015
Polygonaceae	<i>Rumex crispus</i>	Curly dock	Kolstad 1981
Polypodiaceae	<i>Thelypteris palustris</i>	Marsh Fern	Kolstad 1981
Portulacaceae	<i>Phemeranthus parviflorus</i>	Prairie flameflower	Kolstad 1982

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Primulaceae	<i>Androsace occidentalis</i>	Western rockjasmine	Steinauer 2013
Primulaceae	<i>Lysimachia ciliata</i>	Fringed loosestrife	Kolstad 1981
Primulaceae	<i>Lysimachia thyrsiflora</i>	Tufted loosestrife	Kolstad 1981
Ranunculaceae	<i>Anemone canadensis</i>	Meadow anemone	Kolstad 1982
Ranunculaceae	<i>Anemone caroliniana</i>	Carolina anemone	Caven 2015
Ranunculaceae	<i>Clematis virginiana</i>	Eastern Virgin's bower	Caven 2015
Ranunculaceae	<i>Delphinium virescens</i> or <i>Delphinium carolinianum</i>	Prairie larkspur	Kolstad 1982
Ranunculaceae	<i>Ranunculus cymbalaria</i>	Shore/alkali buttercup	Kolstad 1982
Ranunculaceae	<i>Ranunculus longirostris</i> or <i>Ranunculus aquatilis</i>	White water-crowfoot/longbeak buttercup	Caven 2015
Ranunculaceae	<i>Ranunculus macounii</i>	Macoun's buttercup	Kolstad 1982
Ranunculaceae	<i>Ranunculus sceleratus</i>	Cursed crowsfoot	Caven 2015
Ranunculaceae	<i>Thalictrum dasycarpum</i>	Purple meadow-rue	Kolstad 1982
Rosaceae	<i>Agrimonia parviflora</i>	Agrimony	Caven 2015
Rosaceae	<i>Geum canadense</i>	White avens	Kolstad 1981
Rosaceae	<i>Potentilla norvegica</i>	Strawberry weed/Norwegian cinquefoil	Kolstad 1982
Rosaceae	<i>Potentilla paradoxa</i>	Bushy cinquefoil	Kolstad 1982
Rosaceae	<i>Potentilla recta</i>	Sulphur cinquefoil	Caven 2015
Rosaceae	<i>Rosa arkansana</i>	Prairie wild rose	Kolstad 1981
Rosaceae	<i>Rosa woodsii</i>	Western wild/wood's rose	Kolstad 1981
Rosaceae	<i>Rubus occidentalis</i>	Black raspberry	Kolstad 1981
Rubiaceae	<i>Galium aparine</i>	Catchweed bedstraw	Kolstad 1981
Rubiaceae	<i>Galium circaeans</i> var. <i>hypomalacum</i>	Woods Bedstraw	Caven 2015
Rutaceae	<i>Zanthoxylum americanum</i>	Pricklyash	Kolstad 1982
Salicaceae	<i>Populus deltoides</i>	Plains cottonwood	Kolstad 1981
Salicaceae	<i>Salix amygdaloides</i>	Peach-leaved willow	Kolstad 1981
Salicaceae	<i>Salix exigua</i> or <i>Salix interior</i>	Coyote/sandbar willow	Kolstad 1981
Santalaceae	<i>Comandra umbellata</i>	Bastard toadflax	Steinauer 2013
Scrophulariaceae	<i>Agalinis tenuifolia</i>	Common gerardia/slenderleaf false foxglove	Caven 2015
Scrophulariaceae	<i>Bacopa rotundifolia</i>	Water hyssop	Currier 1990
Scrophulariaceae	<i>Mimulus ringens</i>	Allegheny monkeyflower	Kolstad 1982
Scrophulariaceae	<i>Penstemon albidus</i>	White beardtongue	Caven 2015
Scrophulariaceae	<i>Penstemon digitalis</i> or <i>Penstemon laevigatus</i>	Foxglove beardtongue	Caven 2015
Scrophulariaceae	<i>Penstemon gracilis</i>	Slender beardtongue/lilac penstemon	Caven 2015
Scrophulariaceae	<i>Penstemon grandifloras</i> or <i>Penstemon bradburii</i>	Shell-leaf/large beardtongue	Caven 2015
Scrophulariaceae	<i>Penstemon tubiflorus</i>	Tube penstemon/white whortle beardtongue	Caven 2015
Scrophulariaceae	<i>Verbascum thapsus</i>	Common mullein	Caven 2015
Scrophulariaceae	<i>Veronica americana</i>	American Speedwell	Caven 2015
Scrophulariaceae	<i>Veronica anagallis-aquatica</i>	Water speedwell	Kolstad 1982
Scrophulariaceae	<i>Veronica arvensis</i>	Corn speedwell	Kolstad 1982
Scrophulariaceae	<i>Veronica polita</i> or <i>Pocilla polita</i> / <i>Veronica didyma</i>	Gray field speedwell	Caven 2015

Families	Scientific Name	Common Name	ID'd by
Smilacaceae	<i>Smilax hispida</i>	Bristly greenbriar	Kolstad 1981
Solanaceae	<i>Physalis heterophylla</i>	Prairie/Clammy ground cherry	Kolstad 1981
Solanaceae	<i>Physalis hispida</i>	Sandhills/prairie ground cherry	Kolstad 1981
Solanaceae	<i>Physalis longifolia</i>	Common/longleaf ground cherry	Caven 2015
Solanaceae	<i>Physalis virginiana</i>	Virginia ground cherry	Kolstad 1981
Solanaceae	<i>Solanum americanum</i>	Black nightshade	Kolstad 1981
Solanaceae	<i>Solanum carolinense</i>	Horse-nettle	Caven 2015
Solanaceae	<i>Solanum ptychanthum</i>	Black Nightshade/West Indian NS	Caven 2015
Solanaceae	<i>Solanum rostratum</i>	Buffalo bur	Kolstad 1981
Sparganiaceae	<i>Sparganium eurycarpum</i>	Giant burr-reed	Kolstad 1982
Thymelaeaceae	<i>Thymelaea passerina</i>	Spurge-flax	Caven 2015
Ulmaceae	<i>Celtis occidentalis</i>	Hackberry	Kolstad 1982
Ulmaceae	<i>Ulmus americana</i>	American Elm	Kolstad 1982
Ulmaceae	<i>Ulmus pumila</i>	Siberian Elm	Caven 2015
Urticaceae	<i>Boehmeria cylindrica</i>	Smallspike false nettle	Currier 1990
Urticaceae	<i>Parietaria pensylvanica</i>	Pennsylvania pellitory	Kolstad 1982
Urticaceae	<i>Urtica dioica</i>	Stinging nettle	Kolstad 1982
Verbenaceae	<i>Phyla lanceolata</i> or <i>Lippia lanceolata</i>	Lanceleaf fog fruit	Kolstad 1981
Verbenaceae	<i>Verbena bracteata</i>	Bracted vervain	Kolstad 1981
Verbenaceae	<i>Verbena hastata</i>	Blue/swamp vervain	Kolstad 1981
Verbenaceae	<i>Verbena stricta</i>	Hoary vervain	Kolstad 1981
Verbenaceae	<i>Verbena urticifolia</i>	Nettle-leaved/white vervain	Kolstad 1981
Violaceae	<i>Viola missouriensis</i> or <i>Viola sororia</i>	Missouri violet	Caven 2015
Violaceae	<i>Viola pedatifida</i>	Meadow violet	Kolstad 1981
Vitaceae	<i>Parthenocissus vitacea</i>	Woodbine	Kolstad 1981
Vitaceae	<i>Vitis riparia</i>	River-bank grape	Kolstad 1982
Zygophyllaceae	<i>Tribulus terrestris</i>	Puncture vine	Kolstad 1981

Regal Fritillaries and Monarchs

As part of our monitoring protocol we documented 2 species of butterfly, the Regal Fritillary (*Speyeria idalia*) and the Monarch (*Danaus plexippus*), by sight while conducting other monitoring surveys (birds, plants, small mammals, etc.). We recorded a GPS location for each detection of either species as well as the number of individuals of either species present. We submitted a description of the habitats used by the Regal Fritillary on Crane Trust property and general ecology via the literature to the Regal Fritillary status review (docket ID: FWS-R6-ES-2015-0078; see Appendix 1).

Table 6. Butterfly Detections

Species	No. of Butterflies Detected	First Seen	Peak Date (No.)	Last Seen
Monarch	677	Jun 05 2015	Sep 23 2015 (165)	Oct 05 2015
Regal Fritillary	56	Jul 01 2015	Jul 01 2015 (15)	Jul 30 2015*

*One deceased fritillary was found Sep 27 2015

Incidental Specimens Collected

Occasionally in our work we find dead animals and take them for collections. We did not trap any animals for collection, but when a good specimen was found it was taken.

Table 7. Incidental Animals Collected

Species	Cause of death	Location Found
Sora (<i>Porzana carolina</i>)	Car	W. Whooping Crane Dr.
Sora (<i>Porzana carolina</i>)	Possibly trampled by bison	Bison pen Shoemaker Island
Least Weasel (<i>Mustela nivalis</i>)	Unknown	East Mormon Island
Armadillo (<i>Dasypus novemcintus</i>)	Car	I-80 before exit 300

Conclusion

Implementing a long-term monitoring program will help us more critically assess the impacts of our management actions to better understand their impacts upon Whooping Cranes, Sandhill Cranes, and the other bird species that pass through and breed in the Big Bend region of the Platte River in Nebraska. This field season our efforts totaled 70 avian surveys, 46 small mammal surveys (2,740 trap nights), 43 vegetation surveys, and three days of fish seining; leading to 185 avian species detected, 296 small mammals trapped, 372 plants collected, and 3,870 fish caught and released. This report represents preliminary findings and thus should be interpreted as such; our intention with this data is to produce peer-reviewed research that addresses issues of conservation concern in the Central Platte River Valley.

Appendix

1. Regal Fritillary Status Review Submission to Docket FWS-R6-ES-2015-0078

The Regal Fritillary (*Speyeria idalia*) is a tallgrass endemic butterfly species that feeds on *Viola* species as larvae (Wagner et al. 1997). Caterpillars experience the highest mortality for this species; in captivity the mortality rate from first instar to second (growing from a fresh caterpillar to a larger caterpillar) was 50% (after a hatch success averaging 65%; Wagner et al. 1997). Additionally, in the wild the larvae must search for their food (as *S. idalia* females lay their eggs anywhere), and will have to find multiple *Viola* plants to reach the appropriate size to be able to successfully pupate (Wagner et al. 1997). On top of other natural dangers (predation, flooding, disease etc.) spring fires used for managing prairies will result in death for the larvae in diapause (Wagner et al. 1997, Swengel and Swengel 2007, Shepherd and Debinski 2005a, Selby 2007, Swengel et al. 2011, Moranz et al. 2014). Fires are especially problematic to regal fritillaries when combined with grazing (a common practice called pyric herbivory; Moranz et al. 2014), but alone either is not detrimental when done with care (i.e. patch burn-grazing). One can easily see how, despite the ability of *S. idalia* to lay up to 2,500 eggs in its life it is possible that few offspring from one female reach the adult butterfly stage (Wagner et al. 1997).

Overall this species (and many other Lepidoptera) is declining across the Midwest, even in Wisconsin where it is protected from full patch spring burns that would lead to declines or extirpation (Swengel et al. 2011). Three hurdles must be overcome to increase the population of *S. idalia*. First, management of prairie that leads to extirpation must be stopped (i.e. burning entire isolated patches, or rotational burning of patches under 30ha; Moranz et al. 2014). Secondly, the tendency for *S. idalia* not to migrate from the natal patch (Ries and Debinski 2001, Ferster and Vulinec 2010) calls for human intervention to cultivate sustainable populations (where the individuals are not all from the same few migratory females) in quality habitat where *S. idalia* no longer exists (see Shepherd and Debinski 2005a for example). Additionally, this tendency not to migrate (even across 4km of disturbed field see Ferster and Vulinec 2010) will lead to declines in genetic diversity more rapidly than one would expect in a fragmented landscape for a species capable of high mobility (Williams et al. 2003) Thirdly, the issue of habitat loss; the federal government owns less than 7% of the remaining grassland (estimates indicates that 95-99% of tallgrass prairie has been destroyed in the United States) in Region 2 (the Rocky Mountain region) which contains the only secure population of *S. idalia* (in eastern Kansas) therefore the federal species of concern status does nothing to help the majority of *S. idalia* (Selby 2007; Powell et al. 2007). Along these same lines is the issue of *S. idalia* to prefer remnant habitat (Powell et al. 2007, Shepherd and Debinski 2005b; Kelly and Debinski 1998) of which little is left in adequate size (*S. idalia* needs ~70ha or more for sustainable populations depending on region; Shepherd and Debinski 2005a; Kelly and Debinski 1998; Mason 2001). A popular and potentially effective solution to this problem is high quality restorations (including *Viola* spp. in the seed mix) clumped around remnants (Summerville et al. 2006). Due to these unique traits the regal fritillary is exceptionally well suited to the huge expanse of tallgrass prairie that once spread across most of our continent, but is fundamentally incapable of surviving in fragmented isolated patches indefinitely.

We began monitoring for Regal Fritillaries in 2015 at the Platte River Whooping Crane Maintenance Trust in central Nebraska along the Platte River as part of our larger monitoring plan. We collected data on sightings of Regal Fritillaries by habitat type while simultaneously conducting other types of surveys, including avian, small mammal, and vegetation. Our study area centered on Shoemaker Island, a tract of land bordered on both sides by the Platte River (estimated 1,244 acres of pasture). We documented 56 Regal Fritillaries, almost entirely in the month of July (55/56) and mostly

on two large relict pastures (only making up 424 acres of the study area but containing 46/56 *S. idalia* documented) that were distinct in terms of management history (more rested, less frequently grazed and burned, not totally grazed uniformly or burned uniformly in our management records), in terms of plant community and soils (more well drained soils with topography- commonly Inavale Loamy Sand, 3-11% slope), were Big Bluestem dominated (*Andropogon gerardii*), contained significant thatch (litter) and Violets in the understory (mostly *Viola sororia*), and contained good overall forb diversity and cover including (*Verbena strict*, *Onosmodium molle*, *Symporicarpos occidentalis*, *Callirhoe involucrata*, *Conyzia Canadensis*, *Ambrosia psilostachya*, *Asclepias syriaca*, *Aster ericoides*, *Glycyrrhiza lepidota* and *Cirsium altissimum*) amongst other species. Sites that had only ephemeral, likely dispersal use, or no use fell into one or multiple of 3 categories: 1) having similar soils to above but having woody encroachment by either *Juniperus virginiana* or *Rhus glabra* (not enough patchy disturbance over time to maintain a prairie environment), 2) again having appropriate soils, but having been consistently burned and grazed heavily over an extended period of time (this management history also correlates with Smooth Brome (*Bromus inermis*) invasion, and 3) areas that had less well drained, more mesic soils (Platte-Bolent or Bolent-Calamus Complex, with no significant topography or sloping), and were more dominated by wetland plants and mesic grass species such as *Schoenoplectus pungens*, *Eleocharis compressa* and *Panicum virgatum*, *Agrostis stolonifera* respectively. Any combination of the above factors seemed to preclude dense consistent use of a pasture by the Regal Fritillary. The combination of litter depth, well drained soils, and *Viola* presence on remnant prairie has been found to be an excellent predictor of regal fritillary presence across the range (Ferster and Vulinec 2010, Vogel et al. 2007). Our preliminary findings (Caven & King 2015, in draft) thus far seem to agree with past research, we also hope to eventually add to the body of work advocating for Regal Fritillary conservation.

In summary, the regal fritillary has specific habitat and diet requirements that make it susceptible to extirpation. Additionally, this species is part of the prairie butterfly paradox; where a disturbance sensitive species is resident in a disturbance-dependent system (Moranz et al. 2014) making it prone to unintentional extirpation by landowners and managers. Ideally, critical habitat for this species would include large remnant prairies (or remnants with restored prairie clustered around; see Ratcliffe and Hammond 2002 for comments about Nebraska habitat; see Swengel 1997 for habitat sizes in various regions). This habitat has been almost entirely converted or degraded and is in need of protection for many species including *S. idalia*. However, it is important to remember that unlike the furry and adorable mammalian species in need of conservation insects live not only on a different scale, but often by different constraints. When it is clear that there are significant declines it is not necessary to know each driving cause (Mace et al. 2008). However, it is clear that the major cause of decline is a non-resilient and disconnected set of metapopulations due to habitat fragmentation.

For more in-depth information please see the attached papers that are relevant to determining the status of *S. idalia* in the United States.

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