

**Targeted Butterfly and Skipper Inventory of  
Selected Iowa State Preserves and Prairies 2013**

**Prepared for Ann and Scott Swengel**

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**Franklin L. Olsen, Principal Researcher**

## Targeted Butterfly and Skipper Inventory of Selected Iowa State Preserves and Prairies 2013

### Abstract

*This report presents the findings of a limited inventory of butterflies and skippers at four Iowa State Preserves and one privately-owned native prairie. The principal researcher completed a total of twelve field surveys of these sites (three surveys of two of the sites, and two surveys of the other three sites) during normal flight times for targeted species – *Oarisma poweshiek* and *Hesperia ottoe*. Those twelve surveys recorded a total of 408 butterflies and skippers representing 31 species. None of the targeted species was found.*

Keywords: Lepidoptera, *Oarisma poweshiek*, *Hesperia ottoe*.

### Introduction

Five sites – four State Preserves and one privately-owned native prairie – were chosen as search sites for two target species (*Oarisma poweshiek* and *Hesperia ottoe*).

The 36-acre Hoffman Prairie State Preserve in Cerro Gordo County was dedicated as a biological state preserve in 1986 (Herzberg and Pearson 2001). *Oarisma poweshiek* has been found here on these occasions:

- August 7, 1984 – R. Howe
- July 4, 1986 – J. Nekola
- July 11, 1986 – J. Nekola
- July 12, 1993 – M. Saunders
- July 2, 1995 – K. Larsen
- June 23, 2005 – J. Selby
- July 5, 2005 – D. Schlicht and F. Olsen
- June 19, 2007 – F. Olsen
- June 29, 2007 – F. Olsen
- July 4, 2008 (4 specimens) – J. Selby

Selby searched for this species on July 2, 3, 6, and 11, 2009, and again on June 24, 2010, but found no individuals.

The 10-acre Crossman Prairie State Preserve in Howard County was dedicated as a biological state preserve in 1980 (Herzberg and Pearson 2001). *Oarisma poweshiek* was recorded at this site on June 28, 1986 by Jeff Nekola.

The 240-acre Hayden Prairie State Preserve in Howard County was dedicated as a biological state preserve in 1968. *Oarisma poweshiek* has been recorded at this site as follows:

- July 13, 1968 (3 specimens) – J. Michael
- July 5, 1976 – Conway and Seaborg
- June 29, 1978 – G. Balogh
- July 2, 1989 – J. Nekola
- July 25, 1993 (one male) – M. Saunders
- July 7, 2002 (4 specimens) – F. Olsen

The 174-acre<sup>1</sup> Manikowski Prairie State Preserve in Clinton County was dedicated as a biological and geological state preserve in 1985. *Hesperia Ottoe* has been recorded there on these occasions:

July 7, 1987 – J. Selby  
August 16, 1989 – T. Orwig  
July 3, 2002 – F. Olsen  
July 24, 2003 – F. Olsen  
July 27, 2005 – F. Olsen  
July 11, 2007 – F. Olsen  
July 21, 2007 – F. Olsen  
June 24, 2008 – F. Olsen

Hamilton Prairie in Jackson County is a native prairie owned by Dr. Raymond Hamilton of Maquoketa, Iowa. The land is located northwest of the intersection of 35<sup>th</sup> Street and 288<sup>th</sup> Avenue a few miles east of Maquoketa. *Hesperia Ottoe* was recorded once at the site, on July 10, 1991 by Dr. Hamilton.

### **Methods**

The primary goals of this survey were to (1) obtain a compilation of all adult butterflies and skippers found at the five sites during normal adult stages during the study period, and (2) assess the status of the two target species at these locations.

To accomplish these goals, surveys for *O. poweshiek* were conducted on June 30 and July 8, 2013 at Hoffman, Crossman, and Hayden Prairie State Preserves. Surveys for *H. Ottoe* were conducted on June 27, July 4, and July 23 at Manikowski Prairie State Preserve and Hamilton Prairie.

The principal researcher selected days where field surveys had the greatest likelihood of locating the highest number of species. This means surveys occurred when meteorological conditions favored the active presence of target species. Weather conditions – temperature, wind speed and direction, and approximate cloud cover percentage – were recorded for each visit. Track logs were recorded on a Garmin eTrex 20 GPS mapping device for Manikowski Prairie State Preserve and Hamilton Prairie; these track maps have been sent to Ann and Scott Swengel. For Hoffman Prairie State Preserve, the track was a meandering transect thoroughly covering the south half of the site. For Crossman Prairie, the track was a meandering transect first covering the east half of the site (from south to north), then the west half (from north to south). At Hayden Prairie State Preserve, I concentrated on the northeast 40 acres, where I had previously recorded *O. poweshiek*. This area is xeric/mesic, with a shallow swale running diagonally through it.

Site visits consisted of meandering transects, concentrating on sampling habitat types appropriate for the target species. The researcher scanned an area to the left, to the front, and to the right to a distance of about five meters, recording all butterfly/skipper species seen, and in what numbers.

Crossman Prairie State Preserve is a nearly flat, 10-acre tallgrass prairie remnant that in some years is mesic with areas of water-soaked grasses that support bog birch and swamp milkweed. It has been wet enough that species such as *Lycaena hyllus* and *Satyroides eurydice* have been recorded there, though last year's drought conditions may have eliminated those populations.

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<sup>1</sup> The site is composed of five parcels: a 5.5-acre parcel just south of the east-west gravel road at the north side of the site; a 34-acre parcel some distance to the southeast; and a 134-acre parcel at the southeast, added to the site in 2001.

Hamilton Prairie is a native prairie of approximately 70 acres situated on rolling hills that contain both xeric prairie hillsides and various small woodlands. Previously, both *Hesperia ottoe* and *Hesperia leonardus* have been recorded at the site. During three surveys of the site this year, I found a number of additional species, including *Thymelicus lineola*, *Anatrytone logan*, *Lycaena dione*, *Satyrrium titus*, and *Satyrrium calanus*. This prairie has a wondrous assortment of native prairie plants such as pale purple coneflowers (thousands of plants), leadplant, white indigo, harebell, butterfly weed, compass plant, gray-headed coneflower, white prairie clover, purple prairie clover, rattlesnake master, bergamot, and culver's root.

At 240 acres, Hayden Prairie State Preserve is Iowa's largest prairie outside the Loess Hills (Herzberg and Pearson 2001). The habitat ranges from xeric to wetland, thus supporting a good variety of butterfly/skipper species. A sampling of these species have included, *Erynnis baptisiae*, *Ancyloxypha numitor*, *Polites mystic*, *Euphyes conspicua*, *Lycaena hyllus*, *Satyrrium acadica*, *Hemiargus isola*, *Glaucopsyche lygdamus*, *Speyeria aphrodite*, *Speyeria idalia*, *Boloria selene*, *Polygonia interrogationis*, *Limenitis archippus*, and *Satyrodes eurydice*. The elevation varies by about 40 feet, with very gradual gradients spread across the expanse. Important plants here include phlox, white indigo, puccoon, pale spiked lobelia, shooting stars, wood lily, compass plant, culver's root, dogbane, and rattlesnake master.

Hoffman Prairie State Preserve, with its 36 acres, has both xeric areas (particularly in the lower quality northern part of the site) as well as a large prairie marsh with plenty of standing water. Little elevation change is present across the site. The varied plant community there has supported an impressive list of Lepidoptera, including *Ancyloxypha numitor*, *Oarisma poweshiek*, *Polites mystic*, *Atrytone arogos*, *Euphyes conspicua*, *Euphyes dion*, *Poanes viator*, *Satyrrium acadica*, *Glaucopsyche lygdamus*, and *Satyrodes eurydice*. The few *O. poweshiek* specimens I've seen here were all located in the southernmost portion of the 36 acres. I regard this site as one of the best in Iowa. Plants here include phlox, puccoon, blue flag iris, skull cap, wood lily, meadow rue, larkspur, leadplant, butterfly weed, rattlesnake master, dogbane, swamp milkweed, and cinquefoil.

Finally, Manikowski Prairie State Preserve consists of three parts, as mentioned earlier. The 5.5-acre parcel at the northwest has high-quality native prairie primarily in the northern half, with a large area of sumac in the southeast. This portion of the site has an elevation change of about 20 feet, with a high quality ridge running east-west perhaps 100 yards from the north property line. The 34-acre portion of the site has three or four east-west gentle ridges that support a huge population of pale purple coneflowers, flowering spurge, hoary vervain, some leadplant, a few pale spike lobelia, a few columbine, and a few purple prairie clover. The last parcel of 134 acres has xeric and low-lying areas, and is generally not as high a quality as the other parcels. All parcels have rocky outcrops. Some of the butterfly/skipper species that have been recorded at this site include *Erynnis horatius*, *Erynnis baptisiae*, *Erynnis lucilius*, *Hesperia ottoe*, *Polites origenes*, *Poanes zabulon*, *Phoebis sennae*, *Lycaena dione*, *Lycaena hyllus*, *Callophrys gryneus*, *Libytheana carinenta*, *Speyeria idalia*, and *Chlosyne gorgone*.

## **Results**

Results for the twelve individual surveys yielded a total of 408 butterflies and skippers. No *Oarisma poweshiek* or *Hesperia ottoe* skippers, or state threatened or endangered species, were found.

Looking at the general results for each site, we find the following (Total Miles walked is estimated except for Hamilton and Manikowski):

<u>Site</u>	<u>Species</u>	<u>Total Butterflies</u>	<u>Total Hrs</u>	<u>Estimated Total Miles</u>
Crossman Prairie St. Pres.	8	18	1.47	2.1
Hamilton Prairie	19	88	3.25	3.6
Hayden Prairie St. Pres.	11	50	2.6	2.8
Hoffman Prairie St. Pres.	12	58	4.3	3.9
Manikowski Prairie St. Pres.	21	194	8.32	9.6

Following the text of this report are individual log sheets for each site visit. In addition, at the end of each site’s log sheets is a species list obtained for that site. Note that for the Manikowski Prairie State Preserve, the log sheets list each species seen, *and list which of the three distinct parcels of the Preserve that species was found in.*

### **Discussion**

The year 2013 has proven to be a sobering one in terms of both the diminished number of species and the total number of any given species. Anecdotal reports as well as on-going formal inventories have, for the most part, shown the consequences of last year’s drought and extremely high temperatures combined with 2013’s extreme spring rainfall and cool temperatures. It is this researcher’s belief that these weather factors have adversely and profoundly affected the populations of butterflies and skippers in the Midwest.

#### *The Drought of 2012*

As widely reported, Iowa experienced an exceptionally dry and hot summer during 2012. According to *The Des Moines Register* (Jan. 1, 2013), “Weather in Iowa...was hot and dry for most of the year. The worst drought since the 1936 Dust Bowl year affected crops, livestock and river levels.” As of December 31, 2012, eastern Iowa had received 9.72 inches less rain than normal (normal for the year is 36.01 inches), and most of the state remained in an extreme drought condition.

Statewide, it was the warmest March on record – 15.2° F warmer than normal – with an average overall temperature of 51.1° F, breaking the 1910 record of 48.7°. Temperatures for Iowa for the months May, June, and July were 5.0°, 1.9°, and 6.3° Fahrenheit above normal respectively. Indeed, it was the third-hottest July on record in Iowa, and the fifth-driest (*The Des Moines Register*, Jan. 1, 2013). In July Des Moines recorded 10 days with 100° F or higher. Although Lepidoptera initially responded favorably in the spring – with very early adult emergences and high numbers of individuals and species, by summer the continuation of heat and subsequent lack of rain dramatically and negatively impacted both food plants and nectar sources for butterflies and skippers.

*The Gazette* [newspaper published in Cedar Rapids] reported that in late July the United States Department of Agriculture showed 75 percent of Iowa in severe drought. According to Iowa Agriculture Secretary Bill Northey, we experienced the fifth driest and third hottest July on record. In early September *The Gazette* reported that although June, July, and August are our rainiest months of the year, 2012 recorded (in Cedar Rapids) only 6.60 inches of rain when normal rainfall would be 13.86 inches. And according to State Climatologist Harry Hillaker, average statewide precipitation averaged 20.57 inches, more than 9 inches below the normal 29.69 inches for the first nine months of the year.

Finally, as reported in *The Gazette* on January 1, 2013, during 2012 Iowa experienced its worst drought since the 1936 Dust Bowl year. They also reported that during the winter of 2011-2012, the temperature failed to drop to zero degrees or below for the first time since record keeping began with the winter of 1878-1879.

#### *The Cool, Wet Months of Early 2013*

*The Gazette* reported on May 27, 2013 that for the year 2013 Dubuque had received 19.93 inches of rain, 163% of normal precipitation. Other parts of the state such as Cedar Rapids had already received 19.67 inches of rain, 8.22 inches above normal. A few days later *The Gazette* reported that the months March, April, and May, had established a record amount of rainfall, making it “the wettest Spring (March through May) on record.” On June 5<sup>th</sup> *The Gazette* stated that the temperatures for that same time period had averaged 3.2 cooler than normal. And on June 26, 2013 *The Gazette* reported that although normal rainfall through the end of June is 15.92 inches, Cedar Rapids had already received 24.68 inches. Similar situations applied throughout eastern Iowa.

Both record rainfalls and cooler temperatures negatively impact the viability of butterflies, skippers, and moths to survive. I believe the counts of both the number of species as well as the number of any given species seen were dramatically reduced by the incidence of a year of record heat and drought followed by record rainfall and weeks of cool temperatures the next spring.

While the surveys completed by this researcher did not locate either *Oarisma poweshiek* or *Hesperia ottoe*, we are encouraged by reports, particularly from Allamakee County in northeast Iowa, of the discovery of numerous *H. ottoe* sightings by Dr. Kirk Larsen and students from Luther College and other individuals. Future search efforts for Ottoe Skipper populations in eastern Iowa should be coordinated with these individuals. I believe Manikowski Prairie State Preserve may yet hold a small population of the Ottoe Skipper, and it should be monitored in the years ahead.

As for the Poweshiek Skipperling, the best hope for finding this species in Iowa lies at Hoffman Prairie State Preserve, and possibly in Dickinson County in northwest Iowa; on July 13, 1993 Mike Saunders found 150+ of this species at Cayler Prairie State Preserve, and on June 29-30, 1994 a team of researchers found 150+ of this species along the Little Sioux River (Township 99, Range 37, Sections 6, 7, 8, 16, 17, 20, and 21). My personal feeling, however, is that *Oarisma poweshiek* is indeed extirpated from the state.

#### **Funding Acknowledgement**

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**Literature Cited**

Herzberg, Ruth and John Pearson, 2001. The Guide to Iowa's State Preserves. University of Iowa Press, Iowa City, for the Iowa Department of Natural Resources.

## Crossman Prairie State Preserve Species List 2013

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>	<u># Visits Seen/ Total Individuals</u>
<i>Thymelicus lineola</i>	European Skipper		1 / 1
<i>Papilio polyxenes</i>	Black Swallowtail		1 / 1
<i>Papilio glaucus</i>	Eastern Tiger Swallowtail		1 / 1
<i>Colias eurytheme</i>	Orange Sulphur		2 / 2
<i>Everes comyntas</i>	Eastern Tailed-Blue		2 / 6
<i>Danaus plexippus</i>	Monarch		1 / 1
<i>Speyeria cybele</i>	Great Spangled Fritillary		1 / 1
<i>Phyciodes tharos</i>	Pearl Crescent		1 / 5
<b>Total Species: 8</b>	<b>Total Individuals: 18</b>		

## Crossman Prairie Log Sheet

**Date:** June 30, 2013  
**County** Howard

**Weather:** 11:20-12:10, overcast w. shadows, NNE 2-13, 64-65°

<b><u>Species List</u></b>	<b><u>Number Seen</u></b>	<b><u>Comments</u></b>
Thymelicus lineola	1	Condition 1
Colias eurytheme	1	
Everes comyntas	4	Condition 1 and 2

**Total Species: 3**      **Total Count: 6**

### **Comments**

In bloom: red clover, daisy fleabane, yarrow, phlox, many white indigo, one prairie smoke, wild rose, black-eyed susan, milkweeds close to blooming, birdfoot trefoil, a few puccoon, dogbane, 1 pale spiked lobelia, a few golden alexanders, 1 compass plant, 1 wood lily, a few prairie dandelion, 2 yellow star grass. Thousands of rattlesnake masters about to bloom.

I flushed up all the leps I saw. Also saw some moths.

## Crossman Prairie Log Sheet

**Date:** July 8, 2013  
**County** Howard

**Weather:** 11:35-12:15, two-thirds clouds, NW 0-4, 81°

<b><u>Species List</u></b>	<b><u>Number Seen</u></b>	<b><u>Comments</u></b>
Papilio polyxenes	1	1
Papilio glaucus	1	
Colias eurytheme	1	
Everes comyntas	2	
Danaus plexippus	1	
Speyeria cybele	1	
Phyciodes tharos	5	

**Total Species: 7**      **Total Count: 12**

### **Comments**

In bloom: yarrow, milkweed, many rattlesnake masters, compass plant, phlox, white indigo, black eyed susan, 1 puccoon, birdfoot trefoil, daisy fleabane, dogbane, culver's root, 1 wood lily.

## Hamilton Prairie Species List 2013

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>	<u># Visits Seen/ Total Individuals</u>
<i>Thymelicus lineola</i>	European Skipper		1 / 1
<i>Anatrytone logan</i>	Delaware Skipper		1 / 1
<i>Papilio polyxenes</i>	Black Swallowtail		1 / 2
<i>Pieris rapae</i>	Cabbage White		2 / 4
<i>Colias philodice</i>	Clouded Sulphur		1 / 1
<i>Colias eurytheme</i>	Orange Sulphur		1 / 3
<i>Lycaena dione</i>	Gray Copper		1 / 1
<i>Satyrrium titus</i>	Coral Hairstreak		2 / 2
<i>Satyrrium calanus</i>	Banded Hairstreak		1 / 1
<i>Everes comyntas</i>	Eastern Tailed-Blue		2 / 9
<i>Celastrina neglecta</i>	Summer Azure		1 / 6
<i>Danaus plexippus</i>	Monarch		1 / 3
<i>Speyeria cybele</i>	Great Spangled Fritillary		3 / 10
<i>Phyciodes tharos</i>	Pearl Crescent		2 / 21
<i>Junonia coenia</i>	Buckeye		2 / 5
<i>Vanessa atalanta</i>	Painted Lady		1 / 1
<i>Limenitis archippus</i>	Viceroy		1 / 2
<i>Megisto cymela</i>	Little Wood Nymph		1 / 1
<i>Cercyonis pegala</i>	Common Wood-Nymph		2 / 14
<b>Total Species: 19</b>	<b>Total Individuals: 88</b>		

## Hamilton Prairie Log Sheet

**Date:** June 27, 2013  
**County:** Jackson

**Weather:** 1:45 – 2:45, mostly clear, wind W 0-15, 86-87°

<b><u>Species List</u></b>	<b><u>Number Seen</u></b>	<b><u>Comments</u></b>
Thymelicus lineola	1	Caught & released, condition 1
Colias philodice	1	
Lycaena dione	1	Caught & released near NE shed*
Danaus plexippus	3	
Speyeria cybele	3	
Phyciodes tharos	1	
Junonia coenia	2	

**Total Species: 7**

**Total Count: 12**

### **Comments**

Site doesn't look burned. Surveyed only the north portion of the site.

\* Nectaring on pale purple coneflower.

In bloom: thousands of pale purple coneflowers, white indigo, cinquefoil, birdfoot trefoil, nearly all the leadplant not yet in bloom, daisy fleabane, St. John's wort (I think), some butterfly weed, horse nettle, a few thistles, a few hoary vervain, a few compass plants, many Deptford pink, black-eyed susans, some harebell.

## Hamilton Prairie Log Sheet

**Date:** July 4, 2013  
**County** Jackson

**Weather:** 1:30 – 2:30, 50% clear, wind S 0-6, 82°

<b><u>Species List</u></b>	<b><u>Number Seen</u></b>	<b><u>Comments</u></b>
Anatrytone logan	1	Caught & released
Pieris rapae	2	
Satyrrium titus	1	Condition 1
Satyrrium calanus	1	Nectaring on butterfly weed
Everes comyntas	3	
Speyeria cybele	5	
Megisto cymela	1	
Cercyonis pegala	2	Fresh hatches – nearly black

**Total Species: 8**

**Total Count: 16**

### **Comments**

Surveyed only the north portion of the site. Many Haploa moths and others.

In bloom: birdfoot trefoil, countless pale purple coneflowers, butterfly weed, white indigo, cinquefoil, leadplant, rattlesnake master, compass plant, black-eyed susan, purple prairie clover, daisy fleabane, hoary vervain, deptford pink, milkweed, harebell, whorled milkweed, St. John's wort.

## Hamilton Prairie Log Sheet

**Date:** July 23, 2013  
**County:** Jackson

**Weather:** 1:05 – 2:20, 25-50% clear, wind N 0-7, 74-78°

<b><u>Species List</u></b>	<b><u>Number Seen</u></b>	<b><u>Comments</u></b>
Papilio polyxenes	2	
Pieris rapae	2	Both condition 1
Colias eurytheme	3	Caught & released one
Satyrrium titus	1	Condition 2, on butterfly weed
Everes comyntas	6	
Celastrina neglecta	6	
Speyeria cybele	2	One was condition 2-
Phyciodes tharos	20	
Junonia coenia	3	
Vanessa atalanta	1	
Limenitis archippus	2	Both condition 1
Cercyonis pegala	12	

**Total Species: 12**

**Total Count: 60**

### **Comments**

Surveyed only the north portion of the site. Saw a few bumblebees and some moths.

In bloom: bergamot, gray-headed coneflower, countless queen-anne's lace, white prairie clover, purple prairie clover, rattlesnake master, butterfly weed, hoary vervain, a few pale purple coneflowers, a few culver's root, tick trefoil, whorled milkweed, black eyed susan, flowering spurge, a few deptford pink, compass plant, horse nettle, daisy fleabane.

This site is located north of 35<sup>th</sup> Street, and west of 288<sup>th</sup> Avenue.

## Hayden Prairie State Preserve Species List 2013

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>	<u># Visits Seen/ Total Individuals</u>
<i>Thymelicus lineola</i>	European Skipper		2 / 3
<i>Papilio polyxenes</i>	Black Swallowtail		1 / 3
<i>Colias eurytheme</i>	Orange Sulphur		2 / 2
<i>Satyrium acadica</i>	Acadian Hairstreak		1 / 1
<i>Everes comyntas</i>	Eastern Tailed-Blue		2 / 10
<i>Danaus plexippus</i>	Monarch		2 / 5
<i>Speyeria cybele</i>	Great Spangled Fritillary		1 / 1
<i>Phyciodes tharos</i>	Pearl Crescent		1 / 22
<i>Junonia coenia</i>	Buckeye		1 / 1
<i>Vanessa atalanta</i>	Painted Lady		1 / 1
<i>Limenitis archippus</i>	Viceroy		1 / 1
<b>Total Species: 11</b>	<b>Total Individuals: 50</b>		

## Hayden Prairie Log Sheet

**Date:** June 30, 2013

**Weather:** 9:25-10:55, overcast w. shadows, NNE 2-12 winds, 63-65°

<b><u>Species List</u></b>	<b><u>Number Seen</u></b>	<b><u>Comments</u></b>
Thymelicus lineola	1	Caught & released, cond. 1 near parking lot
Colias eurytheme	1	
Everes comyntas	3	Condition 1
Danaus plexippus	1	
Vanessa atalanta	1	

**Total Species: 5**

**Total Count: 7**

**Total hours: 1.5 on site**

### **Comments**

In bloom: phlox, yarrow, hundreds of white indigo, campion, a few puccoon, wild rose, black-eyed susan, Canada anemone, parsnip, a few goatsbeard, dogbane, 1 one lily, scurf pea (I think), a few golden alexanders, prairie dandelion, a few yellow star grass, 1 pale spiked lobelia, 5 shooting stars.

Saw some moths, some bobolinks and a thin, bright green snake.

## Hayden Prairie Log Sheet

**Date:** July 8, 2013

**Weather:** 10:10-11:15, 75% clouds, NW winds 0-3, 78-80°

<b><u>Species List</u></b>	<b><u>Number Seen</u></b>	<b><u>Comments</u></b>
Thymelicus lineola	2	Caught & released 1; condition 1-
Papilio polyxenes	3	
Colias eurytheme	1	
Satyrium acadica	1	Caught & released, see below
Everes comyntas	7	
Danaus plexippus	4	
Speyeria cybele	1	
Phyciodes tharos	22	
Junonia coenia	1	
Limenitis archippus	1	

**Total Species: 10**

**Total Count: 43**

**Total hours: 1.1 on site**

### **Comments**

In bloom: wild rose, parsnip, red clover, white indigo, milkweed, rattlesnake master, black eyed susan, pale spiked lobelia, dogbane, canada anemone, compass plant, 5 wood lily, a few spiderwort, 3 culver's root.

Saw some bobolinks. The *S. acadica* was located 200 yards south-southeast of the parking lot. The *A. numitor* were located in the ditch on the north end of the site.

## Hoffman Prairie State Preserve Species List 2013

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>	<u># Visits Seen/ Total Individuals</u>
<i>Polites peckius</i>	Peck's Skipper		1 / 2
<i>Polites mystic</i>	Long Dash		1 / 2
<i>Euphyes conspicua</i>	Black Dash		1 / 2
<i>Colias eurytheme</i>	Orange Sulphur		1 / 1
<i>Satyrrium acadica</i>	Acadian Hairstreak		1 / 3
<i>Everes comyntas</i>	Eastern Tailed-Blue		2 / 19
<i>Danaus plexippus</i>	Monarch		1 / 3
<i>Phyciodes tharos</i>	Pearl Crescent		1 / 12
<i>Junonia coenia</i>	Buckeye		1 / 3
<i>Limenitis archippus</i>	Viceroy		2 / 3
<i>Satyrodes eurydice</i>	Eyed Brown		1 / 5
<i>Cercyonis pegala</i>	Common Wood-Nymph		1 / 3
<b>Total Species: 12</b>	<b>Total Individuals: 58</b>		

## Hoffman Prairie Log Sheet

**Date:** June 30, 2013  
**County** Cerro Gordo

**Weather:** 3:30-5:30, clear w. thin clouds, wind NE 2-10, 75-77°

<b><u>Species List</u></b>	<b><u>Number Seen</u></b>	<b><u>Comments</u></b>
Polites peckius	2	One on dogbane, see below
Polites mystic	2	Vouchered one, see below
Colias eurytheme	1	
Satyrium acadica	1	On dogbane, condition 1
Everes comyntas	8	Most condition 1
Limenitis archippus	1	

**Total Species: 6**

**Total Count: 15**

### **Comments**

Many moths. Met Bill Watson at the site. Vouchered a small moth close to site sign in envelope 97.

In bloom: parsnip. Wild rose, yarrow, phlox, black-eyed susan, a few puccoon, blue flag iris, canada anemone, golden alexander, Shasta daisies, skull cap, 5 wood lilies, meadow rue, thistles. Identifications of some of these courtesy of Bill. No milkweed species were yet in bloom.

One of the *P. peckius* was on dogbane west of the pond. The other was quite a ways northwest of the pond. Condition of these leps was 1 and 1-. One of the *P. mystic* was on dogbane just west of the pond; I vouchered it at 3:56 p.m. in envelope 44. The other was about 70 yards northeast of the site sign.

## Hoffman Prairie Log Sheet

**Date:** July 8, 2013  
**County** Cerro Gordo

**Weather:** 1:50-3:10, clear, wind NW 0-5, 88-90°

<b><u>Species List</u></b>	<b><u>Number Seen</u></b>	<b><u>Comments</u></b>
Euphyes conspicua	2	Caught & released 1, see below
Satyrrium acadica	2	Caught & released 1, see below
Everes comyntas	11	
Danaus plexippus	3	
Phyciodes tharos	12	
Junonia coenia	3	
Limenitis archippus	2	
Satyrodes eurydice	5	Caught & released 1, condition 1
Cercyonis pegala	3	Condition 1

**Total Species: 9**

**Total Count: 43**

### **Comments**

Many moths and some bobolinks. The *S. acadica* were both in the southeast corner of the site; one was nectaring on milkweed. The *E. conspicua* were both condition 1, and were located (1) on the west-northwest side of the large pond/wetland and (2) on the southwest side of the large pond/wetland.

In bloom: parsnip. Thistles, yarrow, milkweed, parsnip, larkspur, hoary vervain, black eyed susan, phlox, one puccoon, daisy fleabane, rattlesnake master, leadplant, cinquefoil, dogbane, a few swamp milkweed, canada anemone, blue flag iris, 2 wood lily, 1 butterfly weed.

**Manikowski Prairie State Preserve Species List 2013**

<u>Scientific Name</u>	<u>Common Name</u>	<u>Status</u>	<u># Visits Seen/ Total Individuals</u>
<i>Epargyreus clarus</i>	Silver-spotted Skipper		1 / 1
<i>Ancyloxypha numitor</i>	Least Skipper		1 / 1
<i>Thymelicus lineola</i>	European Skipper		1 / 3
<i>Polites themistocles</i>	Tawny-edged Skipper		2 / 3
<i>Polites origenes</i>	Crossline Skipper		1 / 3
<i>Anatrytone logan</i>	Delaware Skipper		3 / 34
<i>Papilio polyxenes</i>	Black Swallowtail		3 / 9
<i>Pieris rapae</i>	Cabbage White		3 / 17
<i>Colias eurytheme</i>	Orange Sulphur		3 / 12
<i>Everes comyntas</i>	Eastern Tailed-Blue		3 / 17
<i>Celastrina neglecta</i>	Summer Azure		2 / 9
<i>Danaus plexippus</i>	Monarch		3 / 15
<i>Euptoieta claudia</i>	Variiegated Fritillary		1 / 3
<i>Spyeria cybele</i>	Great Spangled Fritillary		1 / 1
<i>Speyeria idalia</i>	Regal Fritillary		3 / 18
<i>Phyciodes tharos</i>	Pearl Crescent		2 / 14
<i>Junonia coenia</i>	Buckeye		2 / 3
<i>Vanessa atalanta</i>	Painted Lady		3 / 3
<i>Limenitis a. astyanax</i>	Red-spotted Purple		1 / 1
<i>Megisto cymela</i>	Little Wood Satyr		2 / 6
<i>Cercyonis pegala</i>	Common Wood-Nymph		1 / 21
<b>Total Species: 21</b>	<b>Total Individuals: 194</b>		

## Manikowski State Preserve Log Sheet

**Date:** June 27, 2013

**Weather:** 10:20-1:15, 75-33% clear, WNW 0-8 wind, 82-87°

<u>Species List</u>	<u>Number Seen*</u>	<u>Comments</u>
Thymelicus lineola	2 – 0 – 1	All condition 1; caught & released 2
Polites themistocles	0 – 0 – 1	Caught & released cond. 1 male
Anatrytone logan	2 – 10 – 5	Caught & released 4, both sexes, cond. 1
Papilio polyxenes	0 – 1 – 1	One on thistle
Pieris rapae	1 – 1 – 0	
Colias eurytheme	1 – 3 – 1	Two on pale purple coneflowers
Everes comyntas	1 – 7 – 1	One on leadplant, one on hoary vervain
Danaus plexippus	1 – 2 – 3	
Speyeria cybele	0 – 1 – 0	Condition 1
Speyeria idalia	0 – 4 – 0	Caught & released 1 cond. 1 female
Junonia coenia	0 – 1 – 1	Condition 1 on pale purple coneflower
Vanessa atalanta	0 – 1 – 0	
Limnitis a. astyanax	1 – 0 – 0	
Megisto cymela	2 – 0 – 1	

**Total Species: 14**

**Total Count: 57**

**Total hours: 2.9 actual time at sites**

### Comments

\* First number is the 5.5-acre parcel; second number is the 40-acre parcel; third number is the 134-acre parcel.

In bloom: 1<sup>st</sup> parcel: hundreds of pale purple coneflowers, daisy fleabane, many parsnip, birdfoot trefoil, a few leadplant in bloom, hoary vervain, horse nettle, a few black-eyed susans, a few pale spiked lobelia; 2<sup>nd</sup> parcel: thousands of pale purple coneflowers, a few milkweed, a few leadplant, flowering spurge, thistles, birdfoot trefoil, hoary vervain, parsnip, 1 black-eyed susan, 1 pale spiked lobelia, 2 columbines; 3<sup>rd</sup> parcel: pale purple coneflowers, daisy fleabane, wild rose, thistles, parsnip, cinquefoil, hoary vervain, mullein, horse nettle, milkweed, yarrow, a few red clover, a few leadplant.

No ticks, a fair number of moths. Vouchered two moths: a Haploa in envelope 77 on the 2<sup>nd</sup> ridge from the north in the 40 acre parcel, and an 8-Spotted Forester on pale purple coneflower in the 134 acre parcel. Also saw a White-lined Sphinx moth in the NW corner of the 40 acre parcel. Many gnats. **Note:** all skippers seen in 5.5-acre parcel were located in the north portion of the parcel. All the *A. logans* seen in the 40-acre parcel were on the two northmost ridges. The *idalias* were 2 on northernmost ridge, and 2 on the next ridge to the south in the 40-acre parcel.

Actual time at 3 parcels: 5.5-acre: 10:20-10:55 and 1:05-1:15; 40-acre: 10:55-12:05 and 12:40-1:05; 134-acre: 12:05-12:40.

## Manikowski State Preserve Log Sheet

**Date:** July 4, 2013

**Weather:** 10:20-1:05, 100-25% clear, S 0-4 wind, 74-82°

<u>Species List</u>	<u>Number Seen*</u>	<u>Comments</u>
<i>Epargyreus clarus</i>	1 – 0 – 0	Condition 2
<i>Ancyloxypha numitor</i>	1 – 0 – 0	At far north of 5.5-acre parcel
<i>Polites themistocles</i>	0 – 2 – 0	Caught & released 2 ♂
<i>Polites origenes</i>	0 – 3 – 0	Vouchered 2
<i>Anatrytone logan</i>	7 – 3 – 6	Caught & released 4
<i>Papilio polyxenes</i>	2 – 1 – 1	
<i>Pieris rapae</i>	0 – 1 – 0	
<i>Colias eurytheme</i>	0 – 2 – 0	
<i>Everes comyntas</i>	0 – 3 – 0	
<i>Celastrina neglecta</i>	0 – 1 – 0	
<i>Danaus plexippus</i>	1 – 1 – 0	
<i>Speyeria idalia</i>	0 – 10 – 0	Caught & released 1 male
<i>Phyciodes tharos</i>	0 – 5 – 0	
<i>Vanessa atalanta</i>	0 – 1 – 0	
<i>Megisto cymela</i>	2 – 1 – 0	

**Total Species: 15**

**Total Count: 55**

**Total hours: 2.75 actual time at sites**

### Comments

\* First number is the 5.5-acre parcel; second number is the 40-acre parcel; third number is the 134-acre parcel.

In bloom: 1<sup>st</sup> parcel: hundreds of pale purple coneflowers, hoary vervain, horse nettle, mullein, leadplant, gray-headed coneflower, parsnip, daisy fleabane, thistles, black-eyed susan, milkweed; 2<sup>nd</sup> parcel: mostly same as 1<sup>st</sup> parcel, but also catnip, purple prairie clover, and 1 pale spiked lobelia; 3<sup>rd</sup> parcel: mostly same as 1<sup>st</sup> parcel, but add St. John's wort and queen anne's lace.

No ticks, a fair number of moths, especially Haploas, which were abundant. Of the *S. idalia*, 6 were on the northernmost ridge, 3 were on the next ridge to the south, and one was on the southernmost ridge. Of the *P. origenes*, one was on the 2<sup>nd</sup> ridge, one was on the 3<sup>rd</sup> ridge, and one was on the 4<sup>th</sup> (southernmost) ridge; two were nectaring on pale purple coneflowers. The *C. neglecta* was at the southernmost ridge in the 40-acre parcel. Several of the *A. logan* seemed to be ovipositing on rather short grasses; several were nectaring on pale purple coneflower, and one on milkweed.

Actual time at 3 parcels: 5.5-acre: 10:20-10:55 and 1:05-1:15; 40-acre: 10:55-12:05 and 12:40-1:05; 134-acre: 12:05-12:40.

## Manikowski State Preserve Log Sheet

**Date:** July 23, 2013

**Weather:** 9:55-12:35, 15% clear, N 0-12 wind, 71-75°

<u>Species List</u>	<u>Number Seen*</u>	<u>Comments</u>
Anatrytone logan	1 – 0 – 0	Caught & released close to road, cond. 2+
Papilio polyxenes	0 – 2 – 1	Both looked like males
Pieris rapae	5 – 7 – 2	
Colias eurytheme	3 – 0 – 2	
Everes comyntas	2 – 2 – 1	Most condition 1
Celastrina neglecta	5 – 3 – 0	
Danaus plexippus	1 – 4 – 2	
Euptoieta claudia	0 – 2 – 1	
Speyeria idalia	0 – 2 – 2	See below
Phyciodes tharos	3 – 3 – 3	Most condition 1
Junonia coenia	0 – 1 – 0	
Vanessa atalanta	1 – 0 – 0	Condition 1+ on bergamot
Cercyonis pegala	5 – 14 – 2	

**Total Species: 13**

**Total Count: 82**

**Total hours: 2.67 actual time at sites**

### Comments

\* First number is the 5.5-acre parcel; second number is the 40-acre parcel; third number is the 134-acre parcel.

In bloom: 1<sup>st</sup> parcel: birdfoot trefoil, chicory, queen-anne's lace, hoary vervain, tons of flowering spurge, mullein, prairie sage, a few spiderwort, a few purple prairie clover, very few pale purple coneflowers, some bergamot, black-eyed susan, ground cherry, and whorled milkweed ; 2<sup>nd</sup> parcel: queen-anne's lace abundant flowering spurge, a few purple prairie clover, very few pale purple coneflowers, a few thistles, hoary vervain, a few compass plants, a few mullein, a few birdfoot trefoil, 1 horse nettle, a few whorled milkweed; 3<sup>rd</sup> parcel: queen-anne's lace, gray headed coneflowers, very few pale purple coneflowers, flowering spurge, a few hoary vervain, tick trefoil, mullein, one cinquefoil, whorled milkweed, catnip, black-eyed susan.

No ticks, some number of moths including two Haploas. Of the *S. idalia*, in the 40-acre parcel one was at the extreme north and one was in the NW. Of the two in the 134-acre parcel, one was at the extreme east, and both were condition 1 (I caught & released one female). The extensive cloud cover still allowed soft shadows a majority of the time. The condition of the pale purple coneflowers, with about 98% past blooming, tells me the Ottoe Skipper flight period is likely over.

Actual time at 3 parcels: 5.5-acre: 9:55-10:35 and 12:20-12:35; 40-acre: 10:35-11:30 and 12:00-12:20; 134-acre: 11:30-12:00.