## SILOAM SPRINGS STATE PARK

## ADAMS / BROWN COUNTIES, ILLINOIS

## AN INSECT SURVEY FOR ILLINOIS DEPARTMENT OF NATURAL RESOURCES FUNDED BY THE SMALL GAME GRANT FY1999

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A report of research by

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### Siloam Springs State Park, Adams / Brown County, Illinois Insect Survey 1997-2000

#### Introduction

Approximately 2000 species of Lepidoptera (butterflies and moths) occur in Illinois. These species are important to the ecosystem because of their association with the flora of this area. The larval stages are primary plant consumers, and the adult forms are pollinators. In addition, they are a common food resource for many species of birds, mammals and other arthropods. Many species, especially those restricted by host plant requirements, serve as indirect indicators of habitat quality (LaGesse et al. 1996). With the current interest in land management and maintaining plant and animal diversity, a formal insect survey was conducted. During the growing season of 1997 through 1999, 15 diurnal and 9 nocturnal surveys for Lepidoptera were performed over a three-year period by the senior author.

#### Materials and Methods

Prairies (mesic to dry), oak- hickory woodlands, oak barrens stream/creek edges and the lake communities were sampled at Siloam Springs State Park. Insects were sampled by various methods. Sampling included capture and release of species easily identified and preservation of voucher representatives to confirm identification of species. All voucher specimens will be deposited with the author's collection or the Illinois State Museum (ISM), Springfield, Illinois.

The following methods were used:

- 1. Random walks with aerial nets were conducted that passed through the natural communities present at the site. These occurred between 0700h to 1400h.
- 2. Three portable 15-watt ultra-violet bucket trap lights were suspended from trees in communities sampled. These were powered by car batteries and were operated from 1400h to 0700h on the next day. Specimens were selectively collected from the traps and preserved to be identified later.
- 3. A 15 watt ultra-violet light powered by a 12-volt battery was used to illuminate a white sheet suspended on a parked truck or rope suspended between two trees. The sheet was illuminated from 1400h to 0200h. Selected specimens were collected and preserved for identification.
- 4. A 125-watt mercury vapor light, powered by a portable gas generator, was used to illuminate a white sheet suspended between trees, located in the large prairie near the remote campground. This was operated from 1400h to 0250h. Selected specimens were collected and preserved for identification.

#### **Results and Discussion**

During the 15-day/ 9-night survey 195 species of Lepidoptera were identified to species (See Tables 1 & 2). Nocturnal Lepidoptera were sampled for during a nine nights. One hundred forty eight moth species were identified. Over a 15-day peroid, surveys were conducted for flying insects and 47 Butterfly species were identified. James Wiker, ISM Research Associate, Springfield, Illinois confirmed all specimens identified. Ten species of Odonata were sampled during this survey (see Table #3). Tim Vogt, ISM Research Associate, identified all Odonata specimens. All common names used are from Covell (1984) or Heitzman (1987). The taxonomic nomenclature follows that of Miller-Brown (1981) for butterflies and Hodges et. al. (1983) for moths.

#### **Recommendations**

This site shows high diversity of Lepidoptera species and is worthy of more extensive flora and faunistic surveys to be performed. Fire management should be coordinated so as not to impact localized Lepidoptera species.

#### Sampling Locations

Figure 2 shows sampling location and local names for areas researched during this study. Siloam Springs State Park occurs in Brown and Adams Counties in Illinois. All sites sampled were in Adams except for Fern Area #1 and Roadside Prairie, which were in Brown County.

#### Lepidoptera Species List

**Siloam Springs State Park** Table #1 **Butterflies** 

#### Scientific Name **Common Name** Family Papilionidae Eurytides marcellus Zebra Swallowtail Pterourus troilus Battus philenor Pterourus glaucus Tiger Swallowtail Black Swallowtail Papilio polyxenes Heraclides cresphontes Giant Swallowtail

#### Family Pierdae

Ponita protodice Artogeia rapae Colias philodice C. eurytheme Phoebis sennae Pyrisitia lisa

#### Family Lycanidae

Mitoura gryneus Strymon melinus Harkenclenus titus Everes comvntas Celastrina argiolus

#### Family Nymphalidae

Libytheana bachmanii Euptoieta claudia Speyeria cybele Charidryas nyteis Phyciodes tharos Polygonia comma P. interrogationis Vanessa cardui V. virginiensis V. atalanta Junonia coenia Basilarchia arthemis Astrocampa celtis Megisto cymela Cercyonis pegala

Spicebush Swallowtail Pipe-Vine Swallowtail

Checkered White Cabbage White Clouded Sulfur Orange Sulfur Cloudless Sulfur Little Sulfur

**Olive Hairstreak** Gray Hairstreak Coral Hairstreak Eastern-Tailed Blue Spring Azure

American Snout Variegated Fritillary Great Spangled Fritillary Silvery Checkerspot Pearl Cresent Green Comma Question Mark American Painted Lady Painted Lady Red Admiral Buckeye **Red Spotted Purple** Hackberry Little Wood Satyr Common Wood Satyr

## Lepidoptera Species List

Common Name	
ont.)	
Mourning Cloak	
Pearly- Eyed Brown	
	<u>'ont.)</u>

Family Danaidae Danaus plexippus

Siloam Springs State Park

#### Monarch

## Family Hesperiidae

Epargyreus clarus Thorybes pylades Erynnis juvenalis E. horatius Pyrgus communis Hylephila phyleus Polites themistocles P. coras Wallengrenia egeremet Atalopedes campestris Problema byssus Poanes zabulon Silver Spotted Skipper Northern Cloudywing Juvenal's Duskywing Horace's Duskywing Checkered Skipper Fiery Skipper Tawny-Edge Skipper Peck's Skipper Northern Broken Dash Sachem Golden Byssus Zabulon Skipper

Siloam Springs State Park Table # 2	Lepidoptera Species List		
	Moths	Date	Area
Scientific Name	Common Name	Documented	Sampled
· · ·			
<u>Family Saturniidae</u>			
Eacles imperialis	Imperial Moth	10-Aug-99	Remote Pr
Sphingicampa bicolor	Honey Locust Moth	9-May-98	Hickory Hills
Dryocampa rubicunda	Rosy Maple Moth	10-Aug-99	Remote Pr
Antheraea polyphemus	Polyphemus Moth	9-May-98	Hickory Hills
Actius luna	Luna Moth	21-April-97	Hickory Hills
		9-May-98	Hickory Hills
		-	-
Family Sphingidae	~		
Manduca sexta	Carolina Sphinx	10-Aug-99	Remote Pr
Ceratomia catalpae	Catalpa Sphinx	28-June-98	Remote Pr
		10-Aug-99	Remote Pr
C. hageni	Hagen's sphinx	10-Aug-99	McKee Cr Br
Paonias excaecatus	Blinded Sphinx	28-June-98	Remote Pr
P. myops	Small Eyed Sphinx	28-June-98	Remote Pr
		10-Aug-99	Remote Pr
Darapsa pholus	Azalea Sphinx	10-Aug-99	Remote Pr
D. myron	Hog Sphinx	10-Aug-99	Remote Pr
Family Noctuidae			
Zale lunata	Lunate Zale	9-May-98	Hickory Hills
		10-Aug-99	Remote Pr
Papaipema beeriana	Liatris Stem Borer	14-Oct-99	Remote Pr
P. cataphracta	Burdock Stem Borer	14-Oct-99	Crabtree Tr
P. cerussata	Ironweed Stem Borer	14-Oct-99	Remote Pr
P. nebris	Stalk Borer	10-Aug-99	Remote Pr
P. arctivorens	Northern Burdock Borer	23-Aug-99	Remote Pr
		14-Sept-99	Remote Pr
		14-Oct-99	Remote Pr
		10-Aug-99	Remote Pr
Cirrhophanus triangulifer	Goldenrod Stowaway	23-Aug-99	Remote Pr
Nedra ramosula	Gray Half Spot	10-Aug-99	Remote Pr

	Moths	Date	Area
Scientific Name	Common Name	<u>Documented</u>	Sampled
Family Noctuidae			
Spodoptera ornithogalli	Yellow striped Armyworm	23-Aug-99	Remote Pr.
Anagrapha falcifera	N/A	14-Oct-99	Remote Pr.
Autographa californica	N/A	14-Oct-99	Remote Pr.
Allagrapha aera	Unspotted Looper Moth	10-Aug-99	Remote Pr.
		14-Oct-99	Remote Pr.
Mocis texana	Texas Mocis	10-Aug-99	Remote Pr.
M. disseverans	Yellow Mocis	14-Oct-99	Remote Pr.
		23-Aug-99	Remote Pr.
Cucullia convexipennis	Brown-Hooded Cucullia	10-Aug-99	Remote Pr
C. asteroides	The Asteroid Moth	10-Aug-99	Remote Pr
Acronicta morula	Ochre Dagger Moth	10-Aug-99	Remote Pr
A. spinigera	Nondescript Dagger Moth	14-Oct-99	Remote Pr
A. afflicta	Afflictes Dagger Moth	9-May-98	Hickory Hills
A. americana	American Dagger Moth	10-Aug-99	Remote Pr
A. vinnula	Delightful Dagger Moth	10-Aug-99	Remote Pr
Agriopodes fallax	The Green Marvel	10-Aug-99	Remote Pr
Eudryas grata	Beautiful Wood-Nymph	10-Aug-99	Remote Pr
E. unio	Pearly Wood-Nymph	28-June-98	Remote Pr
Caenurgina erechtea	N/A	28-June-98	Remote Pr
Ulolonche culea	Sheathed Quaker	28-June-98	Remote Pr
Lithoophane petulca	Wanton Pinion	14-Oct-99	Remote Pr
Nephelodes minians	Bronzed Cutworm	14-Spt-99	Remote Pr
Amphipyra pyramidoides	Copper Underwing	10-Aug-99	McKee Cr Br
Eupsilia morrisoni	Morrison's Swallow	14-Oct-99	Remote Pr
Elaphria grata	Grateful Midget	23-Aug-99	Remote Pr
	-	10-Aug-99	McKee Cr Br
Protolampra brunneicollis	Brown-Collared Dart	10-Aug-99	Remote Pr
		14-Sept-99	Remote Pr
Paeltes oculatrix	N/A	10-Aug-99	Remote Pr
Hypsorophya hormos 👘	Small Necklace Moth	10-Aug-99	Remote Pr
Thioptera nigrofimbria	Black-Bordered Lemon	23-Aug-99	Remote Pr
Tarachidia erastriods	Small Bird-Dropping Moth	10-Aug-99	Remote Pr
Lacinipolia implicata	Implicit Arches	14-Sept-99	Remote Pr
Panopoda carneicosta	Brown Panopoda	10-Oct-99	Crabtree Tr
Callopistria mollissima	Pink-Shaded Fern Moth	10-Aug-99	Remote Pr
Dipterygia rozmani	American Bird-Wing Moth	23-aug-99	Remote Pr
Pyrrhia umbra	Bordered Sallow	10-Aug-99	Remote Pr
		10-Aug-99	McKee Cr Br
Palthis angulalis	Dark Spotted Palthis	9-May-98	Hickory Hills
P. asopialis	Faint-Spotted Palthis	10-Aug-99	Remote Pr
Charadra deridens	The Laugher Moth	10-Aug-99	Remote Pr
		10-Aug-99	McKee Cr

## Siloam Springs Sate Park Lepidoptera List (Cont.)

Shoam Springs Sate Fark L	Moths	Date	Area
Scientific Name	Common Name	Documented	Sampled
Family <i>Noctuidae</i> (CONT.)			
Meronpleon ambifuscum	N/A	23-Aug-99	Remote Pr
Palgiomimicus pityochromus	Black-Barred Brown	10-Aug-99	Remote Pr
Spragueria apicalis	Yellow Spragueria	22-Aug-99	Remote Pr
S. leo	Common Spragueia	10-Aug-99	Remote Pr
Lithacodia carneloa	Pink-Barred Lithacodia	10-Aug-99	Remote Pr
		23-Aug-99	Remote Pr
L. musta	Small Mossy Lithacodia	10-Aug-99	Remote Pr
		23-Aug-99	Remote Pr
Schinia trifascia	Three-Lined Flower Moth	10-Aug-99	Remote Pr
S. arcigeira	Arcigeria Flower Moth	10-Aug-99	Remote Pr
Metalectra discalis	Common Fungus Moth	10-Aug-99	Remote Pr
Platysenta vecors	Dusky Groundling Moth	10-Aug-99	Remote Pr
Lacinipolia renigera	Bristly Cutworm Moth	14-Sept-99	Remote Pr
		14-Sept-99	Hickory Hills
Xestia bicarnea	Pink-Spotted Dart	23-Aug-99	Remote Pr
	-	14-Oct-99	Fern Valley
Raphia abrupta	Abrupt Bother Moth	10-Aug-99	Remote Pr
Pseudaletia unipuncta	Armyworm Moth	14-Oct-99	Remote Pr
Leucania Ursula	Leucania Wainscott	10-Aug-99	Remote Pr
Elaphria versicolor	Varigated Midget	10-Aug-99	Remote Pr
	Festive Midget	9-May-98	Hickory Hills
Catocala amatris	The Sweetheart	14-Oct-99	Remote Pr
C. cerogama	Yellow-Banded Underwing	14-Oct-99	Fern Valley
C. innubens	The Betrothed Underwing	10-Aug-99	Remote Pr
C. neogama	The Bride Underwing	10-Aug-99	Remote Pr
~ · · · · ·	Angus' Underwing	10-Aug-99	McKee Cr
		10-Aug-99	Remote Pr
C. insolabilis	Inconsolable Underwing	28-June-98	Remote Pr
C. residua	N /A	10-Aug-99	Remote Pr
		10-Aug-99	McKee Cr
C. vidua	Widow Underwing	14-Oct-99	Fern Valley
	e	14-Oct-99	Remote Pr
C. epione	Epione Underwing	10-Aug-99	McKee Cr
		10-Aug-99	Remote Pr
I. judith	Judith's Underwing	28-Aug-98	Remote Pr
		10-Aug-99	Remote Pr
I. palaeogama 🛛 🔍 🕻	Oldwife Underwing	10-Aug-99	McKee Cr
	Penitent Underwing	10-Aug-99	McKee Cr
	Yellow-Gray Underwing	10-Aug-99	Remote Pr
	N/A		McKee Cr
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## Siloam Springs Sate Park Lepidoptera List (Cont.)

Siloam Springs State Pai	rk Lepidoptera List (Cont.)	D = 4 -	
0 1 4°C - N	Moths	Date Decomposited	Area
Scientific Name	Common Name	Documented	Sampled
Family Limacodidae	27/4	00 T . 00	D ( D
Monoleuca semifascia	N/A	28-June-98	Remote Pr
<u>Family Megalopygidae</u>			
Lagoa crispata	N/A	28-June-98	Remote Pr
Family Arctiidae			
Apantesis vittata	Banded Tiger Moth	10-Aug-99	McKee Cr Br
Ĥaploa clymene	Clymene Moth	10-Aug-99	McKee Cr Br
* *	•	10-Aug-99	Remote Pr
H. reversa	Reversed Haploa	28-June-98	Remote Pr
Grammia virguncula	Little Virgin Moth	10-Aug-99	Remote Pr
Spilosoma virginica	Virginian Tiger Moth	28-June-9	Remote Pr
-F		9-May-98	Hickory Hills
		10-May-99	McKee Cr Br
Cisseps fulvicollis	Yellow Collared Scape	28-June-98	Remote Pr
Cisseps juricoms	renow contared beape	9-May-98	Hickory Hills
Halysidota tessellaris	Banded Tussock Moth	28-June-98	Remote Pr
Pyrrharctic isabella	Isabella Tiger Moth	10-Aug-99	McKee Cr B.
Apantesis vittata	Banded Tiger Moth	10-Aug-99	McKee Cr Br
Apunesis vinutu	Danded Tiger Moth	10-Aug-99	Remote Pr
Cycnia tenera	Delicate Cycnia	10-Aug-99	Remote Pr
Cycina tenera	Deneate Cycina	10-Aug-99	McKee Cr Br
		23-Aug-99	Remote Pr
Hypoprepia miniata	Saarlat Wingod Liaban	· · · · · · · · · · · · · · · · · · ·	
Пуроргеріа тітай	Scarlet-Winged Lichen	10-Aug-99	McKee Cr Br
		10-Aug-99	Remote Pr
		28-June-98	Remote Pr
Family Lymantriidae			
Diachrysia balluca	N/A	10-Aug-99	Remote Pr.
D. basiflava	Yellow-Based Tussock	10-Aug-99	Remote Pr
Prolimacodes badia	Skiff Moth	10-Aug-99	Remote Pr
Desmia funeralis	Grape Leafroller Moth	10-Aug-99	Remote Pr
Family Notodontidae			
Nadata gibbosa	White-Dotted Prominent	28-June-98	Remote Pr
-		10-Aug-99	Remote Pr
Clostera inclusa	Angle-Lined Prominent	10-Aug-99	Remote Pr
Nerice bidenata	N/Ă	28-June-98	Remote Pr
Furcula cinerea	Gray Furcula	21-June-97	Hickory Hills
		10-Aug-99	Remote Pr
Datana ministra	Yellow-Necked Caterpillar	28-June-98	Remote Pr
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## Siloam Springs State Park Lepidoptera List (Cont.)

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1 -0	Moths	Date	Area
Scientific Name	Common Name	Documented	Sampled
Family Notodontidae(Con	<u>ut.)</u>		
Heterocampa guttivitta	Maple Prominent	10-Aug-99	Remote Pr
Dasylophia thyatiroides	N/A	10-Aug-99	Remote Pr
D. anguina	Black Spotted Prominent	14-Oct-99	Remote Pr
Oligocentria lignicolor	White-Streaked Prominent	10-Aug-99	McKee Cr
Orgyia leucostigma	White Marked Tussock	14-Oct-99	Remote Pr
Ellida caniplaga	Linden Prominent	28-June-99	Remote Pr
Schizura badia	Chestnut Schizura	10-Aug-99	Remote Pr
Family Geometridae			
Lytrosis unitaria	Common Lytrosis	21-June-97	Hickory Hills
Euchlaena amoenaria	Deep Yellow Euchlaena	23-Aug-99	Remote Pr
	*	10-Aug-99	Remote Pr
E. serrata	The Saw-Wing	28-June-98	Remote Pr
E. pectinaria	Pectinate Euchlaena	9-May-98	Hickory Hills
Xanthotype urticaria	False Crocus Geometer	10-Aug-99	Remote Pr
Epimecis hortaria	The Tulip-Tree Beauty	23-Aug-99	Remote Pr
	1 9	28-June-98	Remote Pr
Semiothisa multineata	Many-Lined Angle	23-Aug-99	Remote Pr
Campaea perlata	Pale Beauty	23-Aug-99	Remote Pr
Lomographa vestaliata	White Spring Moth	10-Aug-99	Remote Pr
Ennomos margnaria	Maple Span Moth	14-Oct-99	Remote Pr
Eutrapela clemataria	Curved-Tooth Geometer	28-June-98	Remote Pr
Melanolophia canadaria	Canadian Melanolophia	23-Aug-99	Remote Pr
Hypagyrtis unipunctata	One-Spotted Variant	10-Aug-99	Remote Pr
Plagodis serinaria	Lemon Plagodis	9-May-98	Hickory Hills
Lambdina fervidaria	Curved-Lined Looper	10-Aug-99	Remote Pr
	1	9-May-98	Hickory Hills
Eusarca confusaria	Confused Eusarca	28-June-98	Remote Pr
Eulithis diversilineata	Lesser Grapevine Looper	14-Oct-99	Remote Pr
Mellilla xanthometata	Orange Wing Moth	10-Aug-99	Remote Pr
Pero hubneraria	Hubner's Pero Moth	10-Aug-99	Remote Pr
Bistion betularia	Pepper and Salt Geometer	9-May-98	Hickory Hills
Family <i>Pyralidae</i>			
Pantographa limata	Basswood Leafroller Moth	10-Aug-99	Remote Pr
		28-June-98	Remote Pr
Compacta capitalis	N/A		Remote Pr
Crocidophora tuberculalis	N/A		Remote Pr
Urola nivalis	N/A	-	Remote Pr
Vaxi auratella	N/A		Remote Pr
Hypsopygia costails	Clover Hay-Worm Moth	-	Remote Pr
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# Siloam Springs State Park Lepidoptera List (Cont.)

## Siloam Springs State Park Lepidoptera List (Cont.)

	Moths	Date	Area
Scientific Name	Common Name	Documented	Sampled
Family Pyralidae			
Pyrausta bicoloralis	N/A	10-Aug-99	Remote Pr
Palpita magniferalis	N/A	10-Aug-99	Remote Pr
Family Momphdae			
Monpha eloisella	N/A	10-Aug-99	Remote Pr
Family Tortricidae Epiblema otiosana	Bidens Borer Moth	10-Aug-99	Remote Pr
Family Yponomeutidae Atteva punctella	Ailarvthus Webworm	10-Aug-99	Remote Pr
Family Lasiocampidae Malacosoma americanum Phyllodesma americana	Eastern Tent Caterpillar Lappet Moth	28-June-98 9-May-98	Remote Pr Hickory Hills

## Siloam Springs State Park Odonata List Table #3 Scientific Name

### Family Aeshnidae Anax junius

## <u>Family Coenagrionidae</u> Argia moesta

<u>Family Corduliidae</u> Epitheca (Epicordulia) princeps

## Family Gomphidae

Gomphus (Gomphorus) externus Gomphus (Phanogomphus) graslinellus Progomphus obscrurus

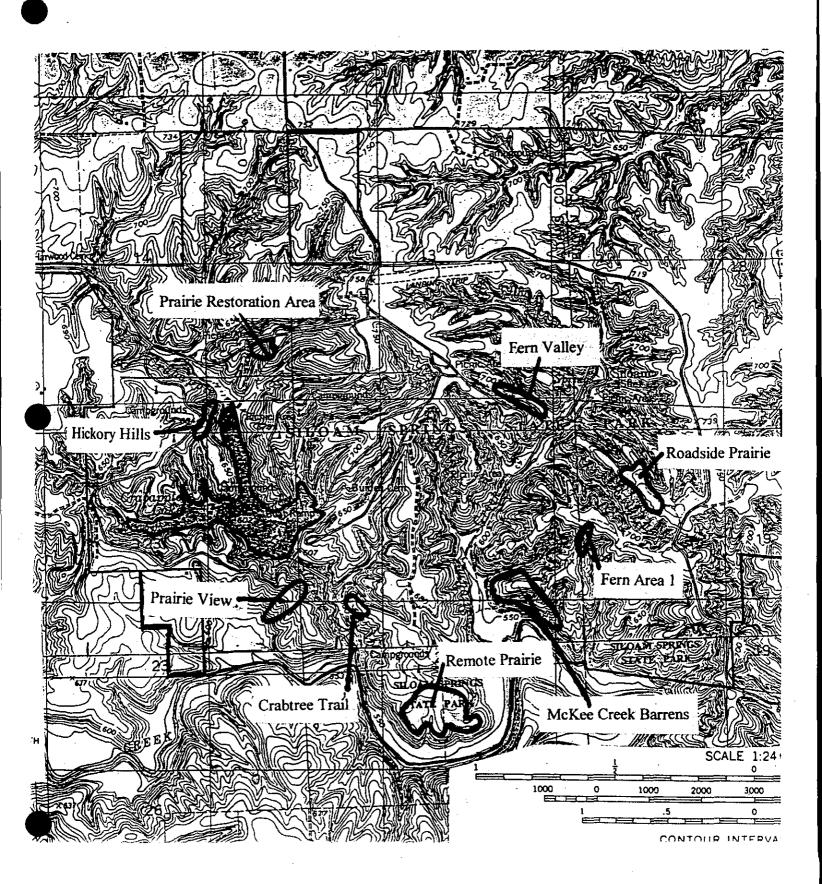
## Family Libellulidae

Libellula pulchella Pantala hymenea Plathemis lydia Tramea lacerata



Figure 1Equipment for nocturnal survey at "Remote Prairie", Siloam SpringsState Park, Adams County, Illinois.Photo by Vernon LaGesse

Figure #2 Areas Sampled during study at Siloam Springs State Park.



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