

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 period, 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.

Siloam Springs State Park

Lepidoptera Species List

Table # 1

Butterflies

<u>Scientific Name</u>	<u>Common Name</u>
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Family Papilionidae

<i>Eurytides marcellus</i>	Zebra Swallowtail
<i>Pterourus troilus</i>	Spicebush Swallowtail
<i>Battus philenor</i>	Pipe-Vine Swallowtail
<i>Pterourus glaucus</i>	Tiger Swallowtail
<i>Papilio polyxenes</i>	Black Swallowtail
<i>Heraclides crespontes</i>	Giant Swallowtail

Family Pieridae

<i>Ponita protodice</i>	Checkered White
<i>Artogeia rapae</i>	Cabbage White
<i>Colias philodice</i>	Clouded Sulfur
<i>C. eurytheme</i>	Orange Sulfur
<i>Phoebis sennae</i>	Cloudless Sulfur
<i>Pyrisitia lisa</i>	Little Sulfur

Family Lycaenidae

<i>Mitoura gryneus</i>	Olive Hairstreak
<i>Strymon melinus</i>	Gray Hairstreak
<i>Harkenclenus titus</i>	Coral Hairstreak
<i>Everes comyntas</i>	Eastern-Tailed Blue
<i>Celastrina argiolus</i>	Spring Azure

Family Nymphalidae

<i>Libytheana bachmanii</i>	American Snout
<i>Euptoieta claudia</i>	Variegated Fritillary
<i>Speyeria cybele</i>	Great Spangled Fritillary
<i>Charidryas nylais</i>	Silvery Checkerspot
<i>Phyciodes tharos</i>	Pearl Crescent
<i>Polygonia comma</i>	Green Comma
<i>P. interrogationis</i>	Question Mark
<i>Vanessa cardui</i>	American Painted Lady
<i>V. virginensis</i>	Painted Lady
<i>V. atalanta</i>	Red Admiral
<i>Junonia coenia</i>	Buckeye
<i>Basilarchia arthemis</i>	Red Spotted Purple
<i>Astrocampa celtis</i>	Hackberry
<i>Megisto cymela</i>	Little Wood Satyr
<i>Cercyonis pegala</i>	Common Wood Satyr

Siloam Springs State Park

Lepidoptera Species List

Butterflies

Scientific Name

Common Name

Family Nymphalidae (Cont.)

Nymphalis antiopa

Mourning Cloak

Enodia anthedon

Pearly- Eyed Brown

Family Danaidae

Danaus plexippus

Monarch

Family Hesperidae

Epargyreus clarus

Silver Spotted Skipper

Thorybes pylades

Northern Cloudywing

Erynnis juvenalis

Juvenal's Duskywing

E. horatius

Horace's Duskywing

Pyrgus communis

Checkered Skipper

Hylephila phyleus

Fiery Skipper

Polites themistocles

Tawny-Edge Skipper

P. coras

Peck's Skipper

Wallengrenia egeremet

Northern Broken Dash

Atalopedes campestris

Sachem

Problema byssus

Golden Byssus

Poanes zabulon

Zabulon Skipper

Siloam Springs State Park
Table # 2

Lepidoptera Species List

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

Siloam Springs Sate Park Lepidoptera List (Cont.)

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

Siloam Springs Sate Park Lepidoptera List (Cont.)

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

Siloam Springs State Park Lepidoptera List (Cont.)

<u>Scientific Name</u>	<u>Moths Common Name</u>	<u>Date Documented</u>	<u>Area Sampled</u>
<u>Family Limacodidae</u>			
<i>Monoleuca semifascia</i>	N/A	28-June-98	Remote Pr
<u>Family Megalopygidae</u>			
<i>Lagoa crispata</i>	N/A	28-June-98	Remote Pr
<u>Family Arctiidae</u>			
<i>Apantesis vittata</i>	Banded Tiger Moth	10-Aug-99	McKee Cr Br
<i>Haploa clymene</i>	Clymene Moth	10-Aug-99	McKee Cr Br
		10-Aug-99	Remote Pr
<i>H. reversa</i>	Reversed Haploa	28-June-98	Remote Pr
<i>Grammia virguncula</i>	Little Virgin Moth	10-Aug-99	Remote Pr
<i>Spilosoma virginica</i>	Virginian Tiger Moth	28-June-9	Remote Pr
		9-May-98	Hickory Hills
		10-May-99	McKee Cr Br
<i>Cisseps fulvicollis</i>	Yellow Collared Scape	28-June-98	Remote Pr
		9-May-98	Hickory Hills
<i>Halysidota tessellaris</i>	Banded Tussock Moth	28-June-98	Remote Pr
<i>Pyrrharctic isabella</i>	Isabella Tiger Moth	10-Aug-99	McKee Cr B.
<i>Apantesis vittata</i>	Banded Tiger Moth	10-Aug-99	McKee Cr Br
		10-Aug-99	Remote Pr
<i>Cycnia tenera</i>	Delicate Cycnia	10-Aug-99	Remote Pr
		10-Aug-99	McKee Cr Br
		23-Aug-99	Remote Pr
<i>Hypoprepia miniata</i>	Scarlet-Winged Lichen	10-Aug-99	McKee Cr Br
		10-Aug-99	Remote Pr
		28-June-98	Remote Pr
<u>Family Lymantriidae</u>			
<i>Diachrysia balluca</i>	N/A	10-Aug-99	Remote Pr.
<i>D. basiflava</i>	Yellow-Based Tussock	10-Aug-99	Remote Pr
<i>Prolimacodes badia</i>	Skiff Moth	10-Aug-99	Remote Pr
<i>Desmia funeralis</i>	Grape Leafroller Moth	10-Aug-99	Remote Pr
<u>Family Notodontidae</u>			
<i>Nadata gibbosa</i>	White-Dotted Prominent	28-June-98	Remote Pr
		10-Aug-99	Remote Pr
<i>Clostera inclusa</i>	Angle-Lined Prominent	10-Aug-99	Remote Pr
<i>Nerice bidenata</i>	N/A	28-June-98	Remote Pr
<i>Furcula cinerea</i>	Gray Furcula	21-June-97	Hickory Hills
		10-Aug-99	Remote Pr
<i>Datana ministra</i>	Yellow-Necked Caterpillar	28-June-98	Remote Pr

Siloam Springs State Park Lepidoptera List (Cont.)

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

Siloam Springs State Park Lepidoptera List (Cont.)

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

Siloam Springs State Park Odonata List

Table #3

Scientific Name

Family Aeshnidae

Anax junius

Family Coenagrionidae

Argia moesta

Family Corduliidae

Epithea (Epicordulia) princeps

Family Gomphidae

Gomphus (Gomphorus) externus

Gomphus (Phanogomphus) graslinellus

Progomphus obscurus

Family Libellulidae

Libellula pulchella

Pantala hymenea

Plathemis lydia

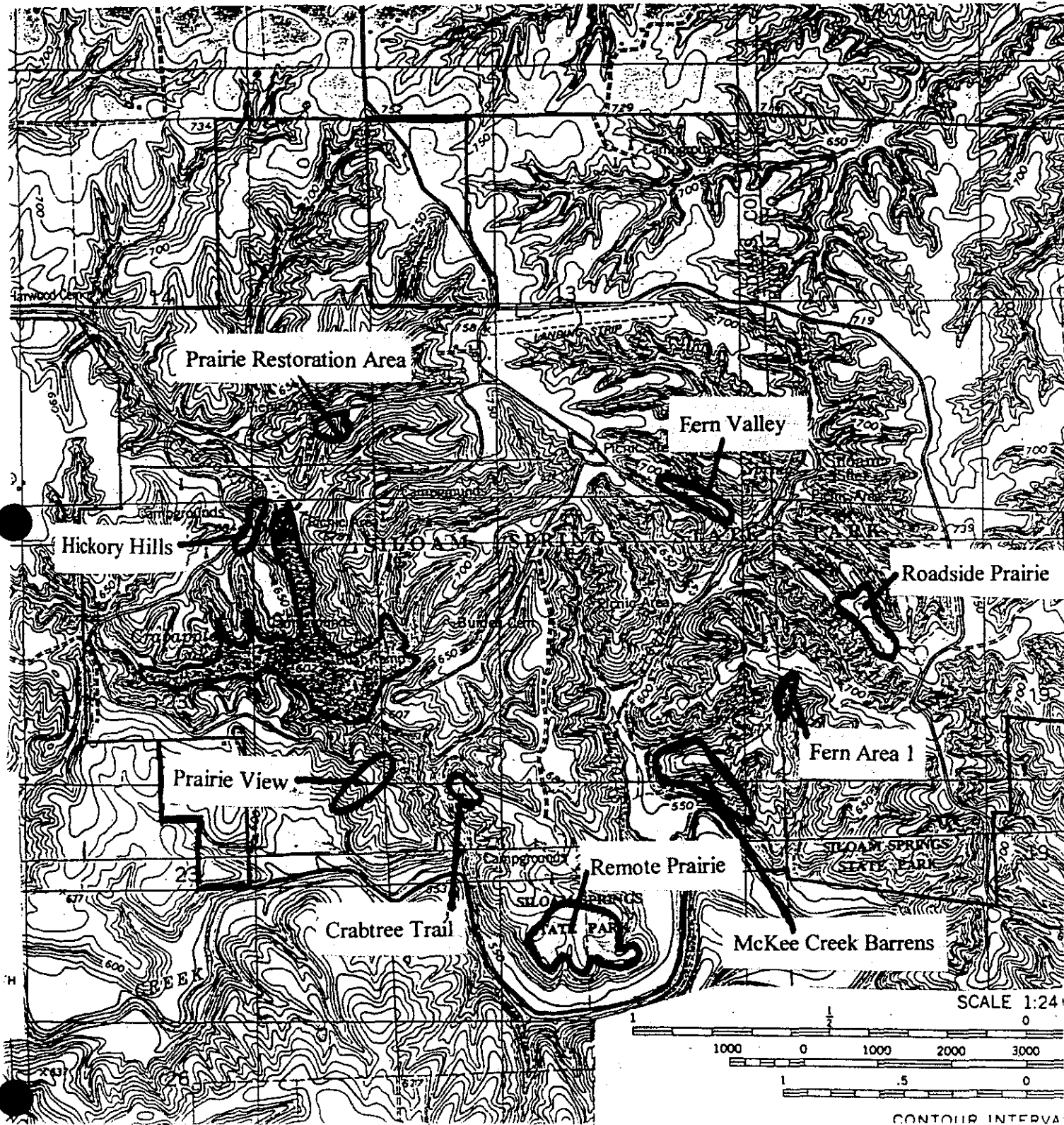
Tramea lacerata



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

Figure #2

Areas Sampled during study at Siloam Springs State Park.



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