Wildlife Preservation Fund
Grant #07-018W

FINAL REPORT - JULY 1, 2006 - JUNE 30, 2007

Survey of the Moths, Butterflies and Leafhoppers at Sweet Fern Savanna Land and Water Reserve

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Project Objectives:
To conduct a survey of the conservative insect taxa that inhabit the Sweet Fern Savanna, with special attention to the large suite of conservative butterfly and moth species that historically have been found in sand ecosystems in this region. (One hundred and eighty remnant-requiring species have been recorded within the sand savannas of the Chicago Wilderness region within the past 10 years). Special emphasis will be placed on those rare savanna-requiring species believed to be imperiled in Illinois. Examples include the Indian skipper (*Hesperia sassaucus*), the sweet fern underwing (*Catocala antinympha*), the *Ceanothus*-feeders *Apodrepanulatrix liberaria* and *Erastria coloraria*, and the *Amorpha*-feeders *Cabera quadrifasciaria, Catocala abbreviatella, Catocala amestris* and *Histrichophora taleana*.

Project Description and Summary:
Narrative begins on next page. Photographs for Figures 2 through 9 are provided in digital format only on the accompanying CD.

Press Release:
Copy enclosed with this report.
Sent to:
Bill Byrnes, Reporter, The Daily Journal, Kankakee, Illinois
Erin F. Doss, Reporter, Watseka-Times Republic
Susan Lafferty, Star Newspapers
Karen Sorensen, Features Editor, Daily Southtown
Dale Bowman, Outdoor Writer, Chicago Sun Times
Bob Maciulis, Outdoor Notebook Publishing

Total Project Expenditures:
Mr. George Derkovits agreed to conduct seven surveys of Sweet Fern for the amount of the grant, namely $2,000.00. He actually visited Sweet Fern on nine different occasions.

Other Project Expenditures:
All expenditures for the grant application, report preparation and mailings have been borne out-of-pocket by Marianne L. Hahn.

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Survey of the Moths, Butterflies and Leafhoppers at Sweet Fern Savanna Land and Water Reserve

Submitted by Marianne Hahn and George Derkovitz

INTRODUCTION

Pembroke Township in Kankakee County, Illinois has the largest and highest quality black oak savannas and associated sand ecosystems in Illinois. Sweet Fern Savanna Land and Water Reserve (L&WR) was the first protected property in the township. This one-mile-long strip has elevation changes that result in varying wetness conditions. Accordingly, the vegetation spans the spectrum of upland, wetland, and facultative plants, and 426 species of native plants have been identified, with 14 confirmed state-listed species. The largest population of *Comptonia peregrina* (sweet fern) in Illinois is located on the property.

With such diversity of native flora, including rare, threatened and endangered plants providing habitat, it might be expected that the fauna would be equally diverse. It is the purpose of this two year survey to determine the extent of the diversity of certain insect populations, namely the Lepidopterans and the leafhoppers, which are known to have small populations of extinction prone (conservative) species persisting in some remnants of Illinois' native ecosystems.

METHODS

Sweep nets and aerial nets were used for catching and identifying butterflies, skippers and leafhoppers during daytime hours. Various host plants were regularly examined for larval stages. Battery-powered black light bucket traps and generator-powered mercury vapor lights illuminating white sheets were used to collect insects during each nighttime visit. Collection sites were selected on the basis of the proximity and abundance of various selected host plants.

Easily identified insects were captured, identified, and released. Less tractable species were sacrificed and retained for further examination; these will be housed as voucher specimens at Northeastern Illinois University or at the Illinois Natural History Survey (INHS), Champaign, Illinois.

The taxonomy and nomenclature were according to Hodges (3). Except for the two species new to Illinois, identifications were confirmed by comparison to photographs of specimens in the collections at the Field Museum of Natural History or the INHS (2).

RESULTS

A total of 261 species of Lepidoptera (Table 1) were found on nine visits (Table 2) to Sweet Fern Savanna (Fig. 1). There were 239 species of moths and 22 species of butterflies. Of the 239 species of moths, two species, *Catocala antinympha* and *Elaphria georgei*, had never been reported in Illinois, and both are species of concern in Ohio. *Catocala antinympha* (Fig. 2) is listed as threatened and *Elaphria georgei* is a species of Special Interest (5). Twenty-one moth species were remnant-dependent (4). Of the 22 butterfly species that were sighted, four are considered remnant-dependent (4).

The State-threatened regal fritillary (*Speyeria idalia*) (Fig. 3) can be seen in good numbers on almost every trip to Sweet Fern during their season, and the great spangled fritillary (*Speyeria cybele*)(Fig. 4) is fairly common.

Photographs of the following notable moth species are included in this report: *Gabara subniviosella* (Fig. 5) is very uncommon throughout its range; the sensitive fern borer moth, *Papaipema inquaesita* (Fig. 6) and the *Vernonia missurica* feeder *P. limpida* (Fig. 7) are fairly common in Illinois savannas and prairies; *Euxoa niveilinea* (Fig. 8) is a very uncommon savanna-dependent species; and the *Hadena ectypa* larva (Fig. 9) was found feeding on its host plant, *Silene stellata* (starry campion).

Several leafhoppers were captured and await identification.

DISCUSSION

The number of species of moths and butterflies found on Sweet Fern Savanna L&WR during approximately 90 hours (Table 2) of observation and collecting was 261. Most remarkable at Sweet Fern was the finding of two species of moths new to Illinois, namely, *Catocala antinympha* and *Elaphria georgei*. Consideration should be given to placing these two species on the State list of endangered species. Voucher specimens of both species will be housed eventually at the Illinois Natural History Survey, Champaign, Illinois.

Of the eight rare savanna-requiring species listed in the project objectives of the grant proposal, three were found at Sweet Fern. These were the Indian skipper (*Hesperia sassaucus*), which feeds on grasses of the genus *Andropogon*, the sweet fern underwing (*Catocala antinympha*), and the leadplant-feeding abbreviated underwing (*Catocala abbrieviatella*). New Jersey tea (*Ceanothus americanus*) is abundant at Sweet Fern, so it was surprising that none of the target *Ceanothus*-feeders was found; however, the remnant-dependent, *Ceanothus*-feeder *Erynnis martialis* (mottled dusky wing) was found.

SUMMARY

The rich diversity of plants at Sweet Fern Savanna L&WR provides for an equally rich diversity in insect species, notably the moths and butterflies targeted in this survey. The finding of 261 species of Lepidopterans, with two new state records and a total of 25 remnant-dependent species attests to the quality of the habitat in Pembroke Twp., Kankakee County, Illinois. We expect that the list will be moderately expanded during the next year of this survey.

REFERENCES

1. Covell, Charles V. Jr. 1984. A Field Guide to the Moths of Eastern North America. Houghton Mifflin, Boston, Massachusetts.
2. Field Museum of Natural History, Chicago, Illinois, and the Illinois Natural History Survey, Champaign, Illinois. Lepidopteran Collections. Photographs are in the collection of George Derkovitz.
3. Hodges, Ronald W., *et al.* 1983. Check List of the Lepidoptera of America North of Mexico. University Press, Cambridge.
4. Panzer, R., R. Gnaedinger, G. Derkovitz, and D. Stillwaugh. 1995. Prevalence of remnant-dependency among the prairie and savanna-inhabiting insects of the Chicago Region. Natural Areas Journal 15: 101-116.

5. Rings, Roy W., *et al.* 1992. Owlet Moths of Ohio: Order Lepidoptera, Family Noctuidae. The Ohio State University, Columbus, Ohio.

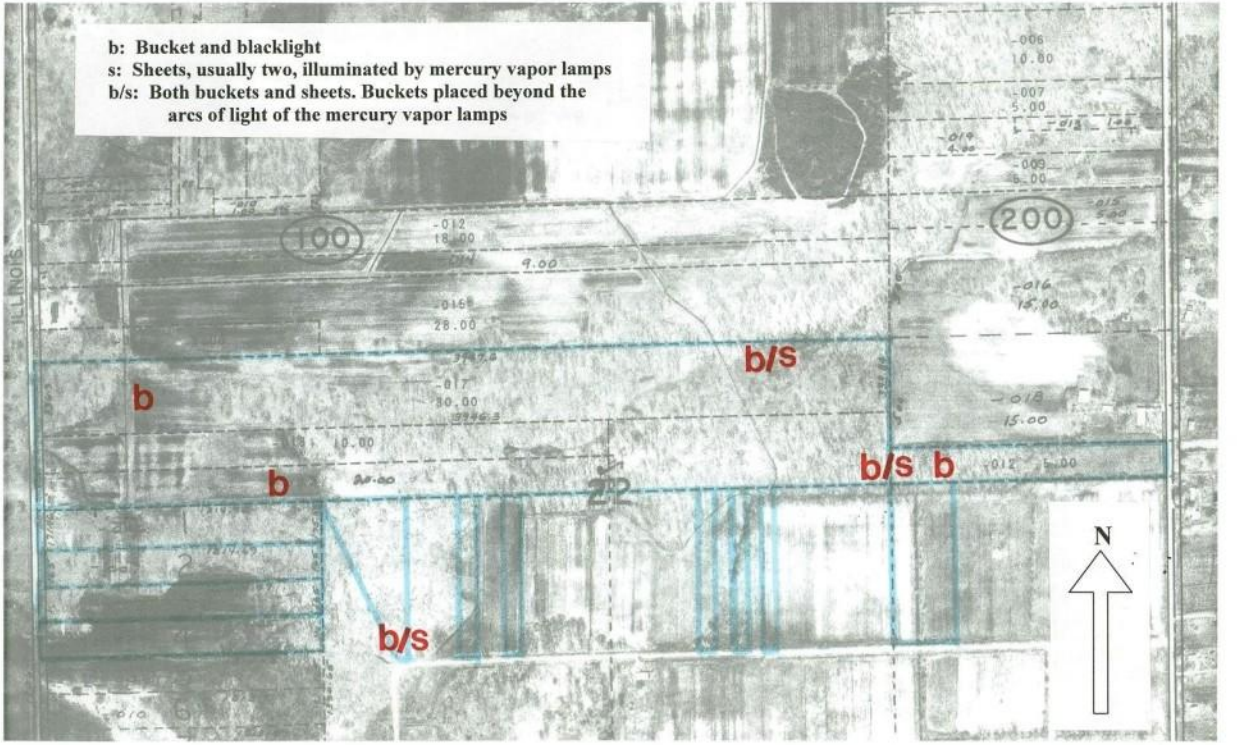

Fig. 1. Sweet Fern Savanna Land and Water Reserve Insect Collection Sites

Table 1. SWEET FERN SAVANNA LEPIDOPTERAN SPECIES LIST

Hodge's #	FAMILY/SPECIES	R-D*	R-A**	CATEGORY	HOST PLANTS
Family – Yponomeutidae					
2401	*Atteva puctella*				Tree-of-Heaven
Family - Tortricidae					
2829	*Olethreutes osmundana*	X			*Osmunda* species
3116.a	*Eucosma dorsisignatana diffusana*				Roots of goldenrods
3494	*Melissopus latiferreanus*			Filbertworm moth	Chestnut burs, young beech
3495	*Ecdytolopha punctidiscana*				
3497	*Ecdytolopha insiticiana*			Locust twig borer moth	Twigs of locust, wisteria
	Subfamily – Limacodidae				
4669	*Apoda biguttata*				Blue beech, hickories, oaks
4697	*Euclea delphinii*			Spiny oak-slug moth	Various trees and shrubs
4700	*Sibene stimulea*			Saddleback caterpillar moth	Many plants and trees
	Subfamily – Pyraustinae				
5079	*Udea rubigalis*			Celery leaftier moth	Many low plants
5156	*Nomophila nearctica*				Wide variety of plants
5169	*Hymenia perspectalis*			Spotted-beet webworm moth	Various greenhouse plants
5552	*Galasa nigrinodis*				Larva ties together and eats boxwood
Family - Geometridae					

R-D = Remnant Dependent
R-A = Remnant Associate

Table 1. SWEET FERN SAVANNA LEPIDOPTERAN SPECIES LIST

6261	*Heliomata cycladata*			Common spring moth	Black and honey locust
6322	*Mellilla xanthometata*			Orange wing	Locust
6486	*Tornos scolopacinarius*			Dimorphic gray	Asters, coreopsis
6640	*Biston betularia cognataria*			Pepper and salt geometer	Many trees and shrubs
6654	*Hypagyrtis unipunctata*			One-spotted variant	Willows, alders, birches, fir
6724	*Euchlaena serrata*			The saw-wing	Apple, blueberries, maples
6729	*Euchlaena johnsonaria*			Johnson's euchlaena	Hawthorn, ash, oaks, birch, willows
6737	*Euchlaena tigrinaria*			Mottled euchlaena	Oak, Quaking aspen, white l
6739	*Euchlaena irraria*			Least marked euchlaena	Oaks, quaking aspen, sugar
6753	*Pero honestaria*			Honest pero	Black cherry, American larc
6763	*Nacophora quernaria*			Oak beauty	Balsam, willow, basswood, hawthorn
6797	*Ennomos magnaria*			Maple spanworm moth	Many trees
6819	*Metanema inatomaria*			Pale metanema	Aspens, birch, hazel, poplar
6820	*Metanema determinata*			Dark metanema	Aspens, ash, willows
6835	*Cepphis armataria*			Scallop moth	Apple, birch, maples, curran
6843	*Plagodis fervidaria (spring)*			Fervid plagodis	Ashes, birches, maples, oak
6941	*Eusarca confusaria*			Confused eusarca	Asters, clover, dandelion, go composites
6987	*Antepione thisoaria (spring)*			Variable antipione	Apple, maple, sumac
7071	*Chlorochlamys choroleucaria*			Blackberry looper	*Rubus* sp. And various com
7139	*Cyclophora pendulinaria*			Sweetfern geometer	Sampson's snakeroot, sweet beech,blueberries
7169	*Scopula inductata*			Soft-lined wave	Aster, clover, dandelion, rag
7196	*Eulithis diversilineata*			Lesser grapevine looper moth	Grapes, virginia creeper
7237	*Hydriomena transfigurata*			Transfigured hydriomena	Pines

R-D = Remnant Dependent
R-A = Remnant Associate

Table 1. SWEET FERN SAVANNA LEPIDOPTERAN SPECIES LIST

7414	*Orthonama obstipata*			The gem	Dock, elms, mayweed, *Poly*
7416	*Orthonama centrostrigaria*			Bent-lined carpet	Knotweed, smartweed
7440	*Eubaphe mendica*			The beggar	Maples, violets
7445	*Horisme intestinata*			Brown bark carpet	Hoptree, junipers, wild cher
Family – Apatelodidae					
7663	*Apatelodes torrefacta*				
7665	*Olceclostera angelica*				
Family - Lasiocampidae					
7670	*Tolype velleda*				
7687	*Phyllodesma americana*				
7701	*Malacosma americanum*				
Family - Saturniidae					
7716	*Anisota stigma*			Spiny oakworm moth	Oaks, hazelnut
7746	*Automeris io*			Io moth	Birches, clover, elms, maple and others
7757	*Antheraea polyphemus*			Polyphemus moth	Ashes, birches, maples, oak
Family - Sphingidae					
7776	*Manduca quinquemaculata*			Five-spotted hawk moth	Tobacco and tomato plants
7796	*Sphinx eremitus*			Hermit sphinx	Bee-balm, bugleweeds, min
7821	*Smerinthus jamaicensis*			Twin-spotted sphinx	Apple, ash, birch, elm, plum
7824	*Paonias excaecatus*			Blinded sphinx	Basswood, birches, elms, oa *Prunus* sp.

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R-A = Remnant Associate

Table 1. SWEET FERN SAVANNA LEPIDOPTERAN SPECIES LIST

7825	*Paonias myops*			Small-eyed sphinx	Birches, hawthorns, poplars,
7885	*Darapsa myron*			Hog (Virginia) sphinx	Ampelopsis, viburnums, Vi
7894	*Hyles lineata*			White-lined sphinx	Apple, willow-herbs, four o plants
Family - Notodontidae					
7895	*Clostera albosigma*			Sigmoid prominent	Poplars, willows
7902	*Datana ministra*			Yellow-necked caterpillar moth	Various trees
7906	*Datana contracta*			Contracted datana	Blueberries, chestnut, hicko hazel
7908	*Datana perspicua*			Spotted datana	Sumacs
7915	*Nadata gibbosa*			White-spotted prominent	Birches, cherries, maples, o
7917	*Hyperaeschra georgica*			Georgian prominent	Oaks
7920	*Peridea angulosa*			Angulose prominent	Oaks
7922	*Pheosia rimosa*			Black-rimmed prominent	Poplars, willows
7931	*Gluphisia septentrionis*			Common gluphisia	Poplars
7937	*Furcula cinerea*			Gray furcula	Aspens, birches, poplars, wi
7957	*Dasylophia anguina*				
8005	*Schizura ipomoeae*			Morning glory prominent	Roses, beech, birch, elms, m morning glory
8007	*Schizura unicornis*			Unicorn caterpillar moth	Many trees and shrubs
8017	*Oligiocentria lignicolor*			White-streaked prominent	Beech, birches, oak
Family - Arctiidae					
8107	*Haploa clymene*			Clymene moth	*Eupatorium* , oaks, willows
8109	*Haploa reversa*			Reversed haploa	Wide variety

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Table 1. SWEET FERN SAVANNA LEPIDOPTERAN SPECIES LIST

8112	*Haploa confusa*			Confused haploa	Hounds tongue
8131	*Estigmene acrea*			Salt marsh moth	Many plants
8137	*Spilosoma virginica*			Virginian tiger moth	Many plants
8140	*Hyphantria cunea*			Fall webworm	Trees
8157	*Phragmatobia lineata*			Lined-ruby tiger moth	*Eupatorium* sp.
8195	*Apantesis oithona*			Oithona tiger moth	Clover, coccinia, wild pea
8199	*Apantesis arge*			Arge tiger moth	Cactus, grape, sunflowers, o
8203	*Halysidota tesellaris*			Banded tussock moth	Trees, willows, low shrubs
8230	*Cycnia tenera*			Delicate cycnia	Dogbanes, milkweeds
8231	*Cycnia oregonensis*			Oregon cycnia	Dogbanes
8238	*Euchaetes egle*			Milkweed tussock moth	Milkweeds
8267	*Cisseps fulvicollis*			Yellow-collared scape moth	Grasses, lichens, spike rush
Family - Lymantriidae					
8316	*Orygia leucostigma*			White-marked tussock moth	Various hosts
Family - Noctuidae					
	Subfamily - Herminiinae				
8322	*Idia americalis*			American idia	Lichens
8323	*Idia aemula*			Common idia	Dead leaves
8329	*Idia diminuendis*			Orange-spotted idia	
8352	*Zanclognatha jacchusalis*				Dead cottonwood leaves
8355	*Chytolita morbidalis*			Morbid owlet	Dead leaves
8357	*Chytolita absorptalis*			Slant-lined owlet	Grasses
8362	*Phalenostola metonalis*			Pale epidelta	Kentucky blue grass, dead le
8364	*Phalenostola larentioides*			Black-banded owlet	K. blue grass, clover, dead le
8366	*Tetanolita mynesalis*			Smoky tetanolita	Nectars on flowers

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Table 1. SWEET FERN SAVANNA LEPIDOPTERAN SPECIES LIST

8368	*Tetanolita floridana*			Florida tetanolita	Dead leaves
8370	*Bleptina caradrinalis*			Bent-winged owlet	Dead leaves
8384.1	Renia flavipunctalis				Dead leaves of deciduous tr
8393	*Lascoria ambigualis*			Ambiguous moth	Ragweed stalks
8397	*Palthis angulalis*			Dark-spotted pathis	Red osier dogwood,honeysu
8404	*Rivula propinqualis*			Spotted grass moth	Grasses
8411	*Colobochyla interpuncta*			Yellow-lined owlet	Willow leaves
8412	*Melanomma auricinctaria*	X			Huckelberry
	Subfamily - Hypeninae				
8421	*Hypenodes fractilinea*				
8441	*Bomolocha manalis*			Flowing-lined bomolocha	
8465	*Plathypena scabra*			Green cloverworm moth	Many plants
8481	*Phytometra rhodarialis*			Pink-bordered yellow	
	Subfamily - Catocalinae				
8490	*Pangrapta decoralis*	X		Decorated owlet	Blueberry
8491	*Ledaea perditalis*			Lost owlet	*Scirpus cyperinus* , buttonbu
8522	*Gabara subniviosella*	X			
8555	*Scoliopteryx libatrix*			The Herald	Poplars, willows
8564	*Urola nivalis*				Grasses
8587	*Panopoda rufimargo*			Red-lined panopoda	Beeches, oaks
8651	*Lesmone detrahens*	X		Detracted owlet	
8689	*Zale lunata*			Lunate zale	Many trees and shrubs
8694	*Zale aeruginosa*				
8739	*Caenurgina erechtea*			Forage looper moth	Clovers, grasses, great ragw
8857	*Catocala ultronia*			Ultronia underwing	Member’s of the rose family

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Table 1. SWEET FERN SAVANNA LEPIDOPTERAN SPECIES LIST

8864	*Catocala grynea*			Woody underwing	Apple, hawthorn, plum
8775	*Catocala antinympha*	X		Wayward (Sweet fern) underwing	Sweet fern (*Comptonia*)
8876	*Catocala micronympha*			Little nymph	Oaks
8841	*Catocala abbreviatella*	X		Abbreviated underwing	Leadplant
	Subfamily - Plusinae				
8889	*Agrapha oxygramma*			Sharp-stigma looper moth	Asters, goldenrod, horsewee
8890	*Pseudoplusia includens*			Soybean looper moth	Goldenrods, many plants
8898	*Allagrapha aerea*			Unspotted looper	Stinging nettle,asters
8899	*Pseudeva purpurigera*			Straight-lined looper moth	Meadow-rue
8924	*Anagrapha falcifera*			Celery looper moth	Viburnum, clover, plaintain,
8962	*Paectes abrostoloides*			Large paectes	Sweetgum
8971	*Baileya dormitans*			Sleeping baileya	Ironwood
8990	*Nola cilicoides*			Blurry-patched nola	
	Subfamily - Acontinae				
9040	*Hyperstrotia secta*			Black-patched graylet	Red & white oak
9044	*Thioptera nigrofimbria*			Black-bordered lemon moth	Crabgrass, morning glories
9046	*Lithacodia bellicula*			Bog lithacodia	
9047	*Lithacodia muscosula*			Large mossy	Grasses
9051	*Lithacodia musta*			Small mossy	
9054	*Lithacodia indeterminata*				
9089	*Tarachidia binocula*				
9090	*Tarachidia candefacta*			Olive-shaded bird-dropping moth	Ragweed
9095	*Tarachidia erastrioides*			Small bird-dropping moth	Ragweed

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Table 1. SWEET FERN SAVANNA LEPIDOPTERAN SPECIES LIST

9127	*Spragueia leo*			Common spragueia	Bindweed
9193	*Raphia frater*			The brother	Aspen, poplars, willows
	Subfamily - Acronictinae				
9200	*Acronicta americana*			American dagger moth	Many trees
9208	*Acronicta betulae*			Birch dagger moth	Birches
9209	*Acronicta radcliffei*			Radcliff's dagger moth	*Prunus* sp.
9221	*Acronicta funeralis*			Funerary dagger moth	Maples, apples, elms, birchs
9238	*Acronicta lobeliae*			Lobelia dagger moth	Blackcherry, oak
9244	*Acronicta modica*			Medium dagger moth	Oaks
9249	*Acronicta increta*				
9250	*Acronicta inclara*			Unclear dagger moth	Birches, chestnut, oaks
9264	*Acronicta longa*			Long-winged dagger moth	Birches, willows, oaks, rose
9266	*Acronicta lithospila*			Streaked dagger moth	Chestnut, oaks, walnut, hick
9272	*Acronicta oblinata*			Smeared dagger moth	Oaks, willows, grasses, elms many plants
9280	*Simyra henrici*			Henry's marsh moth	Willows, poplars, cattails, g
9284	*Agriopodes teratophora*	X		The gray marvel	Mint, monarda
9286	*Harrisimemna trisignata*			Harris's three spot	Willows, other woody plant
9299	*Eudryas unio*			Pearly wood nymph	Willow herb, grapes, evenin
9301	*Eudryas grata*			Beautiful wood nymph	Buttonbush, grapes, Virgini
	Subfamily - Amphipyrinae				
9391	*Luperina passer*			Dock rustic	Roots of dock
9393	*Luperina stipata*	X			*Spartina*
9406	*Oligia fractilinea*				Timothy
9418	*Oligia obtusa*	X			

R-D = Remnant Dependent
R-A = Remnant Associate

Table 1. SWEET FERN SAVANNA LEPIDOPTERAN SPECIES LIST

9427	*Meropleon diversicolor*				Sedges
9473	*Papaipema impecuniosa*	X			Sneezeweed
9480	*Papaipema ptersii*	X		Bracken borer moth	*Pteridium*
9480	*Papaipema inquasita*	X		Sensitive fern borer moth	*Onoclea*
9507	*Papaipema limpida*				*Vernonia*
9556	*Chytonix palliatricula*			Cloaked marvel	Smut-infested aster
9560	*Dypterygia rozmani*			American bird's wing moth	Docks, smartweed
9578	*Hyppa xylinoides*			Common hyppa	St. John's wort, roses, many
9626	*Trachea delicata*				
9633	*Calloistria cordata*			Silver-spotted fern moth	Ferns
9637	*Magusa orbifera*			Orbed narrow-wing	Black ironweed
9638	*Amphipyra pyramidoides*			Copper underwing	Trees, shrubs
9647	*Proxenus miranda*			Miranda moth	Alfalfa, dandelion
9662	*Balsa malana*			Many-dotted appleworm moth	Apple, cherry, elm, plum
9661	*Crambodes talidformis*			Verbena moth	Verbena
9666	*Spodoptera frugiperda*			Fall armyworm moth	Many plants
9669	*Spodoptera ornithogalli*			Yellow-striped armyworm moth	Many plants
9678	*Elaphria versicolor*			Variegated midget	Firs, pines, spruces
9680	*Elaphria georgei*	X			
9681	*Elaphria festivoides*			Festive midget	Maple
9684	*Elaphria grata*			Grateful midget	Clover, oaks, violets, dead l
9688	*Galgula partita*			The wedgling	Wood-sorrels
9690	*Condica videns*			White-spotted groundling	Asters, goldenrod
9725	*Stiriodes obtusa*			Obtuse yellow	
	Subfamily - Cuculliinae				

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Table 1. SWEET FERN SAVANNA LEPIDOPTERAN SPECIES LIST

9946	*Epiglaea decliva*			Sloping sallow	Blueberry, oaks, *Prunus* sp.
9950	*Chaetaglaea sericea*			Silky sallow	Oaks, chokeberry, wild blac
9952	*Eucirroedia pampina*			Scalloped sallow	Chokecherry, black cherry, maples
9957	*Sunira bicolorago*			Bicolored sallow	Seeds of elm, maple, poplar, cherry
	Subfamily - Hadeninae				
10223	*Discestra trifolii*			Nutmeg (clover) cutworm	Many plants
10280	*Polia purpurissata*			Purple arches	Alders, blueberries, birches,
10291	*Polia latex (morrisonia)*			Fluid arches	Beech, maples, elm, other b
10301	*Spirometra lutra*				Many plants
10316	*Hadena ectypa*	X			Starry campion
10317	*Anepia capsularis*			Capsule moth	Seed capsules of pinks
10368	*Lacinipolia meditata*			The thinker	Many herbaceous plants
10397	*Lacinipolia renigera*			Bristly cutworm moth	Many wild and cultivated pl
10405	*Lacinipolia lorea*			Bridled arches	Many plants
10431	*Faronta diffusa*			Wheat head armyworm moth	Grasses
10434	*Faronta rubripennis*	X		The pink streak	Grasses
10436.a	*Aletia oxygala luteopallens*				Grasses, sedges
10438	*Pseudaletia unipunctata*			The armyworm moth	Grasses, many plants
10447	*Leucania commoides*				Orchard grass
10459	*Leucania inermis*			Unarmed wainscot	Orchard grass
10462	*Leucania pseudargyria*			False wainscot	Grasses
10501	*Crocigrapha normani*			Norman's quaker	Apple, cherries, oaks, other
10518	*Achatia distincta*			Distinct quaker	Birch, oak, ash, maples, gra
10524	*Nephelodes minians*			Bronzed cutworm moth	Grasses

R-D = Remnant Dependent
R-A = Remnant Associate

Table 1. SWEET FERN SAVANNA LEPIDOPTERAN SPECIES LIST

10532	*Homorthodes furfurata*	X		Scurfy quaker	Maples
10552	*Protorthodes incincta*				Alfalfa beans, hickory, dand
10563	*Protorthodes oviduca*			Ruddy quaker	Dandelion, grasses, plantain
10567	*Ulolonche culea*			Sheathed quaker	Red oak
10569	*Ulolonche modesta*	X			
10585	*Orthodes crenulata*			Rustic quaker	Grasses, willows, plantain
10587	*Orthodes cynica*			Cynica quaker	Plantain, dandelion, goldenr
	Subfamily - Noctuinae				
10641	*Agrotis vetusta*			Old man dart	Many plants
10648	*Agrotis gladiaria*			Swordsman dart	Many wild and cultivated pl
10651	*Agrotis venerabilis*			Venerable dart	Many wild and cultivated pl
10670	*Feltia jaculifera*			Dingy cutworm moth	Asters, goldenrods, grasses, plants
10676	*Feltia herlis*			Master's dart	Many plants
10695	*Eucoptonemis tripars*	X		Fringed dart	
10698	*Trichosilia geniculata*			Knee-joint dart	
10698	*Trichosilia manifesta*	X			
10803	*Euxoa velleripennis*				
10831	*Euxoa niveilinea*	X			
10838	*Euxoa detersa*		X	Rubbed dart	Grasses
10878	*Loxagrotis albicosta*				
10891	*Ochropleura plecta*			Flame shouldered dart	Clovers
10926	*Spaelotis clandestina*			Clandestine dart	Many plants and trees
10943	*Xestia normaniana*			Norman's dart	Blueberries, raspberry, other
10944	*Xestia smithii*			Smith's dart	Wide variety of plants
10950	*Xestia bicarnea*			Pink-spotted dart	Many plants

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10955	*Xestia badinodis*			Pale-banded dart	Chickweeds, dock
10998	*Choephora fungorum*			Bent-lined dart	Clover, dandelion, other pla
11029	*Abagrotis alternata*			Greater red dart	Various trees and shrubs
Family - Heliothinae					
11068	*Heliothis zea*			Corn earworm moth	Many plants
11071	*Heliothis virescens*			Tobacco budworm moth	Roses, nightshade sp.
11072	*Heliothis phloxiphagus*			Spotted straw	Asters, pholx, gumweed, str
11117	*Schinia lynx*			Lynx flower moth	*Erigeron*
11128	*Schinia arcigera*			Arcigera flower moth	Asters
11149	*Schinia trifascia*			Three-lined flower moth	False boneset, Joe-pye weed
Family - Hesperiidae					
3870	*Epargyreus clarus*			Silver-spotted skipper	Legumes
3954	*Erynnis martialis*	X		Mottled dusky wing	*Ceanothus americanus*
4033	*Hesperia sassacus*	X		Indian skipper	*Andropogon* sp.
4251.a	*Lycaena phlaeas americana*			American copper	*Rumex*
Family - Papilionidae					
4159.a	*Papilo polyxenes asterius*			Eastern black swallowtail	Umbelliferae sp.
Family - Pierdae					
4197	*Artogeia rapae*			Cabbage white	Many mustard plants
4210	*Colias eurytheme*			Alfalfa butterfly	Various legumes
4248	*Nathalis iole*			Dainty sulfur	Asters, *Bidens*

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Family - Lycaenidae					
4361	*Everes comyntas*			Eastern tailed blue	Flowers and seeds of many
4363	*Celastrina ladon*			Spring azure	Sumac, spiraea, flowering d
Family - Nymphalidae					
4432	*Nymphalis antiopa*			Mourning cloak	Willows, birch, cottonwood
4523	*Basilarchia archippus*			Viceroy	Willows
4434	*Vanessa virginiensis*			American painted lady	*Cirsium* sp., pussytoes, pea
4437	*Vanessa atalanta*			Red admiral	Nettles, pellitory
4440	*Junonia coenia*			Buckeye	Snapdragon, toadflax, plant foxglove
4450	*Speyeria cybele*			Great spangled fritillary	Violets
4451	*Speyeria aphrodite*	X		Aphrodite fritillary	Violets
4452	*Speyeria idalia*	X		Regal fritillary	Violets
4481	*Phyciodes tharos*			Pearl crescent	Asters
4578	*Megisto cymela*			Little wood satyr	Grasses
4587	*Cercyonis pegala*			Common wood nymph	Purpletop and other grasses
4614	*Danaus plexippus*			Monarch	Common milkweed

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Table 2. ***SWEET FERN SAVANNA NIGHT LOG***

Each visit lasted approximately 10 hours.

DATE / No. Bucket Traps set with blacklight / Sheet with mercury vapor lamp

7-07-06 / 4 / 1
8-19-06 / 0 / 1
9-09-06 / 4 / 2
9-15-06 / 4 / 0
9-16-06 / 4 / 3
9-23-06 / 3 / 2
10-01-06 / 4 / 0
10-02-06 / 3 / 0
10-07-06 / 0 / 1

04-21-07 / 0 / 2
05-05-07 / 2 / 1
05-19-07 / 2 / 1
06-02-07 / 0 / 2
06-09-07 / 2 / 2

Ron Panzer

Ron Panzer

Gabara subnivosella

Tom Panzer

George Derkovitz
Papaipima inquaesita

Euxoa niveilinea