Journal of the Arkansas Academy of Science

Volume 45 Article 6

1991

Biota of Magazine Mountain (II): A Preliminary List of the Macrolepidoptera Fauna

Robert T. Allen
University of Arkansas, Fayetteville

Richard L. Brown
University of Arkansas, Fayetteville

THE BIOTA OF MAGAZINE MOUNTAIN (II): A PRELIMINARY LIST OF THE MACROLEPIDOPTERA FAUNA

ROBERT T. ALLEN[1,2] and RICHARD L. BROWN[3]
Department of Entomology
University of Arkansas
Fayetteville, Arkansas 72701

ABSTRACT

Collections during the past three years have demonstrated a large and diverse Lepidoptera fauna on Magazine Mountain, Logan County, Arkansas. During the study, over 5,000 specimens were collected at ten different localities on the mountain. To date, 274 species of macromoths have been identified. Twenty-six of these species are new state records while four of the taxa appear to be new species. Localities and the approximate dates when the specimens were collected are reported.

INTRODUCTION

The Lepidoptera species of an area constitute a significant part of the overall fauna. Adults are important pollinators, whereas the larvae feed on a variety of plants and are an important food source for other insect species and vertebrates, particularly birds. From the preliminary data, the Lepidoptera fauna of Magazine Mountain appears certainly large and diverse. Over 5,000 specimens have been collected and partially identified. This paper reports on the macromoth segment of the fauna of Magazine Mountain. The term macrolepidoptera has been used for more than a century to distinguish the families that include the large butterflies, skippers, and moths from the microlepidoptera, which includes families of mostly smaller moths. The macrolepidoptera is not a natural group, because butterflies and skippers are considered to be more closely related to moths assigned to microlepidoptera than to moths assigned to macrolepidoptera (Zimmerman, 1978). This paper lists only the moths that have traditionally been assigned to the macrolepidoptera. We have used the designation "macrolepidoptera" in order to be specific.

Numerous lists of species of macromoths and other Lepidoptera have been made for specific areas in North America during recent years. Among lists for the eastern section of United States, Tietz (1951) reported 1,049 species of macromoths occurring in Pennsylvania.

Blanchard *et al.* (1985), reported 453 species of macrolepidoptera (excluding butterflies and skippers) from Welder Wildlife Refuge, which occupies 7,800 acres in the transition zone between the prairies and plains of south Texas. Their list was based on approximately 23 years of collecting by numerous individuals. Rings and Metzner (1989) reported 417 species of macrolepidoptera moths in a three year survey at the Mohican State Forest and Mohican State Park in Ashland County, Ohio. Profant (1990, 1991) reported 318 species of macromoths from survey of the Sand Pine Scrub area of Blue Spring State Park in Volusia County, Florida, and he listed 459 species occurring on Beaver Island Archipelago in Lake Michigan.

The present study reports 274 species of macromoths collected during three years of sampling at ten sites on Magazine Mountain. Twenty-six of these species are new state records. Four of the taxa collected appear to represent new species and have been tentatively assigned to the following genera: *Cirrhophanus*, *Leuconycta*, *Protoperigea*, and *Zanclognatha*. The junior author estimates that over 1,500 species of Lepidoptera may eventually be recorded from Magazine Mountain.

METHODS

With the exception of one species of *Cirrhophanus*, all specimens were collected with an ultraviolet blacklight, either at a sheet suspended in front of the light or in a box trap. The method for collecting and preparing specimens has been described by Hodges, as quoted by Zimmerman (1978). The *Cirrhophanus* species was collected by sweeping flowers of *Bidens*. During the first three years of this study (1988, 1989, 1990), specimens have been collected on approximately 55 nights. This paper is based on the identification of approximately 3,000 specimens of the 5,000 plus specimens that have been collected.

Nomenclature follows Hodges *et al.* (1983). New state records were based on ranges reported by Covell (1984) for moths in eastern North America. Species that have tentatively been identified as possibly new and undescribed were examined by Tim McCabe of the New York State Museum, Albany.

The following is a list of macrolepidoptera collected at Mt. Magazine, Arkansas; numbered localities listed in Table 1; months (M=May, Jn=June, Jy=July, A=August) are divided into first half (1=days 1-15) and second half (2=days 16-30/31); entry of month without number indicates collections made throughout month. Asterisk indicates new state records.

Table 1. Localities of collections at Mt. Magazine, Arkansas. Elevations in ( ) are those used by the junior author.

1. 1050' (1020'), Cove Lake Campground, T7N,R25W, sec 35SE
2. 2550' (2540-2560'), T6N,R25W, sec 22N, Cameron Bluff Campground.
3. 2753' (2600-2640'), T6N,R25W, sec 22N, Signal Hill
4. 2575' (2600'), S. Rim, W. Cabin Site, T6N,R25W, sec 22SW
5. 2650' (2640'), Dripping Springs Rd., T6N,R25W, sec 20SE
6. 2550' (2680-2700'), Mossback Ridge, T6N,R25W, sec 23SW
7. 1300' (1350'), Wicked Creed Rd., T6N,R25W, sec 16
8. 2500', N.Slope, Mossback Ridge, T6N,R25W, sec 23NW
9. 2675' (2620'), Radio Tower Rd., T6N,R25W, Sec 21SE
10. 2400' (2370'), East End Rec. Area, T6N,R25W, sec 24SE

[1]Published with the approval of the Director, Arkansas Agricultural Experiment Station, University of Arkansas, Fayetteville, AR 72701.
[2]Professor, Department of Entomology, University of Arkansas, Fayetteville, AR 72701.
[3]Associate Professor, Department of Entomology, Mississippi State University, Drawer EM, Mississippi State, MS 39762

	LOCALITIES	DATES
APATELODIDAE		
Apatelodes torrefacta (J.E. Smith)	2,3	Jy2,A1
Olceclostera angelica (Grt.) *	1-3	M2,Jn1,Jy2
ARCTIIDAE		
Apantesis anna (Grt.)	1,4	M2
Apantesis figurata (Drury)	1,4,5,7	M2
Apantesis nais (Drury)	1	M2
Cisseps fulvicollis (Hbn.)	4,5,7	M2
Cisthene packardii (Grt.)	4	M2
Clemensia albata Pack.	1,3	M
Crambidia sp.	10	Jn1
Cycnia tenera Hbn.	5	M2
Halysidota tessellaris (J.E. Smith)	2	Jn2
Haploa contigua (Wlk)	2	Jn2
Haploa reversa (Stretch)	2	Jn
Holomelina aurantiaca (Hbn.)	1,4	M2
Holomelina laeta (Guer.-Meneville) *	1	M2
Holomelina opella (Grt.)	1,7	M2
Hyphantria cunea (Drury)	2,6	Jn2
Hypoprepia miniata (Kby.)	1,2,3,4,10	Jn,Jy,A
Spilosoma congrua Wlk.	1	M2
Spilosoma virginica (F.)	10	Jn1
DREPANIDAE		
Oreta rosea (Wlk.)	3	Jy2
EPIPLEMIDAE		
Callizzia amorata Pack.	1	M2
GEOMETRIDAE		
Anacamptodes vellivolata (Hulst)	1	M2
Anavitrinella pampinaria (Gn.)	1-3	M2,Jn2,A
Antepione thisoaria (Gn.)	2,3	Jn2,A2
Besma quercivoraria (Gn.)	1,2,4	M2,Jn2,A2
Cabera quadrifasciaria (Packard)	1	M2
Campaea perlata (Gn.) ? *	5,7	M2
Chlorochlamys chloroleucaria (Gn.)	4,7	M2
Cyclophora pendulinaria (Gn.)	5	Jn1
Dichorda iridaria (Gn.)	3	Jy1
Ectropis crepuscularia (D. & S.)	2,3,5	Jn,Jy2,A
Eubaphe mendica (Wlk.)	1	M2
Euchlaena pectinaria (D. & S.)	2-4	Jy,A
Euchlaena tigrinaria (Gn.)	1,4	M2
Eulithis diversilineata (Hbn.)	3	Jy1,A2
Eupithecia miserulata Grt.	1	M2
Eusarca confusaria Hbn.	5	Jn1
Eutrapela clemataria (J.E. Smith)	2	A
Exelis dicolus Rindge		
Glena cribrataria (Gn.)	1,3	M2,A2
Glenoides texanaria (Hulst)		
Heliomata cycladata (G. & R.)	1,4,7,9	M2
Horisme intestinata (Gn.)	1	M2
Hypagyrtis unipunctata (Haw.)	1-3	M2,Jy2,A
Idaea furciferata (Pack)	2	Jy1
Idaea obfusaria (Wlk.)	2	Jy1
Iridopsis larvaria (Gn.) *	2	Jn2
Itame pustularia (Gn.) *	2	Jn2
Itame subcessaria (Wlk.) *	3	Jn1
Lambdina fiscellaria (Gn.)	2-4	M2,Jn
Lomographa vestaliata (Gn.)	1,2,4,7,8	M2,Jy2
Lytrosis unitaria (H.-S.)	2	Jn2
Melanolophia signataria (Wlk.)	3	A1
Metarranthis duaria (Gn.) *	2	Jn1
Metarranthis homuraria (G. & R.)	1,3	M2,A2
Metarranthis hypocharia (H.-S.) *	2	Jn2
Nemoria sp.	2	Jy1
Orthonama centrostrigaria (Woll.)	1,2,4,8	M2,Jn2
Orthonama obstipata (F.)	1,2,4,5,7	M2
Patalene olyzonaria (Wlk.)	1-3	M2,Jy2
Pero sp.	2	A1
Plagodis alcoolaria (Gn.) *	1-3	M2,Jy2,A1
Plagodis fervidaria (H.-S.)	1	M2
Pleuroprucha insulsaria (Gn.)	1,3,5	M2,Jy1
Probole amicaria (H.-S.) *	1,3,4,7,8	M2,Jn1
Prochoerodes transversata (Drury)	1,2	Jn2
Protoboarmia porcelaria (Gn.)	1,2,5	M2,Jn2
Scopula limboundata (Haw.)	1,7	M2
Selenia kentaria (G. & R.) *	3	Jy2
Semiothisa bicolorata (F.)	1,2,7	M2,Jn2,A2
Semiothisa continuata (Wlk.)	2	Jn2
Semiothisa eremiata (Hulst) *	2	Jn1
Semiothisa multilineata (Pack.)	2,4	M2,Jn2
Semiothisa ocellinata (Gn.)	1-3,5,7,8	M2-A
Semiothisa promiscuata Fgn.	1,7	M2
Semiothisa transitaria (Wlk.)	4	M2
Synchlora frondaria Gn.	1,8	M2
Tetracis cachexiata (Gn.)	1,4,5	M2
LASIOCAMPIDAE		
Malacosoma americanum (F.)	1,4,8,10	M2,Jn1
MIMALLONIDAE		
Lacosoma chiridota Grt.	1	M2
NOCTUIDAE		
Abagrotis alternata (Grt.)	2-4	Jy,A
Acronicta afflicta Grt.	1,4,7	M2
Acronicta americana Harr.	2,4	Jn1,Jy2,A2
Acronicta funeralis G. & R. *	4	A
Acronicta furcifera Gn.	4	M2
Acronicta haesitata (Grt.)	1,2,4,5,7,8	M2,Jn,Jy1,A
Acronicta hasta Gn.	2,4	Jn1,A2
Acronicta impleta Wlk.	4,7	M2,Jn1
Acronicta inclard Sm.	1,2,7,9	M2,A1
Acronicta increta Morr.	1,3,7	M2,A2
Acronicta lithospila Grt.	4	M2
Acronicta lobeliae Gn.	1,5	M2
Acronicta morula G.& R.	2-4	M2,Jn1,A2
Acronicta ovata Grt.	2-4	Jn,A
Acronicta radcliffei (Harv.)	2	Jn2
Acronicta spinigera Gn.	1,7	M2
Acronicta tritona (Hbn.)	1-3	M2,Jn1,A
Agrapha oxygramma (Gey.)	10	Jn2
Agriopodes fallax (H.-S.)	1	M2
Agriopodes teratophora (H.-S.)	1	M2
Agrotis ipsilon (Hufn.)	1,2	M2,Jn1
Allotria elonympha (Hbn.)	1,4,5,7	M2
Amphipyra pyramidoides Gn.	2	Jn1
Anagrapha falcifera (Kby.)	1,2	M2
Anorthodes tarda (Gn.)	1,4,5,8	M2
Apamea lignicolora (Gn.)	4	M2
Argyrostrotis anilis (Drury)	1	M2
Arugisa latiorella (Wlk.)	10	Jn1
Autographa biloba Steph.	4	Jn1
Baileya australis (Grt.)	10	Jn2
Baileya dormitans (Gn.)	6	Jn2
Baileya opthalmica (Gn.)	1,3,9	M2,Jy2
Balsa labecula (Grt.)	2	Jn2
Bleptina caradrinalis Gn.	1,4,5,7,8	M2
Bleptina inferior Grt.	1,4	M2
Bleptina sangamonia B. & McD.	1	M2
Bomolocha abalienalis (Wlk.)	3	A1
Bomolocha baltimoralis (Gn.)	2,4	A2
Bomolocha bijugalis (Wlk.)	2	A2
Bomolocha madefactalis (Gn.)	1-3,6	Jn,A2
Bomolocha manalis (Wlk.)	1	M2

Bomolocha palparia (Wlk.)	1-3	Jn,Jy2
Bulla deducta (Morr.) *	2	Jn2
Cataocala amestris Stkr.	2	Jn2,Jy1
Catocala amica (Hbn.)	1,2,3	Jn2,Jy
Catocala andromedae (Gn.)	1,2	Jn2,Jy1
Catocala cerogama Gn. *	2	Jy1
Catocala coccinata	2	Jn2,Jy2
Catocala crataegi Saunders	2	Jy1
Catocala dejecta Stkr.	2,3,4	Jn2,Jy2,A
Catocala epione (Drury)	2	Jn2,Jy1
Catocala gracilis Edw.	1,2	Jn2,Jy1
Catocala ilia (Cram.)	1,2,4	Jn,Jy1
Catocala lacrymosa Gn.	2,3	Jy2,A
Catocala micronympha Gn.	2	Jn2,Jy1
Catocala palaeogama Gn. ?	4	A
Catocala residua Grt. *	1	Jn2
Catocala retecta Grt.	2,3,4	A
Catocala ulalume Str.	2	Jy1
Caenurgia chloropha (Hbn.)	2	Jn2
Caenurgina erechtea (Cram.)	2,4,10	M2,Jn
Callopistria mollissima (Gn.)	1	M2
Cerma cerintha (Tr.)	3	Jy1
Charadra deridans (Gn.)	2	Jy1
Chrysanympha formosa (Grt.) *	1	M2
Chytonix palliatricula (Gn.)	1,2,4,5,7,8	M2,Jn1
Cirrhophanus n.sp.	7	M2
Cobubatha sp.	1	M2
Colobochyla interpuncta (Grt.)	1	M2
Cosmia calami (Harv.)	2	Jy1
Cucullia speyeri Lint. *	4	M2
Elaphria chalcedonia (Hbn.)	4	M2
Elaphria festivoides (Gn.)	1	M2
Elaphria grata (Hbn.)	1,8	M2
Elaphria versicolor (Grt.)	1	M2
Euagrotis illapsa (Wlk.)	1,7	M2
Euclidia cuspidea (Hbn.)	1	M2
Eudryas grata (F.)	2	Jn1
Euparthenos nubilis (Hbn.)	1,5	M2
Feltia subgothica (Haw.)	4	A2
Feltia tricosa (Lint.)	2	A2
Galgula partita (Gn.)	1,5,8	M2
Hemeroplanis scopulepes (Haw.)	1	Jn2
Hemeroplanis sp.	7	M2
Homohadena infixa (Wlk.)	2	Jn
Homophoberia apicosa (Haw.)	1,4	M2
Homorthodes furfurata (Grt.)	1,4	M2
Hyperstrotia secta (Grt.)	1,2,4,5	M2,Jy2
Hyperstrotia villificans (B. & McD.)	1	M2
Hypsoropha hormos Hbn.	1,2,4	M2,Jy2,A2
Hypsoropha monilis (F.)	1	M2
Idia aemula Hbn.	2-4,10	M2,Jn,A
Idia americalis (Gn.)	1-4,5,8	M2,Jy2
Idia lubricalis (Gey.)	2,4	M2,Jn2
Idia rotundalis (Wlk.)	1,2	M2,Jy1
Iodopepla u-album (Gn.)	1	M2
Isogona tenuis (Grt.)	1	M2
Lacinipolia anguina (Grt.)	1	M2
Lacinipolia lorea (Gn.) *	2	Jn1
Lacinipolia renigera (Steph.)	1,4,7,8	M2
Ledaea perditalis (Wlk.)	1	M2
Lesmone detrahens (Wlk.)	1,4,5	M2
Leucania sp.	1,10	M2,Jn1
Leuconycta n. sp.	2	Jn2
Lithacodia carneola (Gn.)	1	M2
Lithacodia concinnimacula Gn. *	1,8	M2
Lithacodia muscosula (Gn.)	4	M2
Marathyssa basalis (Wlk.)	4	M2
Marathyssa inficita (Wlk.)	1,4,8	M2
Metalectra discalis (Grt.)	1	M2
Mocis texana (Morr.)	1-4,7	M2,Jy2,A2
Nedra ramosula (Gn.)	2,4	M2,A1
Nola pustulata (Wlk.)	1,7	M2
Ogdoconta cinereola (Gn.)	1,3,4	M2,Jy2
Ozarba nebula B. & McD. *	1	M2
Paectes abrostoloides (Gn.)	1	M2
Paectes flabella (Grt.)	1,4	M2
Paectes oculatrix (Gn.)	1	M2
Palthis angulalis (Hbn.)	1,3,4	M2,A2
Palthis asopialis (Gn.)	1,5,10	M2
Pangrapta decoralis Hbn.)	1-4,10	M2,Jn,A1
Panopoda carneicosta Gn.	1-7	M2,Jn-A
Panopoda rufimargo (Hbn.)	1,2,4,5,10	M2,Jn,Jy1,A
Parallelia bistriaris Hbn.	1	M2,Jn2
Peridroma saucia (Hbn.)	1,2,4-6,10	M2,Jn
Phalaenostola larentioides Grt.	10	Jn1
Phosphila miselioides (Gn.)	1,2,4,5,10	M2,Jn
Plathypena scabra (F.)	1,2,5,8	M2,Jn2,A
Platysenta sutor (Gn.)	5	M2
Platysenta vecors (Gn.)	1-4,8	M2,A
Plusiodonta compressipalpis Gn.	3,4	Jy1,A2
Polia detracta (Wlk.)	1,2,3,4,5,10	M2,Jn1
Polia latex (Gn.)	1	M2
Polychrysia morigera (Hy. Edw.) *	8	M2
Polygrammate hebraeicum Hbn.	1,5,7	M2
Protolampra brunneicollis (Grt.)	1,2,4	M2,Jn,Jy1
Protoperigea n.sp.	1,4	M2
Pseudaletia unipuncta (Haw.)	2,3,4,5	M2,Jn1,A2
Rachiplusia ou (Gn.)	2,6	Jn2
Renia fraternalis Sm.	1,4,7,9	M2
Rhynchagrotis sp. nr. cupida (Grt.)	2	Jn2
Scolecocampa liburna (Gey.)	2,3	Jn,Jy1
Spiloloma lunilinea (Grt.)	4	A2
Spodoptera ornithogalli (Gn.)	1,2,3,4,5,8	M2,Jn,Jy2
Spragueia leo (Gn.)	2	Jn2,Jy1
Tarachidia candefacta (Hbn.)	1	M2
Thioptera nigrofimbria (Gn.)	1,3,5	M2,Jy2
Tricholita signata (Wlk.)	3	A1
Xestia dolosa Franc.	1	M2
Zale aeruginosa (Gn.)	1	M2
Zale horrida Hbn.	1	M2
Zale lunata (Dru.)	1,2,5	M2,Jn2
Zale minera (Gn.)	1,2,3	M2,Jn2,Jy2
Zale undularis (Dru.)	1,2,6	M2,Jn
Zale unilineata (Grt.)	1	M2
Zanclognatha cruralis (Gn.)	1,4	M2
Zanclognatha jacchusalis (Wlk.)	1	M2
Zanclognatha obscuripennis (Grt.)	4	M2
Zanclognatha pedipilalis (Gn.) *	1,10	M2,Jn1
Zanclognatha n. sp.	2	Jn2
NOTODONTIDAE		
Datana angusii G. & R.	3	Jy2
Datana ministra (Drury)	4	A2
Ellida caniplaga (Wlk.)	3,6	Jn2,A1
Furcula borealis (Guer.-Meneville) *	2	A2
Heterocampa biundata (Wlk.)	2,3,10	Jn,Jy1,A1
Heterocampa obliqua Pack.	1,2	Jn2,A1
Heterocampa umbrata Wlk.	1	M2
Hyperaeschra georgica (H.-S.)	1,2,4	M2,Jn2,A
Lochmaeus bilineata (Pack)	1,3	M2,A1
Lochmaeus manteo Doubleday	3,4	M2,A1
Macrurocampa marthesia (Cram.)	1,2,4	M2,Jn1,A
Nadata gibbosa (J.E. Smith)	1,5	M2
Nerice bidentata Wlk.	3	Jy1,A1
Oligocentria lignicolor (Wlk.)	4	M2
Oligocentria semirufescens (Wlk.)	2	Jn1,A2
Peridea angulosa (J.E. Smith)	2,5	M2,Jy,A
Peridea basitriens (Wlk.) *	3,7	M2,A2

Schizura leptinoides (Grt.)	1,2	M2,Jy1
Schizura unicornis (J.E. Smith)	4	M2
SATURNIIDAE		
Actias luna (L.)	1,2,4	JN1,A
Anisota stigma (F.)	3	Jy2
Antheraea polyphemus (Cram.)	2,3	Jn1,Jy2
Automeris io (F.)	1	Jn1,A
Citheronia regalis (F.)	3	A2
Eacles imperialis (Drury)	2,3,4	A
Hyalophora cecropia (L.)	2	Jn1
SPHINGIDAE		
Darapsa myron (Cram.)	2,3,6,10	Jn2,Jy2,A
Darapsa pholus (Cram.)	1,4	Jn1
Deidamia inscripta (Harr.)	1	Jn1
Laothoe juglandis (J.E. Smith)	2,4,5	M2,Jn2,A2
Paonias astylus (Drury) *	1,2,4	Jn2,A
Paonias excaecatus (J.E. Smith)	5,9	M2
Paonias myops (J.E. Smith)	1	Jn1
Smerinthus jamaicensis (Drury)	1	Jn1
Sphinx chersis (Hbn.)	4,6	Jn2

LITERATURE CITED

ALLEN, ROBERT, T. 1991. The biota of Magazine Mountain (I): an outline of the natural history of Magazine Mountain. Proc. Ark. Acad. Sci. (In Press.)

BLANCHARD, A., J.E. GILLASPY, D.F. HARDWICK, J.W. JOHNSON, R.O. KENDALL, E.C. KNUDSON, and J.C. SCHAFFER. 1985. Checklist of lepidoptera of the Rob and Bessie Welder Wildlife Refuge near Sinton, Texas. Southwestern Entomol. 10:195-214.

COVELL, C.V., JR. 1984. A field guide to the moths of eastern North America. Peterson Field Guide Series. Houghton Mifflin Co., Boston, 496 pp.

HODGES, R.W., *et al.* [Editors]. 1983. Checklist of the Lepidoptera of American North of Mexico. *in* E.W. Clssey Ltd., London, and Wedge Entomological Research Foundation, Washington, D.C. xxiv + 284 pp.

PROFANT, D. 1989. (1990). The lepidoptera of a central Florida sand pine scrube community. J. Res. Lepid. 28:37-74.

PROFANT, D. 1991.An annotated checklist of the Lepidoptera of the Beaver Island Archipelago, Lake Michigan, Great Lakes Entomol. 24:85-97.

RINGS, R.O. and E.H. METZNER. 1989. A preliminary checklist of the Lepidoptera of Michigan State Forest and Mohican State Park, Ashland County, Ohio. Ohio J. Sci. 89:78-88.

TIETZ, H.M. 1951. The Lepidoptera of Pennsylvania. A Manual. Pennsylvania State Coll., Agric. Exp. Sta. 193 pp.

ZIMMERMAN, E.C. 1978. Insects of Hawaii. Vol. 9, Microlepidoptera, pt. 1. University Press of Hawaii, Honolulu, vii + 881 pp.