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BOOK REVIEWS

THE MOTHS OF AMERICA NORTH OF MEXICO. The Wedge Entomological Research Foundation, Washington, D.C. (Distributed by the Wedge Entomological Research Foundation, % National Museum of Natural History, MCR-127, Washington, D.C. 20560; E. W. Classey Ltd., P.O. Box 93, Faringdon, Oxfordshire SN7 7DR, England; Bioquip Products, 17803 LaSalle Ave., Gardena, California 90248; Entomological Reprint Specialists, P.O. Box 77224, Dockweiler Station, Los Angeles, California 90007.)

Fascicle 18.1. Geometroidea, Geometridae (Part), by Douglas C. Ferguson. 1985. 131 pp., 4 color pls. Soft cover. $55.

The appearance of this fascicle of "MONA," as Richard B. Dominick affectionately dubbed it, is unique. It is a memorial fascicle in which intimate details of Dick's life, personality, and contributions to lepidopterology as founder of this series are presented most touchingly by his widow, Tatiana. This, with a full-page portrait of Dick, precedes the paginated body of the work.

Also, this fascicle is the first covering "macros" since the Lymantriidae volume in 1978, and is also the first to treat a subfamily of Geometridae.

Ferguson's treatment consists of nomenclatural and descriptive introduction to the subfamily Geometrinae, leaving superfamily and family material as headings followed by "(continued)," thus anticipating placement of Archearinae, Oenochrominae, and Ennominae ahead of the greens in phylogenetic order. We can expect superfamily and family treatments in a later fascicle.

Tribal and generic descriptions follow, each with a key to the next lower category. Species, and where appropriate, subspecies, are painstakingly described, with illustrations of wing venation and genitalia adding greatly to the usefulness of descriptions. In addition to the bibliography, there are appended abbreviations for contributing collections and individuals, an animal-name index, and a plant-name index.

This work is based primarily on Ferguson (1969, A revision of the moths of the subfamily Geometrinae of America north of Mexico [Insecta, Lepidoptera], Bull. 29, Peabody Museum, Yale University)—a publication based on his doctoral dissertation. Since publishing that work, Ferguson has made some changes, most of them introduced in R. W. Hodges, ed. (1983, Checklist of the Lepidoptera of America north of Mexico, The Wedge Entomological Research Foundation, Washington, D.C., 284 pp.). These include *Synchlora albolineata* and *S. liquoraria* treated as subspecies of *S. aerata*; three new synonyms for *S. frondaria*; *S. frondaria denticularia* reduced to synonymy of *S. frondaria frondaria*; *S. xysteraria* (Hulst) applied to the Florida moths treated as *S. gerularia*, a similar species reaching North America only in southern Texas; *S. herbaria hulstiana* reduced to synonymy of *S. herbaria*; *Merochlora* synonymized to *Chetoscelis* (not indicated as new synonymy in the Checklist); exchange of position of *Xerochlora* and *Chloropteryx* (the 1969 work had *Xerochlora* first); addition of *Hemithia aestivaria* (Hbn.), a European introduction discovered in Canada in 1979; and elevation of *Hethemia pistasciaria insecutata* from synonym to subspecies status, with *auranticolorata* as its synonym. In addition, the 1985 fascicle elevates former synonym *remotaria* (Wlk.) to replace the name *latipennis* Hulst—a correction from the 1969 treatment in which *remotaria* was attributed to Grossbeck.

The text abounds in small refinements and improvements over the revision, and reduction in details that a formal revision normally includes. Ranges and other information are improved for some species. I found partial life history information available for 8 species of the 76 in our fauna for which none appeared in the earlier work. An example of range extension is that of *Nemoria tuscarora* Ferguson (1969:61), once known only from Appalachian North Carolina, Virginia, and West Virginia, now known from north-central Kentucky with flight date extending into August from the 27 July limit stated earlier. Likewise, the ranges of *N. saturiba* Ferguson and *N. elfa* Ferguson are extended northward by addition of Kentucky records in the fascicle.

Genitalia and other line drawings are copious and well rendered, and the delicate patterns and pastel colors of the moths on the four plates are appealing. Several years

elapsed between photography of the plates and their production for the book, however; some moths appear more grayish green or duller than specimens with which I compared their published likenesses. Having had similar disappointments with color registry, I am sure Ferguson must be equally disappointed that the lovely green colors did not come out as well in production as one would wish.

This is a well written and illustrated book which enables one to identify usually by superficial features the North American Geometrinae. It also contains considerable information additional to that in Ferguson's earlier revision, plus variation represented in the color plates by multiple illustrations of some species (six of *N. elfa*, for example). It is a worthy addition to the MONA series, and a fitting fascicle to commemorate the life and contributions of Dick Dominick.

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Fascicle 7.1. Gelechioidea, Gelechiidae (Part), Dichomeridinae, by Ronald W. Hodges. 1986. 195 pp., 4 color & 34 monochrome pls. Soft cover. $70.

This volume presents the first revision of any large group of North American Gelechiidae in contemporary times, and as such, it brings welcome order to part of a family of small moths whose classification is chaotic at best. The fauna covered is small, however, in relation to the size of the family: 84 species out of possibly 1500+ on this continent. Three genera are recognized (one is monobasic), with most species (74) placed in *Dichomeris*. How confused the group was previously is reflected in the 81 generic synonyms under *Dichomeris*, 60 of which are new or revised. The generic synonymy will prove especially useful because it is worldwide in scope. Also noteworthy in the treatment of one genus, *Helcystogramma*, is a list of extralimital (non-North American) species. Unfortunately, a similar list is not included for the larger genus *Dichomeris*, presumably for reasons of length (it includes several hundred species worldwide). The number of new species, 42 or 50% of taxa treated, is a fair reflection of how poorly North American gelechiids are known.

Because this is the first MONA fascicle to treat gelechiids, family and subfamilies are defined. Only three subfamilies are recognized, with Gelechiinae being vastly enlarged to include the majority of our gelechiids. It is quite probable that this assemblage of taxa comprising several thousand species worldwide is defined by primitive character states, and that it will eventually be broken up into monophyletic units. Nevertheless, Hodges must be praised for attempting to delineate precisely the notoriously ill-defined higher categories of gelechiids.

Keys based on external features are given for *Dichomeris* and *Helcystogramma* species. They do not permit the separation of all species, however, because several species are distinguished with certainty by genitalia only. This is an unavoidable fact of many microlepidoptera groups, at least until distributions and natural histories become better known. For *Dichomeris* species, there are also keys based on male and female genitalia.

Species descriptions are lengthy and detailed. They could have been shortened to conserve space and improve readability by deleting unnecessary details of color. For many species, genitalia receive only a brief reference to a figure. It would have been more useful to give distinctive, comparative features because of their importance for species separation. Perhaps this was omitted on account of lepidopterists who dislike or are unable to make genitalia preparations. However, it is likely that whoever is interested in these small moths will also get involved in the techniques required for their study. This notwithstanding, omission of genitalia comparisons partly defeats the purpose of including plates showing genitalia of all species treated because the reader is often left trying to figure out what detectable differences in the figures have taxonomic value. Systematists with a phylogenetic bent will be pleased to find a table of character states that covers 38 characters, albeit nonpolarized, for the 20 species groups of *Dichomeris*.

The four color plates are stunningly sharp—an improvement over previous fascicles