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BOOK REVIEW

OWLET CATERPILLARS OF EASTERN NORTH AMERICA. David L. Wagner, Dale F. Schweitzer, J Bolling Sullivan & Richard C. Reardon. 2011. Princeton University Press, 576 pp., soft cover, 8 by 10.

You may be wondering what an owlet caterpillar is, since "owlet" is not mentioned in some books about insects. It is a general name for moths in the family Noctuidae and is nicely defined by Marshall (2006) as: "nocturnal moths are sometimes called owlet moths (*noctua* means owl in Latin) because of the way their eyes pick up and reflect the smallest amount of light, shining brightly in contrast with the usually inconspicuous body and forewings".

This is an outstanding compilation/contribution for anybody who needs to try to identify an owlet (noctuid) caterpillar in the area east of the $100^{\rm th}$ meridian. It covers 815 species, with 2250 excellent color photos of all larvae and many adults, sometimes with photos of multiple color or pattern variations. In addition, on the same page(s) nearly 400 species have photographs of spread and/or naturally resting adult moths. There are also 89 face-on photos of Catocala underwing heads showing the diverse and highly variable patterns, and 15 of Spodoptera cutworm heads showing variations.

The introduction is 37 pp. and covers about everything you might want to know, including importance, morphology, collecting and rearing/feeding both caterpillars and adults, baiting, bait trapping, obtaining pairings and eggs, over wintering caterpillars and pupae, preservation and voucher data, natural enemies and natural history, and classification and nomenclature,. The rest of the book includes selected keys, identification and diagnoses of the 815 species, a glossary, cited literature, a foodplant index and species and subject indexes.

I have used "Noctuidae" as the family name in the beginning of this review, and although there is still a lot of discussion/disagreement/flux as to what families are in the superfamily Noctuoidea, this book uses the annotated checklist of LaFontaine and Schmidt (2010), which recognizes the owlet families with quadrifid forewing venation as the Notodontidae (not covered here, but in Wagner 2005), the small families Doidae and Euteliidae, and the large family Erebidae (154 pp). Included as subfamilies in the Erebidae are the former families Lymantriidae and Arctiidae which are not covered in this book, but are covered in Wagner (2005). The rest of the owlets in the Noctuoidea are trifid veined and are placed in the very large family Noctuidae (339 pp.)

There is a full page of introductory information about how things are covered in the beginning of the book. For each fully covered species the common name is given, followed by the scientific name without the author. When available, common names recognized by the Entomological Society of America are usually used, but the authors have coined their own common names for species with no known common name, and replaced others that they deemed inappropriate with new names. The following text is grouped into 4 sections which include a wealth of information: Recognition, Occurrence, Common Foodplants and Remarks.

Nearly all of the excellent photos are lateral views of last instar living caterpillars. Most of them are larger than life size, with the last instar length given in the Recognition section. Many times there are additional photos of other larval views or forms that are closer to life-size. Most of the photos of adults are "typical noctuid" sizes, but there are some that in life are very large or small where the adult wingspan would have been useful, especially for those users who are not familiar with them. One good example is the adult Black Witch where the size of the White Witch is given (may exceed 30 cm.), but the photos of both the spread and resting Black Witch is about the size of most noctuids in the book (4-5 cm.). The actual size of a spread Black Witch is closer

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to 15-18 cm.). In addition, the photo of the caterpillar is quite large, but the length of the larva is not given as it almost always is for other caterpillars. The other extreme is the small ones like the Southern Spragueia where the larva is listed as under 2 cm. but the adult is 5 cm., or where the caterpillar of the Gulf Lichen Punkie is under 1 cm., but the adult is 5 cm.

In summary, this is an excellent reference for anybody who wants or needs to try to identify an "owlet" caterpillar and find out much other information, but you should also have at hand a copy of Wagner's Caterpillars of Eastern North America to help in identifying caterpillars like the Notodontidae, Arctiidae, Lymantriidae and others that are not covered in this book. It is also not a field guide, being twice as large and heavy as the above mentioned guide.

Literature Cited

- **LaFontaine**, **J. D. and B. C. Schmidt. 2010**. Annotated check list of the Noctuoidea (Insecta, Lepidoptera) of North America north of Mexico. *ZooKeys* 40: 1-219.
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