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The Moths and Butterflies of Great Britain and Ireland Volume 4, Parts 1 and 2, edited by A.Maitland Emmet and John R. Langmaid (2002). Harley Books, Colchester. 326+251pp, 95+63 figs, 146+161 maps, 7+6 col. pls. ISBN (Part 1) 0-946589-66-6 (hardback), 0-946589-72-0 (paperback). ISBN (Part 2) 0-946589-67-4 (hardback), 0-946589-73-9 (paperback). Price of hardback edition Part 1 £80, Part 2 £80, 2-part set £150
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These are probably the most important and, in my opinion, the best volumes yet to be produced in this monumental series. Part one deals with the microlepidoptera families Oecophoridae, Ethmiidae, Autostichidae, Blastobasidae, Batrachedridae, Agonoxenidae, Momphidae, Cosmopterigidae and Scythrididae, while part two deals with the large family Gelechiidae. Prior to the publication of these books, the only English language work to provide a guide to the identification of a few of these groups was a slim volume entitled 'Illustrated Papers on British Microlepidoptera', published by the British Entomological and Natural History Society in 1978. Although these moth groups may be unfamiliar to biology curators other than specialist entomologists, a brief perusal of the superb colour plates should be sufficient to engender an enthusiasm for these beautiful little insects, many of which are quite common in gardens and other urban situations.

Part one appropriately commences with a publisher's foreword in the form of a tribute to Maitland Emmet who sadly died shortly before these volumes were published. This remarkable man only took up a serious interest in the Microlepidoptera after retirement but rapidly became an acknowledged expert on the leaf-miners. He contributed to the first volume, published in 1975 and shortly afterwards became co-editor and subsequently senior editor of the series on which he worked tirelessly until his 93rd year. The preface makes the point that there is now a wider interest in our microlepidoptera and that today's lepidopterists tend to be field workers rather than collectors. There has consequently been a huge increase in recording, due largely

to the efforts and enthusiasm of people such as Maitland.

In the tradition of this series, the volume starts with a chapter covering an aspect of Lepidoptera biology, in this case a fascinating study of 'The ecology and evolution of lepidopteran defences against bats' by J. Rydell and M.R.Young. This well illustrated chapter describes the different types of echolocation used by bats and the bat-detecting ears and evasive tactics employed by moths. In a section on streetlights, the possible impact of the recent increase in the number of such lights (which emit a considerable proportion of ultraviolet light) is discussed. The conclusion is that the number of moths caught by bats at street lights may be considerable, although they are mainly males. It would be interesting to know if a similar situation occurs with mercury vapour light traps, particularly those that are run on a daily basis.

The main body of the two volumes provides a systematic treatment of the families, genera and species, with checklists, keys and individual species treatments. This is a multi author work with authoritative contributions from no less than ten acknowledged experts on the various groups. As in previous volumes, each species is covered comprehensively, with a detailed description of the adult, life history and distribution, illustrated by a map. Similar species are mentioned and distinguishing features listed. In many cases, line drawings of diagnostic characters or larval feeding behaviour are provided. Every species is illustrated in colour in a superb series of plates by the distinguished entomological illustrator Richard Lewington. Moreover, the male and female genitalia of all species are illustrated by a series of excellent, clear line drawings by Michael J.Roberts. This is the first volume to have the genitalia so comprehensively illustrated and this is an immense step forward as genitalic examination is frequently the only way of identifying difficult species and particularly specimens where the scales are rubbed.

Inevitably in a book of this nature, a number

of minor errors have crept in, some of which are noted on an enclosed erratum slip. However, the publishers have subsequently produced a further sheet of addenda and corrigenda (including a corrected distribution map for *Aristotelia subdecurtella* which in fact was a repeat of the distribution map for *Metzneria aestivella*, erroneously inserted by the printer while making a late correction). This will be included with the paperback edition but those who already have copies of the hardback should request a copy from the publishers.

Although these volumes are fairly costly, they are good value for money, considering the quantity and quality of information that they contain, and are unlikely to be superseded for generations to come. They should be in every lepidopterist's library and deserve a place on the reference bookshelf of all museums that profess an interest in the British and Irish fauna.

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