BOOK REVIEWS

BRITISH PYRALID MOTHS. A GUIDE TO THEIR IDENTIFICATION, by Barry Goater, 175 pp., col. frontispiece, 8 col. pls., 12 text figs. Harley Books, Great Horklesley, Colchester, Essex CO6 4AH, England. Distributed by Apollo Books, Lundbyvej 36, DK-5700 Svendborg, Denmark.

This is an admirable work, a happy combination of excellence and meticulousness by author, illustrators, and publisher who clearly kept the user uppermost in mind. It meets its primary stated purpose, identification, by illustrations and descriptions. It deals with 208 species but there are 264 individual color photographs of the moths, by Geoffrey Senior, supplemented by 58 drawings by Robert Dyke of genitalic and other characteristics of closely related species, and by structural diagrams. The descriptions of the distinguishing features of the species are concise. There are no keys, which anyway are too often inadequate excuses for failures to provide adequate figures, and they are neither needed nor missed.

This book is more than merely a competent and overdue aid to identifications. More than most works of its kind it gives information on the distributions (including Ireland and the Channel Islands), habits, behavior, life histories, foodplants (with a separate index to these), and collecting histories, reflecting the wide natural history interests of its author. Such information is of value in indicating what is not known and thus needs to be found out. The early stages of such common species as *Crambus pascuella* and *Scoparia ambigualis* are still undescribed. Species such as *Scoparia ancipitella* and *Crambus ericella* which have northerly distributions in Great Britain should be found in Ireland. Are the three alpine species that were recorded from the mountains of Scotland or northern England in Victorian times and not since then natives that await rediscovery? Why does Ostrinia nubilalis feed exclusively on Artemisia in Britain?

In the 35 years since the publication of the previous book on these moths, the number of known British species went from 174 to 208. Eighteen, perhaps 20, of the 34 additions were introduced species, 11 of them on aquatic plants, and most of the remainder on stored food products. About 10 were previously unrecorded migrants or vagrants from continental Europe. Only two, and perhaps a third, were apparently previously overlooked natives. These additions are in part offset by the dozen or so species that were recorded in the 19th century but not since. Some of these may yet be rediscovered: the only British records for *Acigonia cicatricella* are 100 years apart.

Changes in the abundance of individual species during the past 35 years are noteworthy. Increases have been of a few established immigrants and introduced species. Some decreases clearly were from human activities: improvements in farming hygiene that have been detrimental to the barn-inhabiting or hay-feeding Aglossa spp. and Pyralis lienigialis, in bee-keeping to Galleria mellonella, and perhaps in hedge cutting to Numonia advenella, which likes old, uncut hawthorns. The decline in the extent of chalk downlands, and the damage by visitors and developers to sandy coastal areas may be primary reasons for decreases in at least five species of those habitats.

Whether or not weather changes have had significant effects is not clear. It may not be coincidence, however, that the 30 or so species that inhabit relatively dry situations, as on sandhills or sandy or chalky soils or limestone pavement, appear as a whole to be more local and less common where they occur than the inhabitants of wet situations; or that the two migrants that became established within the last 35 years, *Phlyctaenia perlucidalis* and *Ancylosis oblitella*, like damp situations, whereas the one species that has not been found since 1960, *Eurhodope cirrigerella* (incidentally, a generic name not in the index) is believed to require hot, dry summers. In any event, the fact that so many species are capable of flying across the English Channel, and much greater distances to Ireland, is one indication of how quickly a long-term weather change could be followed by changes in the lepidopterous fauna of Britain. The publisher's advertisement on the book-jacket states that Mr. Goater had to be persuaded to write this book. Whoever did the persuading deserves our thanks and congratulations.

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NORDEUROPAS PYRALIDER, DANMARKS DYRELIV. Bind 3, by Eivind Palm. Fauna Bøger, København, Denmark, 287 pp., including 8 color plates, 264 black and white figures, and distribution maps of 219 species, 1986. Distributed (as well as volumes 1 and 2 of the series) by Apollo Books, Lundbyvej 36, DK-5700 Svendborg, Denmark. Price: Danish Kroner 400.00 + postage (15% discount for subscribers to the series).

This useful Danish-language book invites comparison with the almost simultaneously published British Pyralid Moths, by Barry Goater. Palm's book deals with a larger fauna-219 species actually recorded from Fennoscandia and immediately adjacent parts of the Netherlands, North Germany and Poland, with brief notes on some 50 more species that might be expected, compared with 209 species, including accidentals and greenhouse pests, on the British list. However, several species on the British list are not represented in the present treatment. On the whole the treatment of species is more extensive in this book than in Goater's: the distributional information is more detailed and is supplemented by dot maps of distribution in the region and more detailed maps of the distribution in Denmark of species that occur there. For anglophone readers there is a "Summary' paragraph for each Danish species, in which geographical distribution in Denmark, habitat, and times and months of flight are briefly stated. Though this courtesy will be appreciated, one wonders why a similar summary was not given for the non-Danish species as well. The numerous black and white figures of genital and other structures and of wing patterns will be useful in distinguishing close species. The color plates are clear, neat, and satisfactory for recognition, but have not achieved the brilliance of those in Goater's book. Palm has picked up some late species synonymy that was missed by Goater, but otherwise the two classifications are extremely close, a fact that will be a blessing for European lepidopterists. Nordeuropas Puralider is convenient in size and attractively produced. It has few blemishes, but there is some typographical confusion on line 2 of the captions for Figs. 205-210.

Language and geography will in large part determine the readership of these two books, but the specialist in Pyralidae and the general student of North European moths ought to have both. As a reference for purchase by libraries, museums and universities, *Nordens Pyralider* can be recommended heartily.

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