BOOK REVIEWS

CLEARWING MOTHS OF AUSTRALIA AND NEW ZEALAND (LEPIDOPTERA: SESIIDAE), by W. Donald Duckworth and Thomas D. Eichlin. 1974. Smithsonian Contributions to Zoology, no. 180. 45 p. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price: $1.70 U.S.

This is the first taxonomic treatment of the Australian Sesiidae since Gaede's 1933 enumeration of the World fauna in Seitz, and the 1925 World list of Dalle Torre and Strand in *Lepidopterorum Catalogus*. The only previous revisions of the Australian species were by A. J. Turner in 1917 and 1922.

The present revision recognizes 14 species from Australia, including the introduced pest species *Synanthedon tipuliformis*. Only the introduced S. *tipuliformis* is known from New Zealand. One Australian species is described as new and the fauna is assigned to six genera. Eight names represent new combinations in three genera *Pennisetia* Dehne, *Albuna* Edwards and *Carmenta* Edwards, which have not previously been included in the Australian fauna. The two genera *Lophocnema* and *Diapyra*, described as endemic by Turner, have been treated as synonyms of *Pennisetia*. The authors discuss the taxonomic history, morphology, biology and geographical distribution of the family. They conclude that the Sesiidae have invaded Australia relatively recently with a minimal development of endemism, and that most of the Australian species will ultimately be found to occur in neighbouring areas to the north.

As the authors state, the Australian Sesiidae have been seriously neglected and are poorly represented in collections; few species have been reared from the larvae. This up-to-date and well documented taxonomic treatment should do much to interest Australian lepidopterists in the group and to encourage them to search for both adult and immature stages. Although no endemic species are known from New Zealand, careful field work in the far north of the North Island could yield new discoveries.

This revision is well illustrated by photographs of the adults and line drawings of the male and female genitalia, wing venation, and morphological details of the head. Maps show the localities referred to in the text. It would have been useful to Australian workers if the numbers of specimens examined in each species had been indicated, together with the label data and the repository of non-type specimens. Although relatively small, the number of specimens studied must have greatly exceeded that of previous workers. The revision appears to be largely free of inadvertent errors, and only three have been noted. On page 18, column 1, line 25, "Bernard" should read "Barnard," and on page 18, column 1, line 39, "western" should read "eastern." Finally in Maps 1 and 6, *Carmenta chrysophanes* is shown to occur at a point well within the Eyrean faunal province. If this point represents Canberra, where the species is stated to occur, it is too far north and too far inland; Canberra is in fact in the Bassian province.

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THE SESIIDAE (LEPIDOPTERA) OF FENNOSCANDIA AND DENMARK, by M. Fibiger and N. P. Kristensen. 1974. Fauna Entomologica Scandinavica, vol. 2, Scandinavian Science Press Ltd., Gadstrup, Denmark, Contents + 85 p., 144 figs., including line drawings, 28 color illus., and 34 black and white photographs. Price: 40 D.kr.

Though the faunal coverage indicated by the title includes 17 species, 8 species not known to occur in Scandinavia are also treated. According to the Introduction

it is the editorial policy of the Series to give full treatment to British species, even though their occurrence in Fennoscandia and Denmark may not be likely. Six species not known from Scandinavia or England are examined, three of which are not known from Northwestern Europe but might possibly reach the eastern edge of Fennoscandia, in the opinion of the authors.

All but the latter three species are illustrated in color. In my opinion this is the only way to properly present adult Sesiidae, not to mention most other Lepidoptera. Many black and white photographs depict various aspects of the behavior of the immature stages and their host plant associations, a useful addition to the biological information. In most studies of this nature only fleeting reference is made to sesiid behavior. The publication points out the value of biological data as it relates to the taxonomy of the group.

This work incorporates the most current ideas on the systematics of Palearctic Sesiidae, particularly ideas found in Naumann's 1971 revision of the Holarctic sesiid genera. Reference is made to Kristensen's original studies on sesiid wing transparency, which has since been published. The authors have added much needed terms for the general hyaline areas on wings of most clearwing moths.

As the authors point out, there will continue to be reinterpretations of higher taxa based on the findings and subjective judgments of other workers, including this reviewer. However, "The Sesiidae of Fennoscandia and Denmark" is a concise, accurate, well-illustrated and modern treatment of a particular faunal area. The *Fauna Entomologica Scandinavica* will be a valuable series of contributions to scientific literature if the quality of succeeding portions can match the quality of this volume.

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CATALOGO DE LOS ROPALOCEROS ARGENTINOS, by Kenneth J. Hayward. 1973. Opera Lilloana XXIII. Fundación Miguel Lillo, Tucumán, Argentina. 318 p. Price: about $3.00 U.S.

As a fitting climax to Kenneth Hayward's years of study of the butterflies of Argentina, we have this posthumously published catalog of the Rhopalocera known to fly there. Hayward had previously published a catalog of the Hesperiidae (1941) and of the remaining Rhopalocera (1950) along with numerous supplements. The present synonymic catalog is a great improvement over the previous works, not only because it combines them into one publication, but because it also includes: (1) where known, larval host plants; (2) distributions in which the provinces are listed circularly clockwise beginning in the northeast, instead of alphabetically, as previously listed; (3) in keeping with modern practice, synonymizing all named aberrations and forms; and (4) a general updating in nomenclature as well as range extensions. Quite a number of new species have been added to the Argentine fauna.

The work varies in quality depending on where the author had concentrated special study. As the higher classification of the butterflies is somewhat subjective, I cannot argue much with the author regarding his rather novel division of the Rhopalocera into five superfamilies (Hesperioidea, Papilionoidea, Riodinoidae (sic), Nymphaloidea, and Danoidea). I would question, however, his placing the Libytheinae as a subfamily of the Riodinidae.

As can be imagined, from an author who published voluminously on the hesperiids, including two mammoth tomes on the Argentine species, the Hesperiidae section is the best. Hayward has closely followed Evans' revision but has felt free to diverge, especially in many cases where Evans placed certain of Hayward's taxa into synonymy. If the hesperiid section is the best, the most deficient areas would be those on the Pieridae and the Lycaenidae. In the Pieridae many subspecies are placed in