

Book reviews

0.2 per cent are attributable to this bat. Of course, these losses are concentrated (in time and locality), when they may be severe. And rabies is not the only vampire-related problem: these bats are also important in initiating outbreaks of surra and the wounds they leave provide access to other micro-organisms and insects, including screw-worm. But it is surprising to read that many of the disease organisms that could potentially be carried by vampires were not found or were of insignificant incidence in the wild. The book also allays common misconceptions about vampires and rabies, such as that the bats cannot be asymptomatic healthy carriers of the virus. A chapter on the control of vampire-borne rabies discusses the pros and cons of various methods, including the potential of oral vaccines, and the strategies for their application.

Vampire-associated problems are of obvious importance, but equal importance is given to other aspects of vampire behaviour: their specialized anatomy, locomotion, social organization, reproduction and feeding behaviour, all contributing to make this one of the most exceptional of animals. Greenhall and Schmidt confess little difficulty in persuading the world's experts in these and other aspects of vampire bat biology to contribute to an invaluable treatise. *Tony Hutson, Bat Conservation Officer, FFPS*

British Red Data Books: 2. Insects

Edited by D.B. Shirt

Nature Conservancy Council, Peterborough, 1987, 402 pp., £10 including postage

The task of selecting from the UK's 22,500 insect species for a RDB must have been daunting. Many species are very poorly known, often both in their status and in their conservation requirements. Thus it took nearly 10 years and 52

many specialists to select 1800 species (15 per cent in the major orders fully covered). As in many such studies the smaller, better known groups come off worst with between 20 and 28 per cent of the Odonata, Orthoptera, butterflies and aculeate Hymenoptera being aculeate Hymenoptera being given RDB status, while large, less well-known groups such as Diptera and Coleoptera include a much lower percentage; that only 0.7 per cent of the micromoths are included indicates the difficulties of identification, rather than the lack of other problems. Even within the well-known groups other species must have come under serious consideration, such as the orthopteran *Stenobothrus stigmaticus*, restricted to one small area of the Isle of Man. Although there may be doubts about its origin, it would appear to fit at least the 'Rare' category and recently to have been promoted to 'Endangered' by threats to its locality. For each order covered lists of species are allocated to the five categories Endangered, Vulnerable, Rare, Out of Danger or Endemic. There are also appendices of species not recorded since 1900. The main body of the text is taken up with species accounts demonstrating a very wide range of problems both for the entomologist-conservationist and for the insects themselves. It is encouraging to note the frequency of existing protection for many sites with included species, but there are also many individual sites under threat. The large number of species and the diversity of pressures makes it difficult to pick out the major areas of concern, although a brief discussion on 18 principal habitats is included.

Meanwhile only 14 British insect species are specifically protected under the Wildlife and Countryside Act 1981.

Tony Hutson, Bat Conservation Officer, FFPS

The Butterflies of Costa Rica and their natural history

P.J. DeVries

Princeton University Press, New Jersey, 1987, 327 pp., HB £37.70

Fifty colour plates illustrate the 543 non-hesperoid butterflies recorded from Costa Rica, Central America. These are accompanied by text for each species, giving size, range, host plants, early stages, adult description and details of habitat and behaviour. There are also 35 text illustrations, many depicting immature stages. Introductory chapters cover the biology and systematics of butterflies with particular reference to the Neotropical fauna and to mimicry, so much a feature of Neotropical butterflies. An appendix of larval host-plant relationships is given and a systematic checklist and bibliography. The photographs are excellent, the text concise and uniform. Although a forceful advocate of collecting as the main means of accumulating information required for conservation, DeVries describes the book as a field guide. Field guides should encourage interest, reduce the need for the taking of specimens from the field and enable a wider range of field studies—there is no reason why this book should not do just that.

Tony Hutson, Bat Conservation Officer, FFPS

Book service

All books reviewed in the Book review pages are available from the address below, except where we supply addresses from which to obtain publications directly. Payment should be made to the NHBS in the following ways: cheques money orders; Visa, Access or Diners' Cards. Please convert dollars at current rate. Please add 10 per cent to orders to cover postage and packing.

Oryx Review Service, Natural History Book Service, 2 Wills Road, Totnes, Devon TQ9 5XN. Telephone: (0803) 865913.

Oryx Vol 23 No 1, January 1989