

returning to my car after this hot, damp adventure in Moxee Bog, I felt an excruciating pain in my foot. Cursing, I tore off my boot and found the vector of my intense discomfort: an Ambush Bug. I had shared *selene's* fate, and came out only slightly better: my foot swelled and throbbed for hours afterward.

Was there ethological significance to the prey-positioning? Do heteropterans usually prey communally when butterflies are the target? I would be most interested in reactions to these questions, and in reports of insect predation on butterflies in general. Thanks be to Dr. Dennis Paulson of the Department of Zoology, University of Washington, and to the library staff of the Royal Entomological Society of London, for aid in identifying the Ambush Bug.

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BOOK REVIEW

SOUTH'S BRITISH BUTTERFLIES, by T. G. Howarth, illustrated by A. D. A. Russwurm and R. B. Davis. 1973. xiii + 210 p., 48 colour plates, 26 drawings, 57 maps. Cased. Frederick Warne & Co. Ltd., London and New York. Price £10.50 UK.

PROVISIONAL ATLAS OF THE INSECTS OF THE BRITISH ISLES: PART 1 LEPIDOPTERA RHOPALOCERA, BUTTERFLIES, edited by John Heath. 1970. iii p., 57 maps. Natural Environment Research Council. Agent: E. W. Classey Ltd., Middlesex, England. Price 50 p. UK.

PROVISIONAL ATLAS OF THE INSECTS OF THE BRITISH ISLES: PART 2 LEPIDOPTERA (MOTHS—PART ONE). LASIOCAMPIDAE: SATURNIIDAE: ENDROMIDAE: DREPANIDAE: THYATRIDAE: SPHINGIDAE: NOTODONTIDAE: LYMANTRIIDAE: ARCTIIDAE: NOLIDAE, edited by John Heath and Michael J. Skelton. 1973. iii + 3 p., 102 maps. Natural Environment Research Council. Agent: E. W. Classey Ltd., Middlesex, England. Price £1.00 UK.

The butterflies of Britain must be the most intensely studied butterfly fauna in the world. The tradition of butterfly collecting is probably stronger there than anywhere else, extending back to the parson-naturalists and other curious people in the eighteenth century, who have had to deal with a fauna of only 61 resident species (fewer than Long Island, and five of them now extinct), 3 regular migrants and a total of 41 assisted and unassisted strays and immigrants. This great band of bug-hunters has successfully recorded the distribution of the butterflies of most of England, about half of Scotland and scattered areas of Ireland; compiled by computer these records provide intensive distribution maps of all 56 residents, plotted on a 10 kilometre grid covering the whole area. Intended as the basis for conservation of dwindling species (they clearly show the decline of many, and the apparent extinction of one moth), these maps, now published provisionally for the butterflies and many of the more spectacular moths, are a triumphant combination of amateur natural history with professional data-processing; they will be of particular interest to the zoogeographer, and invaluable to the collector, observer or photographer, who with the aid of British Ordnance Survey maps or the *AA Book of the Road*, all bearing the same reference grid, can now pinpoint his quarry to within 100 square kilometres. Discreet enquiries with the Nature Conservancy can often produce the exact spot for the really localised species.

The butterfly maps re-appear, considerably improved by new records for the common or secretive species, and for the less scenic parts of the North and Scotland,

in the magnificent re-written version of Richard South's *The Butterflies of the British Isles*. For more than half a century this knapsack-sized, charming but slightly rambling guide has remained the standard work, while many other books, bigger and smaller, came and went. The book now re-emerges as a properly arranged, large-format, popular monograph, the text for each species divided by sub-headings for easy reference, with a fine set of illustrations of the butterflies by A. D. A. Russwurm, and of the eggs, final instar larvae (including a highly magnified seventh segment) and pupae, copied by R. B. Davis chiefly from original paintings by F. W. Frohawk; it is a pleasure to report that the printing of the beautiful Frohawk drawings is far better than in their first production in the two-volume limited edition of Frohawk's *Natural History of British Butterflies* in 1924.

There is no doubt that this will continue as the standard work on the subject, combining as it does the outstanding features of two earlier works with the latest information on the biology of the British species, and showing the influence of new attitudes to lepidopterology which were pointed by E. B. Ford's seminal book *Butterflies*. Some of South's original text from the more leisured world of 1906 is retained. To say of the Small Copper's habit of flying at other butterflies, "Whether these seeming attacks are really due to pugnacity . . . or are merely of a sportive character, is not altogether clear; when the meeting is between two Small Coppers it usually results in a series of aerial evolutions by the pair, so it would seem that there is a good deal of playfulness in the business," sounds strange today (though couched in the jargon of the behavioural sciences it would be little more informative), but it makes pleasant reading. The short section on the history of each species, usually detailing the first discovery of the butterfly in Britain, and including a record of the Painted Lady from 1272, is also great fun. (I have a poser here for lepidopterists: what is the earliest, recognisable picture of a butterfly species? Any advance on the Meadow Brown and Small Tortoiseshell in *The Garden of Delights* by Bosch, ca 1503?)

British collectors, with their small fauna and accessible countryside, have lacked the lure of native rarities (although it is surprising what they missed in Scotland and Ireland), and have tended, like the not so wealthy stamp collector unable to afford the great prizes of philately, to go for "printing errors." The space devoted to these, with their Latin names, is a thought overgenerous (though it will please a good many collectors), but it is good that considerable attention is now given to geographical variation as well. The amateur lepidopterist could well move with the times and become, in the real sense of the word, more conscious of ecology; there are signs that the distribution map scheme is providing a welcome stimulus by making the collection of data for those 3600 grid squares at least as challenging as hunting for mutants. I hope that by the time the next successful edition appears, it will be possible to compile more information on such things as habitat preferences and limits of distribution; there is for instance the marked coastal distribution of the Grayling, which few would have guessed at, and which goes unremarked in the text. I believe that the literature is extensively misleading on some species. Is it true that the Ringlet is a shade butterfly? And then every book I have seen states that the Green-veined White does not occur in cultivated land. Now while it is true that a *Pieris* in a wild place, particularly in Scotland where the other two species are comparatively rare, is overwhelmingly likely to be Green-veined, the reverse is not true: this species was common and co-existed with the others in the gardens and parks of suburban Liverpool when I was a boy. The impossibility of separating British *Pieris* on the wing may have allowed this error to go unchallenged. There is still much to be done on the distributions and voltinism of the two (or one-and-a-half) species of British *Aricia*.

My only qualm about this lovely new book is for the plight of the beginner and the schoolboy, who need a little more help with identifications which are child'splay to Graham Howarth; how does one distinguish the various female Blues and Hair-

streaks at a glance, and for the rank beginner or general naturalist, what distinguishes the Grizzled and Dingy Skippers? Confusion of these last resulted in several incorrect records, now expunged, in the *Provisional Atlas*. The schoolboy (or school-girl, if she is liberated enough to enter this male preserve) might well forego this book till his pockets are larger, and find a second-hand copy of *A Butterfly Book for the Pocket* by Sandars, which despite its amateur illustrations and frankly surrealist distribution maps, did come close to the Peterson identification system. For the visiting American collector, who will already be familiar with some of the species, the choice is between the Houghton-Mifflin *Field Guide* to the European butterflies, and this new work. Outside Britain, one must have the more extensive *Guide*, but "South" will give him far better service on a stay in Britain, for he will not be repeatedly tracking down his specimen to something found only in the Balkans (though in "South" beware the pictures of spectacular rare aberrations). And then there are those detailed maps, which could nearly double one's number of species. Irish and Scottish Americans visiting their homelands should get a set of distribution report cards from the Nature Conservancy as well; the data are badly needed!

And of course, if you have a library of standard works on the world's butterflies, add this one. It is worth every decimalised penny.

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AN INDEX TO THE DESCRIBED LIFE HISTORIES, EARLY STAGES AND HOSTS OF THE MACROLEPIDOPTERA OF THE CONTINENTAL UNITED STATES AND CANADA, by Harrison M. Tietz, 1972. v + 1041 p. in 2 volumes, cloth bound. Allyn Museum of Entomology, Sarasota, Florida. \$25.00. Distributed by Entomological Reprint Specialists, P.O. Box 77971, Dockweiler Station, Los Angeles, California 90007.

This large work of compilation by Harrison Morton Tietz (1895–1963) was intended to provide references to all published information on the early stages of macrolepidoptera for America north of Mexico, being the only index of this nature to appear since Henry Edwards' "Bibliographic Catalogue of the Described Transformations of North American Lepidoptera" (1889, Bull. U.S. Natl. Mus. 35.). Its coverage appears to be reasonably thorough to about 1950, when the author left off his search of the literature to prepare the manuscript. Negotiation with the Smithsonian Institution to publish the work continued for a time thereafter, but final arrangements concerning changes in format, etc., were never completed. The text as now issued is just as it was left by Tietz, although retyped. With the exception of a 2-page introduction by William D. Field and J. F. Gates Clarke, which has the appearance of letterpress printing, the text was reproduced from typed copy by photo offset. The 2 volumes have good quality buckram bindings which in themselves are worth a large part of the purchase price.

The work is divided into two major parts (which do not coincide with the bound volumes). Part 1 contains a list of entomological publications consulted (23 p.), a list of common names of Lepidoptera (33 p.), and the most important section, the list of references to published life history information, indexed alphabetically by species with hosts listed for each (636 p.). Part 2 contains an index of common and scientific names of food plants listed by common names (101 p.), and an index of hosts listed mainly by scientific names, each with a listing of all the species of macrolepidoptera reported to feed on it (221 p.). The work ends with a 12-page list of changes in nomenclature for plant names, giving the old name and the corrected equivalent used in the host index of part 2.

The nomenclature follows rigidly that of the McDunnough check list of 1938, and no effort was made to correct names or revise the manuscript in any way. Admittedly, the up-dating of so large a work would have been a demanding and thankless task for anyone not credited with authorship and would have further