

It is to be hoped that DeVries' book reaches a wider readership today than did Barcant's 18 years ago, and will continue to stimulate and aid those who study the fullness of biological aspects of Neotropical butterflies, and who wish to publish such well illustrated regional accounts in the future. All of these, like the Barcant and DeVries books, should be of immeasurable assistance in biological and ecological studies in the Neotropics, as well as useful and enjoyable to amateurs.

KEITH S. BROWN JR., *Departamento de Zoologia, Instituto de Biologia, Universidade Estadual de Campinas, Campinas, São Paulo 13.081 Brazil.*

Journal of the Lepidopterists' Society
42(3), 1988, 244-245

BUTTERFLIES OF NORTH DAKOTA: AN ATLAS AND GUIDE, by Ronald Alan Royer. 1988. Science Monograph No. 1, Division of Science, Minot State University, Minot, North Dakota 58701. Format 14 × 20 cm, 192 pp., 12 pp. color plates, 1 b/w plate, 30 pp. maps. Plastic spiral binding. Soft cover. \$14.95.

The author has brought together in a single volume a guide and atlas which describes with text, color plates, and distribution maps all 142 species of butterflies known to occur in North Dakota. The book succeeds in fulfilling the author's goal of providing access to the Lepidoptera literature for the state.

The book begins with an Introduction which includes an explanation of the binomial system, North Dakota environments, terminology (wing surface and venation), and scope and use of the book. This is followed by the Guide, which includes a narrative for each species. Each species is introduced with the common and binomial name (including full author name), and corresponding plate number. The Atlas includes a State map with counties named followed by a State map for each species with the counties of record spot marked. There are five maps on the left side of each page with space on the right for notes. Plates are 60% natural size photographs of actual specimens. Opposite each plate, the binomial name, sex, view (dorsal or ventral), collection locality, and date collected are arranged according to how specimens appear in the plate. Next is a Hypothetical and Erroneous Records List followed by a list of names and addresses of lepidopterist organizations and suppliers. The Bibliography follows, then a 121 word Glossary, and finally the Index of Butterflies listed by binominal and common names with page numbers for the Guide, Atlas, and Plate sections.

Some of the nice things about this volume have already been mentioned, but still others are obvious when you pick it up—the sturdy binding and quality paper are suited for years of use. The cover is dominated by a photograph of *Hesperia dacotae* (Skinner), a nice touch. Coverage is complete and you could not ask for more information in the species descriptions. The author follows the 1981 Miller & Brown generic naming system, and there are no taxonomic surprises.

The faults with the book are few considering the wealth of information presented. The map in the Introduction shows only the major life zones. A more detailed map should have named the major rivers, drainage systems, and geographical features. Repeating the named counties map would have been helpful, too. Reading this section makes one feel the book was written for North Dakota collectors already acquainted with the State rather than for collectors who find themselves in North Dakota. The terminology section would have benefited with an explanation of how to distinguish the sexes, and with a generalized diagram of external morphological characters. The chapter might also have included a brief discussion of butterfly evolution, clarifying the hierarchy used in the book. There are no keys except one to the Papilionoidea.

Most of my comments concern the Guide and Plates chapters. The desired information is there, but would have been easier to locate if headings such as Description, Similar

Species, Life Cycle, Flight, Habitat, and Range were inserted in bold type in the text. The text is not cross-indexed except for a Plate number with each species description. The Guide, Atlas, and Plates sections should have included page numbers for the corresponding sections which would have helped tie the chapters together. The color plates are of good quality, and my only change would have been to adjust background colors of Plates II and IV to increase contrast. Illustrated specimens should have been numbered, with those numbers repeated in the Plate legend. This would have helped Plate II, as the extreme example, where 56 specimens are pictured, and searching the legend for the binomial name is tedious. A simple checklist at the end would have been useful to some collectors, or perhaps a box to check by each distribution map.

The faults with the book are few, and my criticisms also apply to a number of other popular books and field guides. This book is a valuable source of information. Whether or not you are ever fortunate enough to collect in North Dakota, this handsome book is a must for the naturalist.

R. D. PETERSON II, *Biosciences Research Laboratory, ARS-USDA, P.O. Box 5674, Fargo, North Dakota 58105.*

Journal of the Lepidopterists' Society
42(3), 1988, 245

THE MOTHS OF BORNEO: SUPERFAMILY BOMBYCOIDEA: FAMILIES LASIOCAMPIDAE, EUPTEROTIDAE, BOMBYCIDAE, BRAHMAEIDAE, SATURNIIDAE, SPHINGIDAE, by Jeremy D. Holloway. 1987. Southdene Sdn. Bhd., P.O. Box 10139, Kuala Lumpur 50704, Malaysia. 199 pages, 20 color plates. Paperback. About \$35.00.

This book deviates from other faunistic treatments by including more detail on phylogeny and ecology, particularly hostplants. The color plates were produced by Bernard D'Abrera, so are predictably of high quality. All known species in these families from Borneo are treated in the text and depicted in color, thus including a considerable portion of the Indo-Australian moth fauna. The text draws from observations and works published in Asia by resident entomologists, and manifests Holloway's own extensive field experience in the region; the result is far beyond what could be produced from study of museum specimens alone. Where new or controversial taxonomic decisions are enacted, the author faithfully provides justification or explanation.

Inclusion of Sphingidae within Bombycoidea is unexpected. Upon reading the discussion of characters to justify this, I was a little disappointed, but apparently seven synapomorphies do link sphingids to other bombycoids. Such a large superfamily, now comprising 13 or 14 families worldwide, makes it difficult to designate nomenclaturally the closer relationships within the group; one wishes for a category between superfamily and family levels (or between suborder and superfamily levels) to remedy the situation. Holloway's discussion of the phylogeny of those families makes the book useful to Lepidoptera taxonomists around the world, even to those who profess no interest in moths of southeastern Asia. The book is well done. I found no typographical errors. I believe those who acquire it will wish to purchase other volumes in the series, most of which are as yet unpublished.

RICHARD S. PEIGLER, 323 *Van Gordon Street, #19-523, Lakewood, Colorado 80228.*