BOOK REVIEWS

CATERPILLLARS: A SIMPLIFIED FIELD GUIDE TO THE CATERPILLARS OF COMMON BUTTERFLIES AND MOTHS OF NORTH AMERICA. by Amy Bartlett Wright. 1993. Peterson First Guides. Houghton Mifflin Company, New York. 128 pp., 54 color plates, several line drawings. Softcover, 9.5 x 18.5 cm, ISBN 0-395-56499-9, $4.95.

Everyone encounters caterpillars every now and then, but even for lepidopterists there hasn't been a quick reference to these interesting and often conspicuous animals. Now there is. This small book is a field guide to the caterpillars of 120 common or characteristic butterflies and moths (57 butterflies and 63 moths, plus 6 additional species represented by close relatives.)

It includes a system of categorizing larvae by overall appearance, along with brief comments about the life cycle, tips for the care and raising of caterpillars, and a generic editor's note by Roger Tory Peterson.

To use this book to identify a caterpillar, one must first assign the larva to one of eleven groups: smooth, smooth with knobs or bumps, smooth with rear horn or tail, smooth with fleshy filaments, sluglike, hairy, hairy with tufts, bristled, branched spines, internal feeders, or structure-building caterpillars. Some specimens may not fall clearly into one of these groups (e.g., "hairy" or "bristled"?), but this categorization works acceptably well. I was disappointed, though, that there isn't an introduction to natural (taxonomic) groups of caterpillars or to the kinds of caterpillars that people know something about. "Hornworms" are a natural group, and there is a brief description of sphingid larvae; however, most everyone knows of "inchworms," but there is no general statement about them, except for a comment buried in one species description about fewer prolegs leading to a looping or inching gait. Skippers are grouped together, but there is no comment about their relatedness, and the same is true for geometrids and lycaenids. Technical taxonomic descriptions are out-of-place in a book like this, but living organisms do fall into clearly recognizable groups, the basis of our taxonomic system, and I think guiding beginners to seeing natural groupings helps them learn about nature.

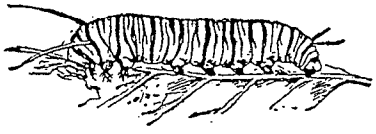
When one writes about only part of a fauna, the selections of species included can range from the most conspicuous and distinctive to representatives of all different groups. Wright chooses some of both. She includes many of the largest and most colorful (e.g., swallowtails), while her choices represent 19 of 22 subfamilies of butterflies and skippers, along with 9 species of sphingids, 11 saturniids, 10 arctiids, 17 noctuids, (only) 3 geometrids, and 4 micros. One may quibble about omitted species, but her selections are reasonable and do provide some western geographic balance to the many eastern species.

There is strong focus on common names. Scientific names appear in the index, somewhat concealed, rather than included with common names in the species descriptions. This de-emphasis is regrettable and reflects "dumbing down," likely due to the publisher more than to the author, and calls into question the audience for the book. More on that later.

Overall, the text has been carefully prepared, with the author appearing to have relied extensively on sources such as Covell's (1984) Peterson *Field Guide to Moths of Eastern North America.* I found few mistakes. The Anicia Checkerspot is labeled *Euphydryas chalcedona* rather than (for consistency) using *anicia* or *chalcedona* for both names (p. 126); clearwing moths are said to have transparent windows in their wings because scales rub off rather than because they don't develop (p. 64); the sense of taste is omitted in describing how females recognize acceptable hostplants (p. 4); and tufts of hairs on caterpillars are referred to repeatedly (e.g., p. 94) as "hair pencils," a term better left to pheromone-producing structures of adults. Also, the notes about foodplants are occasionally misleading (as with Variegated Cutworm and Woolly Bear), and a symbol is missing on p. 12. The art work is accurate for the level of detail given, though colors in the figures sometimes appear brighter than they do in nature. No information is provided about the author/illustrator.

So who will use this book? The fact that it is a Peterson First Guide implies that, like other such small guides, it is intended for children and beginners who will then move to a more comprehensive guide later on (as stated in the editor's note). Of course there is no such field guide to move on to, and the book will find a broad audience precisely because there is no other field guide to caterpillars. This book is needed, and it nestles easily into the broad gap between the token presentation of larvae given at the beginning of most Lepidoptera field guides and the detailed treatment that characterizes technical works such as Stehr's (1987) *Immature Insects.* Despite some missed opportunities to be even better, Wright has done well, and it is a successful field guide. Beginners of all ages will make good use of this book, as will experienced lepidopterists, who want a reference to the wonderful diversity of caterpillars.

Ernest H. Williams
Department of Biology
Hamilton College
Clinton, New York 13323



PAINTED LADIES: BUTTERFLIES OF NORTH AMERICA, by Millie Miller and Cyndi Nelson. 1993. A Pocket Nature Guide. Johnson Books, 1880 South 57th Court, Boulder, Colorado 80301. 64 pp., over 100 watercolor illustrations. Softcover, flexbound, 10.5 x 15.5 cm, ISBN 1-55566-103-3, $5.95.

This charming little book is the ninth addition to the Johnson Pocket Nature Guides (in addition to butterflies, the series to date includes mountain and desert wildflowers, cacti, mushrooms, hummingbirds, eastern and western backyard birds, and raptors). The series is designed to interest and inform nature enthusiasts of natural phenomena by means of watercolor illustrations, as well as to present scientific data on subjects using a hand lettered text reminiscent of artwork of the nineteenth century. This book starts out by providing general information on the order Lepidoptera, illustrating several butterfly and four moth species to show the main differences between moths and butterflies. In fact, the very first illustration in this butterfly book is of a luna moth. The introduction continues by discussing butterfly behavior (puddling, mate locating, mating, thermoregulation) and structure. Other aspects of butterfly biology treated in the introduction include metamorphosis and mimicry. Information on butterfly gardening is also included in the introduction. The field guide aspect of the book follows the introduction with information on about 87 species of North American butterflies. Although only around 10 percent of all North American butterfly species are treated, most of the commonest and more widespread species are illustrated. The guide was apparently designed primarily to treat eastern butterfly species, for only 16 mostly western butterfly species are included. There are five sections to each species' coverage: "Lifestyle" (which usually includes information on timing of broods, overwintering stage, a brief description of ova, larvae, and pupae, and often gives notes on adult behavior), "Favors" (gives details on the preferred habitats), "Host" (lists common larval hostplants), "Nectar" (lists most favored nectar sources), and a small shaded map of the North American continent that gives a general idea of each species' continental distribution. Diagnostic adult characteristics are given where confusion with a similar species is possible. Interesting facts are inserted in the discussion of several species.

As would be expected by the introductory nature of the book, the information given is often based on broad generalities, but where specific facts are given for any species, they are quite accurate. This accuracy comes of no surprise, for Boyce A. Drummond was the scientific advisor to the authors, as can be seen by occasional "B.D." initials scattered throughout the text, and the special mention in the back. The watercolor illustrations vary in quality. Illustrations of the hairstreaks, *Vanessa*, the fritillaries, and the true skippers are excellent, whereas the illustrations of the blues, crescentspots, and anglewings are not as good. The *Thorybes pylades* illustration looks more like a *Cogia* species, but the illustrations of the elfins are among the best I have seen. Several additional illustrations, such as puddling sulphurs, a swarm of *Parnassius phoebus*, and a hackberry butterfly on a child's nose add much charm to the book. Most species are illustrated on their hostplant, or on a favorite nectar plant. Larvae and pupae are also frequently illustrated, usually on the hostplant. A brief bibliography is given at the end, as well as the address of the Xerces Society.

The organization of this book is quite artistic. The book is designed so that the binding is at the top, and the cover opens up as in a wall calendar (rather than to the left as in most books). The book is read from the top of the upper page to the bottom of the lower page. The handwritten text has a distinctive playful tone to it. Frequently, three individuals of each treated species are illustrated somewhere on the page of that species' treatment, separated from each other by text. In a few cases, this organization can be confusing where two similar species are illustrated next to each other, especially when illustrations of one species are on two different pages. To eliminate confusion, the upper and lower page combined should be viewed as one single page.

This attractive book should be useful to any amateur lepidopterist, any naturalist, or anyone who is developing an interest in butterflies. This book appears as if it would be especially good for children. I would also recommend it to any teachers who have students interested in butterflies.

Andrew D. Warren
Department of Entomology
Comstock hall
Cornell University
Ithaca, New York 14853-0999

Naumann, Ian. 1993 (6th edition). CSIRO HANDBOOK OF AUSTRALIAN INSECT NAMES. CSIRO Publications 314 Albert Street, East Melbourne, Victoria 3002, Australia. 193 pages. Softcover, 17.5 x 24 cm, ISBN 0-643-05510-X, $50 Australian in Australia, $50.00 U.S. outside Australia.

The on-again/off-again debate about the utility and validity of common names for Lepidoptera recently resurfaced with the publication in the United States of *The Common Names of North American Butterflies* (1992, edited by Jacqueline Y. Miller; Smithsonian Institution Press, Washington, DC), which was reviewed in the *Journal of the Lepidopterists' Society* by both Raymond White (JLS 46:310-311) and James Scott (JLS 47:170-171). Regardless of those who argue against common names, the general public clearly likes them, and publishers of field guides and other popular books on butterflies usually demand that their authors include them. Thus, common names are here to stay.

In recognition of this fact, *The Common Names* book was published primarily as a concordance to the diversity of common names found in the most widely used butterfly books.

Even more recently, the nascent North American Butterfly Association (NABA) has further advanced the evolution of butterfly common names by forming a Standing Committee on English Names that seeks to "establish the official NABA list of North American Butterfly English names." Drawing on the extensive experience of American birders, NABA formulated its Policy Guidelines for choosing or coining names (see *American Butterflies*, Volume 1, Number 1, pages 21-29) by adopting or adapting relevant policy sections from the *Check-list of North American Birds* (6th edition, 1983) developed by the American Ornithologists' Union (AOU). NABA hopes to complete its list of butterfly common names for America north of Mexico by the end of 1993, but eventually hopes to expand its list to include the butterflies and skippers of Mexico as well.

Given all this activity in the United States, it is instructive to see what other countries have done or are doing about common names. Australia, long recognized for its leadership in conducting national surveys of flora and fauna, has just published the 6th edition of its *CSIRO Handbook of Australian Insect Names*, a much enlarged successor to *Scientific and Common Names of Insects and Allied Forms Occuring in Australia.* Subtitled "Common and Scientific Names for Insects and Allied Organisms of Economic and Environmental Importance," this book covers over 2000 species and nearly 250 families of Australian insects, spiders, mites, and scorpians, and some land-based crustaceans and molluscs, giving for each the correct scientific name, family classification, and common name for all species for which a common name is used. What a task --- and we Americans think that agreeing on common names for butterflies and skippers alone is hard work!

The CSIRO Handbook comprises four lists: (1) an Index of Common Names, (2) an Index of Scientific Names, (3) a Systematic List, and (4) an Index of Commonly Used Abbreviations of Authors' Names. All but the Systematic list are arranged alphabetically. This most recent update of the Handbook (the 5th edition was published in 1987) was prompted by the publication in 1991 of the second edition of the landmark *The Insects of Australia* (Melbourne University Press --- for a complete citation see Recently Published Books in the May-June 1993 issue of the *NEWS*). Both publications are sponsored by the Division of Entomology of the remarkable CSIRO (Commonwealth Scientific and Industrial Research Organization), government patron of Australian science.

The Australians' first list of common names appeared in 1955 and the subsequent editions have grown considerably in size and sophistication. The 6th edition is handsomely produced and features numerous ghost-like images of a variety of insects over which the crisp text is printed. The four lists are preceded by brief prefatory sections entitled: Background, Conventions, Acknowledgments, and Anomalies. The later reminds us that all countries face problems in choosing appropriate common names. For example, *Maleuterpes spinipes* Blackburn (Curculionidae) bears two common names: "spinelegged citrus weevil" and "dicky rice weevil." The latter common name is misleading because the insect has never been recorded as associated with rice crops, but was included because it is well-known and is used frequently in the literature. (I also found "dicky" to be misleading, but the book didn't explain that.)

Furthermore, common names based on poor scientific names sometimes lead to problems. Consider these two species of ladybird beetles: *Epilachna vigintioctopunctata pardalis* (Boisduval) is listed as having the common name "twenty-six spotted potato ladybird" whereas *E. vigintisexpunctata* (Boisduval) is listed as the "twenty-eight spotted potato ladybird." The number of spots indicated by the common names and the scientific names in these two species are reversed. Apparently, the original describers of these two species (Fabricius and Boisduval, respectively) miscounted the spots and assigned inappropirate scientific names. Thus, here we have a case where the common names more accurately characterize the spot numbers of the two species than do the scientific names.