

BOOK REVIEWS

MARIPOSAS DE CHIAPAS, by Roberto G. de la Maza E. and Javier de la Maza E. 1993. Gobierno del Estado de Chiapas. Distributed by Montes Azules, Camino Real a Xochimilo No. 60, Tepepan Xochimilo 16020, Mexico DF, Mexico (email: bfly@sar.net). 223 pp., 152 color plates. Hardcover, dustjacket, 21.5 x 28.5 cm, ISBN 968-6258-34-5. \$60 US (postpaid).

Chiapas holds a special place in my heart—my first experience of the neotropics was a month-long unstructured tour of the state. I return every few years to recapture the excitement I felt during that month-long adrenaline rush, and Chiapas never fails me. It is a land of contrasts, culturally and biologically the richest state in one of the most diverse countries in the world, yet its neglected economy and ecologically abused highlands contribute to an air of depression. Its habitats run the gamut: from lowland rain forests and swamps, through the rich forests of the lower elevation hills, and upwards to the highland deserts, oak/pine forests, and tropical cloud forests along mountainous ridges. Its highland butterflies include species more familiar to Canadians, such as *Nymphalis antiopa*, *Papilio polyxenes*, and *Colias eurytheme*, whereas in the lowlands, classic Neotropical genera abound, such as *Morpho*, *Memphis*, and *Parides*. Thus, it is fitting that this marvelous volume is defined by its contradictions, characterized in many respects by what it is not rather than what it is. It is *not* an identification guide, but it is a picture book with over 100 mostly superb photographs of butterflies in their natural habitats. It is written for local consumption as a general introduction to butterflies, and yet it contains a storehouse of natural history and distribution information that will be used throughout Central America and beyond. It is not, however, an easy book from which to extract this valuable information, and most of the species-specific information is presented in tabular format.

In the tradition of the family's *Mariposas Mexicanas* (R. de la Maza R., 1987, *Mariposas Mexicanas*, Guía para su Colecta y Determinación, 302 pp., 67 color pls.), the current volume features not just butterflies, but the context in which they occur, devoting 170 pages of text and photographs to historical and ecological context. The book opens with an brief overview of butterfly life history and ecology, but quickly focuses on Chiapas ecosystems and biogeography. The bulk of this introductory section details the historical context that produced this volume—the significant field collectors involved, and the interesting history of involvement of the entire de la Maza clan with Chiapas butterflies. Have no doubt about it, this book is as comprehensive an effort as has ever been mounted in Central America. The authors live in Chiapas, and this volume has been an obvious labor of love for many years. The field work and experience that underpins this volume is unequalled for Central America.

The heart of the book is the chapter entitled 'La fauna de mariposas chiapanecas,' which includes a powerful trip through the major ecological and faunal butterfly communities of Chiapas. First, the authors de-construct faunal communities into those of disturbed habitats and those of 'stable ecosystems'—a division that literally separates species that thrive in highly disrupted landscapes from those that require relatively undisturbed habitats. These two categories are each divided further, the disturbed fauna by altitude, the habitat-restricted fauna by broad vegetational cover types, which seem to be strongly influenced by altitude, rainfall, and biogeographic affinities. Each faunal community is discussed relative to the primary factors that influence the habitats found within it, and each discussion is illustrated with excellent maps, habitat photographs, and some excellent photos of the more interesting butterflies found there, such as those that are the most habitat restricted or which are characteristic of the fauna. This section includes many photos of species that are rarely seen. This chapter continues with a curious attempt to group butterflies based on broad evaluations of color patterns and which portion of the habitat they use. For example, 'Patrón banda oblicua' (which I broadly translate as 'butterflies with an oblique band through their forewing,' mostly nymphalids but including some metalmarks and skippers) are found primarily in the sub-canopy of forest communities. Although there may in fact be some truth to these generalizations, the exceptions drive you mad, and the

end result depends to no small degree on difficult decisions of where to place a given butterfly species in these 21 pattern groups. The subjective quality of the groups allows the reader considerable latitude to move species around among the groups to fit one's preconceptions, although the arrangement is certainly thought-provoking. This chapter ends with an overview of butterfly life histories and the conservation status of the Chiapas fauna as well as the threats to biodiversity that face the state.

The final chapter is a beguiling overview of butterfly classification, which opens with a comparison of the classification system used in the village of Tzeltal for the conspicuous kinds of butterflies (large, small, white, blue, etc.) relative to traditional Linnean classification. The remainder of the chapter is devoted to an overview of the families and subfamilies of butterflies in Chiapas. Although most taxonomists may fret about the classification followed in this book, my opinion is that it doesn't detract from the utility of the volume.

The appendices are what I find most interesting. Appendix II is a simple listing of 52 species that are in danger of extinction in Chiapas. The list includes a few species with which I am familiar, but most of these species I have never encountered in the state. Because this is simply a list of species, it is difficult to determine if these species are truly imperiled with identifiable threats, or are simply very rarely encountered. I suspect that the list includes both, but generic threats to biodiversity abound in Chiapas, and I have no doubt that deforestation of highland and tropical forests threaten many of the locally distributed species.

In my view, Appendix I is the technical core of this book—a 34-page listing of the 1,194 species known from Chiapas. No listing like this from the Neotropics will ever be 100% complete, but certainly this is the best so far published for the region. (There are at least two additional skippers from the state that I am aware of, and I am sure other readers will find records in their collections, too, although the additions to be made are certainly minor.) This appendix is the first complete faunal list, including all butterfly families, from a discrete Central American region, so this information is illuminating.

But Appendix I is more than just a list of species—five columns of data are included for each. The first column divides the state into nine zones of distribution, and lists the status of each species and subspecies in each zone (several taxa are represented by two subspecies in Chiapas, thanks to mountainous terrain that effectively divides the lowland tropical ecosystems of the state). Status within each of these regions is coded as 'established, present, extinct, dubious, or requires confirmation,' thus providing some insight into each species' abundance. Next is a series of codes that tell you to which of the faunal group(s) the butterfly belongs. Because the distributions of these faunal groups are mapped, this information can be combined with the nine zones of distribution to develop a pretty refined guess as to the actual (or potential) range of each species within Chiapas. The third column's codes refer to that system of wing-coloration and habitat-use grouping that I mentioned previously. I have absolutely no idea what column 4 stands for—it is labeled PC and I simply can't find any information about it or about the codes listed under this heading. I am not sure if the explanation got dropped during editing or if my broken Spanish prevents me from finding this information. Either way, this is a vexing problem. The final column presents the altitudinal range from which the species is known (which can be added to columns 1 and 2 to further refine range estimates). In summary, this valuable appendix provides a wealth of information and I find myself referring to it on a regular basis.

I cannot resist the urge to make a simple faunal comparison between Chiapas and Costa Rica. In total, Chiapas has fewer species of Nymphalidae, Pieridae, and Papilionidae than does Costa Rica: ca. 450 species compared to Costa Rica's ca. 550 (P. J. DeVries, 1987, *The Butterflies of Costa Rica and their Natural History: Papilionidae, Pieridae, Nymphalidae*, Princeton University Press, 327 pp., 50 color pls.). But what this volume sharply defines is the magnitude of the butterfly fauna not covered by DeVries—Lycaenidae, Riodinidae, and Hesperidae, namely, the two-thirds of the butterfly fauna that is more difficult to adequately inventory and identify. In this regard, the Chiapas volume truly fills a gap in our knowledge of Mesoamerican butterflies and allows us to better ponder the realities of butterfly diversity in the region.

So, do I recommend this volume? Unequivocally, yes. It has been quite a while since I

purchased a book in this price range that did not disappoint—usually such books are all fluff and no content. At twice the price, *Mariposas de Chiapas* would be a bargain.

JOHN A. SHUEY, *The Nature Conservancy, 1330 West 38th Street, Indianapolis, Indiana 46208, USA.*

Journal of the Lepidopterists' Society
51(2), 1997, 193–194

CARCASSON'S AFRICAN BUTTERFLIES: AN ANNOTATED CATALOGUE OF THE PAPILIONOIDEA AND HESPERIOIDEA OF THE AFROTROPICAL REGION, edited by P. R. Ackery, C. R. Smith, and R. I. Vane-Wright. 1995. CSIRO Publications. ix + 803 pp., 300 black-and-white photographs. Hardcover, 27.5 x 21.0 cm, ISBN 0-643-05561-4. \$150. (In North America, order from ISBN, 5602 NE Hassalo Street, Portland, OR 97213-3640.)

Upon first glimpse of the title, one may ask: "Who is this fellow Carcasson, and which are *his* African butterflies?" The answers to these questions (and many others) are found on the first few introductory pages of this handsome book. Bob Carcasson was an English-born entomologist who spent a considerable portion of his highly productive career in Africa, studying the Lepidoptera of that continent. A draft manuscript prepared by Carcasson over 25 years ago was the nucleus upon which this extremely thorough treatment was built. The final product is the result of the masterful editorship and knowledge of three outstanding British lepidopterists—P. Ackery, C. Smith, and R. Vane-Wright.

This annotated (and illustrated) catalogue represents the first comprehensive treatment of the butterfly fauna (Papilionoidea and Herperioidea) of any large tropical region. Carcasson defined the Afrotropical Region (equivalent to the Ethiopian Region of other authors) on the basis of zoogeography rather than political boundaries; hence, the butterflies of North African countries such as Morocco, Libya, and Egypt are not included. The catalogue includes over 3600 species representing a whopping 20% of the world's butterfly fauna. (Among the major faunal realms, the Afrotropical Region supports the third richest butterfly fauna, following the Neotropical with approximately 7900 species and the Oriental with approximately 4100 species.) A representative of each of the 300 genera treated is illustrated in a life-sized, black-and-white photograph at the beginning of each generic treatment. The catalogue includes all generic, specific, and infraspecific names of the butterflies of the region, organized in a highly usable fashion. Families, subfamilies, and genera are arranged phylogenetically, with species names arranged alphabetically under each genus. There are about 14000 names in the catalogue, including all described species, synonyms, forms, etc.

Under each species citation is a reference to the original description and brief notes on its distribution. Where known, information on host plants and other biological features is summarized.

The text of the book begins with a brief introduction and a section on general butterfly biology in the Afrotropical Region. Next there is an extensive gazetteer, which is particularly useful given the instability of place names in Africa over the past 50 years. Following is a section on biogeography that is an updated and slightly modified version of one of Carcasson's most influential publications—*A preliminary survey of the zoogeography of African butterflies*. The next 620 pages are dedicated to the catalogue itself. The book includes a comprehensive index and an up-to-date bibliography on African butterflies.

There is little to criticize in this beautifully produced work. My only complaint is that there seems to be a considerable amount of wasted space. Numerous pages are only half-filled with text, and a few have only two or three lines. (This is an extremely trivial complaint for such a large work.)

In summary, *Carcasson's African Butterflies* is an extremely thorough, well-organized, highly usable catalogue of the butterflies of the Afrotropical Region. The introductory ma-