

## BOOK REVIEWS

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BUTTERFLIES THROUGH BINOCULARS: THE WEST, A FIELD GUIDE TO THE BUTTERFLIES OF WESTERN NORTH AMERICA, by Jeffrey Glassberg. 2001. Oxford University Press, Inc., 198 Madison Ave, New York, New York 10016. v-x + 373 pp., including 1076 color photos. Paperback, 8.25 × 5.5 inches, ISBN: 019-510669-5, \$19.95.

As organisms and their habitats succumb to the weight of encroaching humanity, we race to understand a little about our surroundings in hopes of conserving what we have yet to destroy. We focus on groups with public appeal and use them to promote awareness of the negative impact that results from severely altering natural habitats. Butterflies have become the focus of some conservation inclined people, like birds before them. Jeffrey Glassberg's Butterflies through Binoculars (BTB) series gives us a nonconsumptive approach via the use of lenses, allowing for an up-close view of butterfly biology and identification without interfering with normal butterfly behavior—conservation, apparently, being the ultimate goal. BTB-The West, the latest in the BTB series, continues Glassberg's view of butterflies and his photography of western North American butterfly fauna.

The book has over 1100 photographs of butterflies (western United States and the southern part of western Canada east to include all of Saskatchewan and the United States to just south of Houston), mostly in poses one would observe in the field. Accurate size relationships of species included on a page allow the user to compare size of similar looking species, and magnification or reduction from life size is indicated on each page. Some species have an inset of a different view of the species in question, while others have a black or white line to indicate a diagnostic feature. Photographs were arranged so that similar species are shown in similar poses, making comparisons easier. Dates and locations of the photographs are indicated in the rear of the book, providing a record of seasonal variation at particular localities. Species accounts that accompany photographs include habitat, abundance/phenological, host plant, range, and other information. Color coded distribution maps indicate brood numbers and species rarity or loss at a particular locality. Species and respective families are roughly organized phylogenetically, and common names, as recognized by the North American Butterfly Association's 1995 Checklist and English names of North American Butterflies are utilized throughout.

The remainder of the book includes introductory sections on the use of binoculars and how and where to find butterflies (nectar sources, mud puddles, hill-tops, etc.) and how to identify them through binoculars, and a section on butterfly photography for those inexperienced behind the lens. Subsections under photography include information on equipment, photo etiquette, and caring for and viewing your photographs. Brief sections on butterfly anatomy, biology, behavior and gardening are also included. Other introductory sections include Glassberg's thoughts on conservation, netting butterflies, and commercially raised butterflies, and express his concern for these issues and the overall health of our butterfly fauna. A brief section on Hawaiian butterfly fauna, rare strays observed out west, and dubiously reported species can be found in the back of the guide. Supplementary text on species or groups that present identification problems (i.e., *Euphilotes* blues, Greater Fritillaries) are also included in the books rear and intended to ease identification difficulties in some regions of western United States. Foodplant scientific names, a list of major organizations concerned with butterflies, a short glossary of butterfly terms, and a bibliography of western North American butterfly literature are also included. The dimensions of the book are appropriate for a field guide, and print on pages holds up if moistened.

This guide is written and intended for novice lepidopterists. Those seeking a complete list or photographs of all species and subspecies in western North America, or a thorough taxonomic treatment will not find it here. The repeated use of the term "antennas" on page 10 ("*antennas*" are conductors by which electromagnetic waves are sent out or received and "*antennae*" are movable, sensory appendages occurring on the heads of insects and other arthropods) and "genuses" on pages 182 and 224 (genera was used on page 56) also give subtle hints to the intended audience.

It is admirable that Glassberg suggests an approach to butterfly observation, identification and conservation with the production of the BTB series, a method that incidentally has been used for more than 50 years among tropical naturalists. His message, however, is over-biased to simple observation of butterflies through lenses for biology and identification purposes rather than legitimate, scientific research that is essential to better understand these insects. There is already a mountain of bureaucratic nonsense that legitimate scientific research must contend with, a trend that will surely hinder rather than further our understanding of species relationships within environments. As the majority of Glassberg's audience will be novices, he

should not misinform with ideas that we can understand all butterfly biology and identification without research requiring sampling (yes, at times with a net) a small fraction of an overall species pool (very few collectors have used their nets to decimate the remaining populations of declining butterflies). In this regard, the book does not address the importance of conservation with a complete insight into the study of Lepidoptera. We absolutely cannot, and throughout history we could not have, come to the level of understanding (especially the accurate identification) of butterflies by observing them through binoculars or photographs, and much remains to be discovered, even in North America. This book is for novice (perhaps naïve?) lepidopterists beginning a hobby, but would be of marginal use to the experienced lepidopterist.

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THE MILLENNIUM ATLAS OF BUTTERFLIES IN BRITAIN AND IRELAND, by J. Asher, M. Warren, R. Fox, P. Harding, G. Jeffcoate and S. Jeffcoate, Oxford University Press, 456 pp.; 270 color illus: publication 2001; Cloth ISBN: 0-19-850565-5; Cloth Price: \$40.00.

The United Kingdom has had virtually no intact habitat for the past 500 years and it sports less than 100 species of butterflies. Nonetheless, there are more books treating the butterflies of the British Isles than anywhere else on earth. So why do we need another book? Despite the area of coverage and topic this is not simply another butterfly book. It is a revelation. The six collaborative authors, whose professions include physics, ecology, biochemistry and medicine have not produced something assembled by committee. Rather, the fruits of their labor resulted in a decidedly readable book that is comprehensive, visually beautiful, scholarly and eminently valuable to a wide audience. The information content and style of the Millennium Atlas is a remarkable benchmark that future butterfly books must attempt to emulate.

The backbone of the Millennium Atlas is the incredibly comprehensive understanding of butterfly distributions. Collated by over 60 people in charge of coordinating local records, hundreds of thousands of observations were verified, entered into a central data-

base, plotted on a detailed geographic grid map whose resolution ranges from 10 km<sup>2</sup> to 100 m<sup>2</sup>, and then analyzed in the context of records spanning over 100 years. Thousands of volunteers (amateur and professional) contributed to what, in some cases, consist of many thousands of observations per species on each map. This is the template for the Millennium Atlas. The result is a magnificent understanding of the historical variation in distribution, population ecology, reproductive biology, colony dynamics, food plants, habitat use of each species, and a chronology of changes that reveal conservation successes, threats and failures.

The detailed species accounts draw from the comprehensive database and, of course, form the corpus of the book. Each account provides a full-page distribution map, a color photograph of the butterfly taken in the wild, and a complete account of food plants, habitat, lifecycle and colony structure, local distributional trends contrasted with those on the European mainland, a summary of the ecological and conservation outlook for each species, and references to recent literature. Each species account is a pleasure to read, and a work of art into the bargain. Therefore the book will be of use to virtually anyone with an interest in butterflies and their place in nature.

Tucked away at the end are nine appendices ranging in content from vernacular names and addresses where contributing data should be sent, to lucid graphs showing dynamical changes in the abundance and distribution of many species. These are followed by a comprehensive bibliography that provides the reader with a tremendous amount of research possibility. Calling these sections thorough hardly gets into the ballpark, or if you prefer, the cricket pitch. These sections are vital examples of how scholarly information can be presented in admirable and easily accessible form.

This volume resonates a cultural history that emphasizes cognizance of the natural world. For generations, denizens of the British Isles have shown an abiding interest in natural history, a proclivity to make abundant and accurate observations, share them, and interpret those observations for understanding wildlife and its conservation. Such a historical cultural interest in butterflies has fostered, and ultimately led to, the Millennium Atlas. However, the Millennium Atlas is not a finished work that heralds the end of butterfly study in Britain. Rather, the recent collaborative efforts of many European biologists working on butterflies in a fragmented landscape attests to it being a springboard to further refine our dynamic range of understanding butterflies. In producing the Millennium Atlas the cultural heirs of Darwinism elegantly demon-