



A FIELD GUIDE TO WESTERN BUTTERFLIES

by Paul A. Opler

1999. Houghton Mifflin, New York (*Peterson Field Guide Series*). 540pp (12.5 x 19.5cm, 44 color pl., 110 color photos. Cloth, \$32.00. ISBN: 0-395-79152-9.

This beautifully designed and lavishly illustrated field guide replaces the 1986 edition of the same title, by J. W. Tilden and A. C. Smith, a work which had many deficiencies to students of the western North American butterfly fauna. Opler brings to this new replacement guide a highly productive lifetime of experience with the butterflies of North America and a distinguished record of scientific publi-

cations and popular books on butterflies, including the *Peterson Field Guide to Eastern Butterflies*. Consequently, the new field guide offers much new information, a greatly increased breadth of coverage, and a highly useful format to the novice lepidopterist.

The field guide begins with a brief explanation of how the book is organized and why the species are illustrated by painting the butterflies in natural postures, a notable first for any major North American field guide. Brief sections then follow on the structure of butterflies, their life history and their behavior. There is an excellent chapter on how to study butterflies by watching, photographing, and collecting, which is packed with useful information that will do much to encourage future generations of butterfly hobbyists and budding professionals. A short section on butterfly gardening includes some general suggestions for nectar sources which are applicable almost anywhere in the country. A chapter on the conservation of butterflies covers just two pages but includes a list of federally endangered and threatened western butterflies (16 taxa at the time of publication), together with 8 excellent photographs of living specimens of these endangered species.

Chapter 6, on butterfly distribution, contains a very interesting discussion of ten regional habitat types and biomes that are important in butterfly distribution. Two pages then follow (as Chapter 7) on the topic of the rich speciation and variation found in western butterflies.

At the close of these brief introductory remarks comes the section of 44 specially commissioned color plates. Painted by artist Amy Bartlett Wright, an experienced illustrator, the figures depict virtually all species and a few of the hundreds of described subspecies of Western butterflies. These illustrations will no doubt be controversial because despite their natural poses, the figures show only general characters, absent the detail of, for example, William H. Howe's superb and meticulously drafted illustrations in *The Butterflies of North America* (Doubleday, 1975), which illustrated some 2,093 butterflies in full color. However, the average amateur user of this field guide's plates would find the identification of most of the common species to be quite easy, and will probably become frustrated only at trying to distinguish more difficult genera such as *Speyeria* or the various blues, where subtle characteristics of species (and especially the multitude of subspecies in the West) make this kind of illustrative approach very difficult to use for definitive identification of the plethora of phenotypes among western butterflies.

The plates are followed by the superb main text section by Opler, in which each species is treated in relatively telegraphic but surprisingly

informative detail. The common name is given first; these names apparently follow primarily the NABA list. The scientific name is then given, but since numerous specific and subspecific species changes are made here without specific reference to the exact source, the reader may be confused by many names. For those seeing these changes for the first time, it should be noted that many of them were made by the authors of 73 papers in a major work on western butterflies whose publication preceded this field guide by six months: *Systematics of Western North American Butterflies* (Mariposa Press, 1998). Where Opler makes the scientific name change for his own reasons, he usually comments on these reasons, or those of his expert consultants, such as G. F. Pratt on *Euphilotes*, for the splitting or the lumping involved.

Each text account then includes a brief mention of the wing size (in both inches and millimeters), followed by a description of the upperside and underside of the male and female. Similar-appearing species are then briefly mentioned. The description of the "Early Stages" includes only the most significant color or structural feature of the larva, sometimes further differentiated for several subspecies. The Foodplant is given by common name, and occasionally a scientific name is included. The Flight Period is listed in generalized terms, sometimes differentiating between areas going from south to north over the tremendous latitudinal range of western North America(!). The Geographic Range of the species is described in a short, sweeping, summary statement, followed by usefully detailed notes as to the actual habitats in which the butterfly occurs in. Under "Remarks," Opler usually mentions hints of how to distinguish the subspecies and closely related species. Notes on the species' rarity, attractiveness of particular baits, or unusual behavior are also included in the "Remarks" section. Each species account also includes a color map illustration showing both the core breeding area (in red) and the more expanded migratory range (in blue) if the butterfly moves during the year. Superb color photographs (110) by Opler illustrate a number of the species in this section, and are worth the price of the book alone.

The last part of the book contains a Life List, a detailed Glossary, a brief section of References, and separate indices to plants and to butterflies mentioned in the text.

Overall, this book is designed for the interested hobbyist or beginning lepidopterist who wants a comprehensive but readily understandable treatment and identification guide to the Western North American butterflies. It admirably achieves its stated aim of meeting the need for a convenient identification manual for people just getting involved in the current trend towards observing and photographing butterflies, in contrast to starting or continuing a collection. Nevertheless, everyone interested in butterflies at any level should own a copy of this book. Its greatest contribution will undoubtedly be to raise butterfly awareness and appreciation among the general public, and that can only help in the battle to save bits of wilderness and natural areas in the Western United States — whereby future generations may be able to enjoy, appreciate, and study the fascinating butterfly fauna of this vast region.

THOMAS C. EMMEL

Division of Lepidoptera Research
Depts. of Zoology and Entomology
University of Florida
Gainesville, Florida 32611