

SWALLOWTAIL BUTTERFLIES OF THE AMERICAS: A Study in Biological Dynamic Ecological Diversity, Biosystematics, and Conservation

by Hamilton A. Tyler, Keith S. Brown, Jr., and Kent H. Wilson

1994. Scientific Publishers, Gainesville, FL. 376 pp, 157 col. pl., 1179 text fig. (including 126 halftones), end maps, 21 x 28 cm. Price: \$49.50 cloth (ISBN 0-945417-90-X), \$24.50 paper (ISBN 0-945417-91-8), \$150.00 deluxe edition (ISBN 1-945417-92-6). Available from Flora & Fauna Books, P. O. Box 15718, Gainesville, FL 32604 (plus \$2 shipping).

PREPUBLICATION REVIEW

The prepublication copy made available for this review confirms that this book is a veritable encyclopedia of the New World swallowtails (Papilionidae). This much-delayed book (originally planned for 1992, but delayed to early 1994 due to the encyclopedic coverage that took the authors longer than they imagined), is an incredible compendium of facts, illustrations, life histories, anecdotes, lore, and everything else one could possibly ever have expected pertaining to the most sought after butterflies, the swallowtails. The book began with the work of the late Hamilton Tyler, the author of a much smaller swallowtail booklet of 1975 (*The Swallowtail Butterflies of North America*), and has now evolved into an amazing treatise on swallowtails, under the guidance of Keith Brown and Kent Wilson; the former mostly responsible for the text and final form of the book, the latter for the color plates.

It is difficult to fully convey to our readers the scope and depth of this work on New World swallowtails, without actually having the book in front of you, with the color plates. Not only are all species illustrated on the 57 full-page color plates of set specimens, but all the other color plates and figures show behavior, immatures in all stages (for 100 of the 143 species involved), habitats, historical plates, unusual specimens, and other details of swallowtails. There are numerous line drawings, tables, and charts, as well as distribution maps for all species. There even are swallowtail cartoons and historical representations of swallowtails from New World Indian folklore. Two plates from Merian (1705) are also reproduced in color near the beginning of the book. The book has 1,053 line drawings and 126 halftones, including 109 SEM photographs of morphological details. The genitalia of all species are illustrated (mainly only the male harpes) and extensive figures illustrate various morphological features of swallowtail adults and immatures.

The descriptive text for the species covered is rather brief, and accompanies the color plates and distribution maps. The main text of the book is composed of chapters on swallowtail butterflies in nature and culture, ecology and behavior of swallowtails, population biology, juveniles and foodplants, chemical aspects of swallowtail foodplants, mimicry in American swallowtails, genetics and hybridization, conservation of New World swallowtails, biogeography, systematics, evolution, phylogeny, classification characters, diversity and taxonomy. Each text chapter ends with a section describing how to do things mentioned in that chapter. There also are vignettes of esthetic aspects in various page-long quotes from a recent Venezuelan book entitled *Autana - Sacred Mountain*. Most chapters have various tables, boxes, and illustrations with added details of chapter subjects. These chapters are crammed full of information and data, and most of the book is

indeed extremely tightly packed, often with rather small type size. There are generic keys for eggs, foodplants, larvae and pupae, and a key to species for adults. Tight margins and small type, in fact, are a factor in a goal of the authors to keep the price of this book within reason. The price of the book actually is perhaps one-fourth what most publishers would be charging for so many color plates. The authors also wanted a special paper-bound edition available only to students and third-world residents, that would be of very modest cost, only \$24.50, making it available for almost anyone interested in these butterflies (limited to 2 copies per person).

The book is to be printed on heavy coated paper, with the usual edition being cloth bound. A special autographed edition will also be available (limited to 100 copies) with an imitation leather binding. Every swallowtail in the New World (including the most primitive parnassians) can be identified with this book, through keys and the illustrations, however, the text chapters offer information not usually found in a book of this kind and the species text itself is limited to what is among the color plates. The book ends with appendices on New World collection localities (with full coordinates), a data matrix for the taxonomy of the species, glossary (cross-referenced by small butterfly symbols in the text of the book), bibliography, and scientific and subject indices. There is also a very useful appendix that lists corrected names for those of species illustrated in various older books, up through the recent D'Abrera book covering American swallowtails (1981, *Butterflies of the Neotropical Region, Part 1: Papilionidae and Pieridae*).

Anyone interested in butterflies should have a copy of this unique book, especially with such a low cost. It will undoubtedly inspire a new generation of investigators and amateurs to renew efforts to study these butterflies, and other families, both in the New World and other areas. The book will certainly remain a monument to the lifetime study of a family of Lepidoptera from any region of the world.

J. B. HEPPNER

Florida State Collection of Arthropods
P. O. Box 147100, Gainesville, FL 32614