

THE GENUS *PARIDES*. BUTTERFLIES OF THE WORLD, SUPPLEMENT 13, by Tommaso Racheli. Supplement 13: 116 pages, 82 figures; 24 × 34 cm; ISBN 3-937783-24-5; EUR 70.00. Antiquariat Goecke & Evers, Keltern. Publication date: 15 December 2006. Additional information of the “Butterflies of the World” series can be obtained at www.insecta.de/shop/openstore.htm.

Tommaso Racheli's “The Genus *Parides*” is Supplement 13 of Bauer & Frankenbach's series “Butterflies of the World”. Racheli's monograph is matched with a pictorial catalogue in the same series, “Papilionidae XIII. *Parides*. Butterflies of the World. Part 26.” by Edwin Möhn, also published in 2006. The “Butterflies of the World” series has been published since 1998, and by now covers most major groups of butterflies. Most volumes are published both in German and English editions, and usually their text component is very short. Some parts, however, have a more detailed text which is published as a Supplement, and this is the case for Racheli's volume.

Over the years, Dr. Racheli has published many important studies about the New World Troidini butterflies of genera *Battus* and *Parides*. At present, he is mainly pursuing research in Ecuador and Laos. His supplement 13 on *Parides* summarizes and updates its taxonomic treatment, which has not undergone extensive revision since the 1994 book by Tyler, Brown and Wilson.

Racheli's monograph begins with a review of the importance of Papilionidae swallowtail butterflies in many fields, from genetics to population dynamics studies, and introduces the genus *Parides* as “an unended quest”. In “The enigma of *Parides*”, the author addresses the geographical variation of this Central and South American group of species, with the informal style of a professor telling an interesting story about the huge taxonomic complexity of this genus. Avoiding additional discussion of this controversial field, Racheli follows the nomenclatural treatment of Tyler *et al.* (1994), while his systematic arrangement follows the cladistic hypothesis proposed by Racheli & Olmisani (1998).

In addition to a monographic taxonomic treatment, Tommaso Racheli's book covers several other aspects of *Parides*, such as synonymies, general range, range maps for each nominate subspecies, descriptions of the adults, illustrations and descriptions of the genitalia (mainly the male), pre-imaginal stages, and general observations. Even if there were nothing else of interest in the

Supplement, which is not the case at all, the “Historical Notes” would be worth reading. The author does an excellent and critical job of revising the historical and taxonomic changes applied to the Papilionidae since Haases's 1893 study, the first to divide *Papilio* into three main categories. The classification of *Parides* is carefully reviewed, contrasting the results obtained from different character sources, and discussing the inherent problems of individual analyses.

To address the natural history of the Troidini, the author discusses the available data for every developmental phase of these butterflies – eggs, larvae, pupae and adults. An abridged table containing the *Aristolochia* host plants used by each *Parides* species is presented, with some modifications and additions since Tyler *et al.* (1994)'s book. Focusing on the adults, a series of morphological structures containing important taxonomic characters is discussed. There is also an impressively detailed table featuring the male genitalia traits of each and every species of *Parides*, addressing the variation of this character along the geographical distribution of some species. For those interested in the morphological study of this group, this is an outstanding resource. Other important information on *Parides* is also made available in the Supplement: habitats, eco-ethology, phenology, and aposematic coloring.

Racheli also recovers the refuge theory in order to propose a biogeographical hypothesis for the New World Troidini. Though this theory has received much criticism, Racheli's discussion on Troidini shows that this issue still deserves further investigation.

In the “Systematic account” section, the author thoroughly characterizes the distribution of each species using detailed, clear and comprehensive maps. Racheli's book provides each taxon with a careful description of its type and distribution, as well as commentaries, with details on each subspecies of each species. Upon reading this section, one will notice the care with which the reader is offered full information towards best identifying this complex Papilionidae group. The species presentation follows the clade sequence put forth in the phylogenetic hypothesis of Racheli & Olmisani (1998), and differs from the order followed by Möhn (2006) in the second part of the *Parides* treatment in the series. This makes simultaneous searching of text and figures a bit confusing. For this reason, it would have been helpful if both authors had followed the same order in their presentation of the *Parides* species. Also, the two authors are not always in accordance in their division of

species into subspecies, as is the case of *P. sesostris zischraei* – considered a distinct subspecies by Möhn and synonymous with *P. sesostris sesostris* by Racheli.

As Möhn's volume features a brief abstract about each one of the species and subspecies, this volume, by itself, can be considered an extraordinary field guide to *Parides* identification. It is important to acknowledge the careful work that was performed in order to catalogue the figures of *Parides* species and subspecies. Möhn's illustrations are pleasant, yet remain faithful to scientific accuracy, and the care with which small wing pattern differences along the geographical distribution of each entity is shown is impressive. The pictures make it possible to understand how difficult it is to identify *Parides* species and subspecies, due both to their intraspecific variability and their interspecific similarity.

Racheli's monograph on *Parides* is amusing reading for both Lepidopteran academic scientists and butterfly enthusiasts. The Supplement alone is a worthwhile

purchase and the concurrent acquisition of the Möhn's volume is recommended, but not mandatory, to be fully updated on this butterfly group.

LITERATURE CITED

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BUTTERFLIES OF WEST AFRICA, 2 volume set, by Torben B. Larsen. 865 pages, 125 plates; 11.3 × 8.4 in; ISBN 10: 8788757439 and 13: 978-8788757439; USD \$229. Apollo Books; Publication date: October 2005.

This impressive two-volume work illustrates and guides the reader through the extraordinary butterfly fauna of fifteen countries comprising tropical West Africa. From savannah to rain forest, each of the roughly 1500 species is described in detail with notes on identification, habits, early stages and distribution. The author's enjoyable writing style, and first hand accounts through his extensive field work takes the reader into the tropics for a unique perspective on the lives of these fascinating and diverse creatures.

The first volume contains introductory chapters covering evolution, historical accounts of past researchers, a global perspective of the region's fauna, the biogeographical regions of West Africa, ecology, migration, extinction and conservation. A color map of the vegetation zones and current political boundaries of Africa is included. The bulk of the text is devoted to species accounts in a well-organized structure. Distinguishing features of tribes and genera are discussed followed by species accounts. Numerous line drawings and black and white photographs punctuate the text. The author has gone to great lengths to allow the reader to identify even difficult groups through the use of illustrations conveniently located within the text.

The second volume contains 130 stunning plates depicting approximately 3800 specimens in full color. Upper- and undersides are depicted for most species. Specimens are clearly identified by scientific name and a species number corresponding with the species accounts. Country of origin for each of the specimens illustrated is included. The volumes are well indexed by genera and species.

Several impressive regional volumes have been published in recent years, including Parson's "Butterflies of Papua New Guinea" and Mayberry's "Butterflies of Australia". Larsen's "Butterflies of West Africa" continues the trend of excellence and gives the reader a comprehensive identification guide and in-depth understanding of life histories, habits, and a historical account of the butterfly fauna of West Africa. Considering the number of species treated, this work is truly monumental.

"Butterflies of West Africa" is a must for anyone interested in the butterfly fauna of Africa and perhaps sets a new standard for any regional identification guide. Readers interested in butterflies, especially tropical butterflies, ecology or conservation will find this work fascinating.

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