Title of book: *Butterflies of the World*
Author: Adrian Hoskins, F.R.E.S.
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Reviewed by
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LIKE most people, I too had an obsession for the prettiest and modest Insects – the Butterflies. It is believed that butterflies and moths account for 9% of all life forms on earth. This diversity is really a feast for the human eyes. Poets describe that a fluttering of a butterfly can make an observers' heart wiggle. The elegance, suave and opulence of this tiny creature has fascinated biologists and it developed into a separate scientific study – Lepidopterology. The knowledge or information gathered by the researchers till date is beyond one man's or book's comprehension ability. However, the beginners need a stepping stone and this book *Butterflies of the World* written by Adrian Hoskins can be the best book to begin. The author's vast experience and his mastery over the subject are reflected in his writing style.

Before devouring the content of this book, as a reviewer, I would like to highlight some points. There are numerous pamphlets, identification guides and books about butterflies (Braby, 2016; Carter, 2002; Kunte, 2000; Morgan, 2013; Sandved and Cassie, 2004; Schappert, 2005; Todd, 2013). However, these mostly tend to overemphasise on a particular region or focus more on the field identification with colourful photographs leaving the readers with few descriptive details or bombard the readers with too much information.

This book strikes a balance between pictures as well as descriptions. This makes it more appropriate for beginners. Generally, a book written about flora and fauna tends to be monotonous making the readers skimp or skip pages. I assure the readers that it will not happen with this book. This doesn't mean that there are no drawbacks or limitations. Any lepidopterist can point out some information lacunae about certain species. However, with only 312 pages to describe world butterflies, the author has done his job well.

This book is divided into five sections with a short introductory chapter. I would like to vouch for the interesting story about Alfred Russel Wallace in the dedication page to the readers. In the one-page introduction, the author not only explains the content of the book but also emphasises on the importance of NGOs in conservation.

The first section, *Origin and Evolution* is very precise and gives the crux of the butterfly's origin and evolution. The second section is the heart of the book – *Butterfly Biology*. I would say that it should be titled as Butterfly biology and ecology, as the author describes the anatomical part as well as the natural enemies and the survival strategies of the butterflies. Apart from the usual life cycle description, there is significant information about androconia, hearing organs, cannibalistic feeding behaviour, myrmecophagy, aphytophagy and pseudoscorpion hitchhikers. Some species of butterfly larvae do feed on ants (myrmecophagy) or aphids (aphytophagy) which may appear unusual for the beginners. The interesting part is the mechanism or strategy adopted by the larvae. The Moth Butterfly (*Liphyrabrassolis*) larva allows itself to be captured by the weaver ants (*Oecophyllasmaragdina*). The weaver ants usually gulp down any captured larvae but that will not happen with the Moth Butterfly larvae. It is the reverse condition where the larvae gulp down the ant grubs inside the nest. Furthermore, the larvae pupate inside the ants' nest and emerge an adult. The book holds such attention-grabbing examples.

There are some witty statements in the book which might amuse certain readers. For instance, while explaining the balance of nature and prey-predator relationship, the author states "*The weapon of this warfare is evolution*" (p. 65). The wing of the butterflies performs a lot more function than flying. In certain species, the wing is modified to provide camouflage, as a survival strategy. The remaining part of the second section revolves around this topic.

The third section – *Butterfly Families* – is the main theme of the book. The seven butterfly families are explained meticulously and coherently. In the beginning, the author provides an overview and thereafter the relevant pictures at the right context make the book admirable. As a reviewer, I can't explain the beauty of each butterfly here. However, I would like to point the readers to Cramer's 89 butterfly (p. 143), Blue Glasswing (p. 161) and the world's largest butterfly, Queen Alexandra Birdwing (p. 275) which I adored.

The next section is about *Habitats and Conservation* and most of the readers need no explanation further. The world is facing dire stress due to human actions and there are a lot of big steps and policy decisions to be taken by the governments but there are small steps that we, as individuals can take. The author says, "I *most strongly urge every reader of this book to become actively involved in conservation* (p. 295)". He suggests that it can begin with a small step such as signing some online petition too.

Finally, a clear-cut and precise glossary makes the fifth section of the book. The index provided at the end cannot be that useful as it covers only the scientific names of butterflies. There is a need for well-structured index covering the entire content of the book. There are no references enlisted in the book but I would encourage the readers to visit the website (https://www.learnaboutbutterflies.com) hosted by the author himself for more information and current updates. There is another book by the author, *1000 Butterflies: An Illustrated Guide to the World's Most Beautiful Butterflies,* which is more complementary to the reviewed book.

I would recommend this book as an excellent reference for the beginners and students in entomology and lepidopterology.

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