

BOOK REVIEW

SETTELE J., SHREEVE T., KONVIČKA M. & VAN DYCK H. (eds): *ECOLOGY OF BUTTERFLIES IN EUROPE*. Cambridge University Press, Cambridge, UK, 2009, xii + 513 pp. Paperback ISBN 978-052-176-6975, price USD 75.00, hardback ISBN 978-052-174-7592, price USD 160.00.

During the nearly two decades since the publication of Dennis' (1992) successful book on the ecology of British butterflies, the growing popularity of butterflies has resulted in a rapid increase in the number of important ecological, taxonomical and conservation studies using butterflies and bumblebees as model groups. This rise in interest was further supported by the development of new field and laboratory methods, which facilitated studies on population and genetic structures and evolutionary adaptations to changing environments. Sad to say, this new compendium on ecology of European butterflies is very topical also due to the dramatic adverse effect global changes are having on butterfly populations.

The new *Ecology of Butterflies in Europe* describes the current state-of-the-art in this field and is the combined effort of four editors and 39 European contributors with broad experience of butterfly ecology and conservation. The Introduction is written by the author of the previous British book on this topic, Roger L.H. Dennis. The main text is divided into five parts dealing with closely related subjects. Each chapter in each part aptly starts with a concise summary of the problem. Of special value are the motivating paragraphs in each chapter entitled "open questions and trends", which indicate the dynamic nature of the scientific work in this field and how rewarding it could be as a subject for somebody starting a career as an ecologist.

Part I, "Habitat use: resources and constraints", deals with traditional ethological problems like food exploitation by adults,

mating and egg laying behaviour and thermoregulation. The last chapter in this part introduces the new methods of predictive modelling of the distributions of species. Part II, "Population biology: population structure, dynamics and genetics", deals with new trends in the study of butterfly populations. Apart from non-invasive methods, such as "mark-release-recapture", it describes genetic methods used to determine the structure, dynamics and history of populations. Logically, this part is followed by a cluster of chapters that focus on evolution (Part III "Evolutionary biology") and phylogenetics (Part IV "Species in time and space: distribution and phylogeny"). New findings, from adaptations to different conditions, through functional wing morphology and evolution of wing patterns to whole life-cycle studies, are presented. New methods from the burgeoning discipline of phylogeography, which have resulted in the reconstruction of the trends and history of butterfly species, are also covered, as well as genetic comparisons of so called "bad species", which have produced new insights into their taxonomy. Part V, "Global change and conservation", deals with the most topical problems in butterfly conservation, like the climate mediated shifts in geographical distributions.

"Ecology of butterflies in Europe" is innovative and is recommended not only to researchers' libraries. Important readers will include naturalists, amateur lepidopterologists and all individuals who formulate policy and practical conservation biology.

REFERENCES

DENNIS R.L.H. (ed.) 1992: *The Ecology of Butterflies in Britain*. Oxford University Press, Oxford, xi + 354 pp.

T. Kadlec & V. Jarošík