

and for the various timber and nontimber products that can be competitively managed through multiaged management.

In summary, the strengths far outweigh the weaknesses in the volume. It is a must read for every forester especially where these issues are important driving mandates. And I would encourage every forester to have a copy available for reference at the very least.

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## ZOOLOGY

### LEPIDOPTERA AND CONSERVATION.

By T. R. New. New York: Wiley-Blackwell. \$79.95. xiii + 265 p.; ill.; index. ISBN: 978-1-118-40921-3. 2014.

This is the latest volume in a series of books on insect conservation by a veteran insect conservation biologist, who is in his element when writing about the Lepidoptera (butterflies and moths). In it, New explores contemporary research and management issues encompassing key aspects of the biology and conservation of the Lepidoptera. The text is expansive in its treatment of the subject, touching upon concepts such as metapopulation dynamics and community ecology, and provides rich detail on factors that likely affect long-term survival of species, (e.g., habitat destruction, inbreeding, and pathogens). Specific examples and discussions are peppered throughout the book, but a separate chapter discusses prominent conservation case studies of moths and butterflies that have dominated academic, social, and political discussions for decades.

The volume summarizes vast existing knowledge of conservation issues in temperate regions, where biological insights and conservation efforts have come of age, with mixed success in species protection. On one hand, the Large Blue butterfly (*Maculinea arion*) may be hailed as a great success story. It relied on a combination of tremendous insights into intricacies of multispecies interactions and coexistence, and social and political will to restore habitat patches that brought the butterfly populations back after their local extinction in the United Kingdom. On the other hand, the case of the New Forest burnet moth (*Zygaena viciae*) is a sobering reminder that long-term survival of species still hangs precariously even in rich countries with high level of environmental activism and societal commitment to species conservation. The author

reminds readers that the moth is still restricted to a single patch of less than 1 ha of useable habitat in all of the U.K., where it has already undergone a severe genetic bottleneck and relied on close and constant attention from conservationists for over two decades. New contrasts these cases and circumstances with more difficult conservation landscapes in developing (sub)tropical countries. In highly biodiverse countries, conservation efforts appear to be weakening in the face of push for rapid development, with growing concerns about widespread habitat destruction, inefficient agricultural practices and use of pesticides, and impacts of climate change. A classic example, discussed in the book, is the extinction risk that the endemic and endangered Queen Alexandra's birdwing butterfly (*Ornithoptera alexandrae*) faces in its native Papua New Guinea. Using such species as examples, the author illustrates how conservation of insect species in developing countries is linked to complex realities of cash crops and agricultural expansion, urbanization, international trade, and conservation aid.

This book discusses issues such as habitat restoration, ex situ conservation efforts, and effects of inbreeding that will be critical in ensuring long-term survival of the Lepidoptera and genetic diversity in critical biodiversity areas. Chapters on population recovery planning, assessment of conservation progress, and conservation legislation offer a broad window into policy issues and conservation realities in complex modern landscapes. For this reason, it will serve as an important introduction to Lepidoptera conservation for graduate students and biologists, as well as a reference for conservation practitioners.

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### DRAGONFLIES: MAGNIFICENT CREATURES OF WATER, AIR, AND LAND.

By Pieter van Dokkum. New Haven (Connecticut): Yale University Press. \$35.00. 175 p.; ill.; index. ISBN: 978-0-300-19708-2. 2015.

### EXTREMOPHILE FISHES: ECOLOGY, EVOLUTION, AND PHYSIOLOGY OF TELEOSTS IN EXTREME ENVIRONMENTS.

Edited by Rüdiger Riesch, Michael Tobler, and Martin Plath. Cham (Switzerland) and New York: Springer. \$189.00. xii + 326 p.; ill.; index. ISBN: 978-3-319-13361-4 (hc); 978-3-319-13362-1 (eb). 2015.

Extremophiles live in environments with remarkable levels of physicochemical stressors. As the volume's subtitle suggests, its coverage of fishes living