

BOOK REVIEW: *Australian Beetles. Volume 2.*
Archostemata, Myxophaga, Adephaga, Polyphaga (part).
Edited by Adam Ślipiński and John Lawrence. 2019.
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Our Australian counterparts have an enviable record of publishing books providing a comprehensive coverage of their insect fauna. *The Insects of Australia*, first published in 1970, provided extensive coverage of the fauna at family level. This was followed by an extensively revised second edition in 1991, which remains a classic general taxonomic resource. Subsequently, the Aussie beetlers struck out on their own with *Australian Beetles* in 1994, authored by John Lawrence and E. B. Britton.

This was, in effect, an updated and expanded version of the *Insects of Australia* beetle chapter. Then, in 2013, Volume 1 of an entirely new *Australian Beetles* was published under the authorship of John Lawrence and his Australian National Insect Collection successor, Adam Ślipiński; both world leaders in beetle systematics. This was the first of three proposed



volumes, and covered aspects of Australian beetle ecology, collection, morphology, and classification, as well as comprehensive treatments of the 117 families.

Volume 2 of *Australian Beetles* follows on from the first volume in greater detail, befitting its almost 800 pages. Ślipiński and Lawrence have teamed up again, this time as editors, along with a global line-up of 21 contributing authors. This volume expands on the family-level treatment of Volume 1 by providing in-depth coverage of the suborders Archostemata, Myxophaga, Adephaga and Polyphaga in part (Scirtoidea, Hydrophiloidea, Scarabaeoidea, Buprestoidea and Tenebrionidae). Following brief introductions to the suborders and superfamilies, overviews are given for each of the 23 families covered. This includes commentary on diversity, biology, biogeography, systematics, and conservation. But, at the heart of this book are the identification keys to genera (and occasionally subgenera and species) along with generic synopses, which detail type species, identification characteristics, distribution, biology, and key references. Accompanying the text is a wealth of illustrations. Each chapter includes black and white habitus photographs and drawings, plus a host of detailed morphological drawings. In some cases, larval illustrations are included. Finally, there are beautiful colour habitus photographs of representatives of each the approximately 1000 genera covered. I place a priority on the provision of high-quality illustrations for taxonomic works, and I was not disappointed.

This volume is a monumental achievement, especially considering the vast Australian beetle fauna and all the challenges that brings with it. Beetle systematics is a minefield of ever-changing interpretations, and an indication of that is given by the editors in the Preface, where they note the significant changes that have occurred since publishing Volume 1. They cite the example of Carabidae, where in Volume 1, thirteen Australian subfamilies were recognised. For the latest volume, these were abandoned in favour of 37 tribes and numerous subtribes.

This is a hugely impressive tome and I have no serious criticisms. The layout is clear and easy to follow, the text is highly detailed, and the illustrations are as stunning as they are extensive. The only issue I have - and it is minor - is that the habitus images of the genera (plates 14 to 103) are given in alphabetical order, rather than taxonomically, which makes comparison across related taxa more difficult when browsing. Similarly, the last two plates are of genera that were presumably missed out initially and might otherwise be overlooked, though they are still referred to in the text.

This volume (along with Volume 3, which promises to cover the remaining 94 families – another Herculean task) will be essential reading for anyone with a serious interest in the Australian Coleoptera. There is, to a very small extent, an overlap with some New Zealand genera, but this is essentially an Aussie beetle book and so may have limited general interest to a New Zealand audience. For New Zealand coleopterists, however, I highly recommend Volume 1 of the series as an ideal reference point for getting to grips with the wonderful world of beetles.

As an aside to this review (and as a nod to what the Australian entomologists have achieved), it is regrettable that there is a lack of general family-level treatments for the insect orders in New Zealand. It is all very nice to have new species descriptions and generic revisions. But, without the tools to allow entomologists to recognise the higher taxonomic ranks, this literature is often inaccessible. We are fortunate to have, for example, Klimaszewski and Watt's 1997 *Fauna of New Zealand* 37 review of beetle families, which is surely one of the most widely used FNZ volumes, even if it is now a little out of date. Importantly, FNZ 37 provides a vital inroad into more detailed studies of our beetle fauna, and I would love to see the same for at least the other major insect orders in New Zealand. Wouldn't it be nice to keep up with those Aussies, too?