

Book Reviews

Book Review Editor's Note: We are continuing to use the current currency codes. Thus Canadian dollars are CAD, U.S. dollars are USD, Euros are EUR, China Yuan Remimbi are CNY, Australian dollars are AUD and so on.

ZOOLOGY

Beetles of Eastern North America

By Arthur V. Evans. 2014. Princeton University Press, 41 William Street, Princeton, NJ, USA, 08540-5237. 560 pages, 23.16 USD, Paper.

For those with an inordinate fondness for beetles, finding suitable field guides and reference material has traditionally been a bit of a challenge compared to more charismatic taxa such as butterflies, moths, and (more recently) odonates. My dog-eared 1983 copy of the *Peterson Field Guide to the Beetles of North America* covers 111 families, and despite the 600+ line drawings, there are only 65 colour paintings (this holds true for the 1998 edition as well). More recent field guides to the tiger beetles (Cicindelidae) and jewel beetles (Buprestidae) are welcome and more colourful additions, but leave the majority of beetles treated in a fairly superficial way by more general insect books. On the more technical end of the spectrum, the comprehensive two-volume *American Beetles* by CRC Press (Arnett and Thomas 2000; Arnett *et al.* 2002) are an invaluable reference, but the pair will set you back \$280, and the combined 1300+ pages of text may be a bit daunting for the average field naturalist.

Enter Arthur V. Evans' *Beetles of Eastern North America*. According to its preface, the primary goal of the book is to present the beetles of eastern North America in an engaging format that is accessible to the amateur naturalist interested in beetles, while authoritative enough to serve the needs of the professional biologist. Mission accomplished. No longer will the vast majority of Coleoptera languish underappreciated! The 1500+ colour photographs by some of the best insect photographers in North America truly capture the beauty and diversity of our eastern beetle fauna like no other text before it.

Arthur's fantastic new book covers 1409 species and all of the 115 beetle families known from North America east of the Mississippi River. With an 8" x 10" format and 4 lbs of heft, it is not intended for the field and, despite its size, covers only about 10% of the known species for this region. It should however, allow readers to identify to the species level many of the conspicuous beetles they are likely to encounter, and to assign most others to the appropriate genus or family. *Beetles of Eastern North America* reflects the latest taxonomic works, which may confuse some readers where a once-familiar species is reassigned

to another group. For example, Ghost Tiger Beetle, long known as *Cicindela lepida* (including in recent field guides) is now referred to as *Ellisoptera lepida*. Fortunately, *Beetles of Eastern North America* includes a taxonomic classification from order through suborder, series, superfamily, etc. down to genus/species. While this appendix may be overkill for some, it can help readers more easily find a re-assigned species, and also helps to demonstrate the relationships amongst the diverse beetle groups.

The book opens with about 50 pages of introductory text covering beetle anatomy, behaviour, natural history, and where and when to find beetles. Accompanying photos helpfully demonstrate antennal types, body shapes, tarsal claws, and other features. Arthur has an engaging writing style and it is a much more interesting read than one might expect. Guidance on how to explore the world of beetles is provided, from passive observation and photography to actively collecting and preserving beetles, and even how to rear live beetles and their larvae. The introduction is followed by an illustrated dichotomous key to 68 of the most commonly encountered families in eastern North America. While not as comprehensive as the keys in the two-volume *American Beetles*, they should point the reader in the right direction, especially when used in conjunction with family descriptions from the main body of the book. No one ever said beetle identification was easy!

The main part of the book is organized by family, with a half- to full-page summary of family-level diagnostic characters such as length (mm), shape, color, and distinctive morphological features. Tips are given on how to distinguish each family from other, similar-looking families. A brief overview of the natural history of the group is also provided, as well as notes on suitable collection methods. Finally, the number of species and genera of each family found in the Nearctic and eastern North America are given (if known). This information is very helpful in understanding how diverse the group is, and how many potentially co-occurring species are not illustrated in the book. Similarly helpful is the total number of species in each

genus known from east of the Mississippi River, which is typically provided at the end of the species' accounts.

The species accounts are what set this book apart. There are generally only four species treated per page; this generous layout allows each species' photo to be sufficiently large that the diagnostic features described in the accompany text are often visible. And as a bonus, most of the crisp, vivid photos are of live beetles rather than pinned specimens. One should really use the keys to determine the family, but I would not be surprised if many readers "picture-key" first, and use the text to confirm a beetle's identification. The written descriptions of diagnostic features provided for each species are very useful (if somewhat dry), particularly for small or subtle characters that may not be evident in the photo.

The remainder of each species account consists of concise notes on seasonality, habitat, food preference (for adults and occasionally larvae) and distribution.

No range maps are provided (which would be daunting and space-consuming) but the range descriptions help determine whether a species potentially occurs in your general area. Non-native species are also flagged. Surprisingly, Emerald Ash Borer and Asian Longhorned Beetle are not covered in the species accounts but are presented in the introductory section on *Insects as Pests*. More information on the behaviour and natural history would have been welcome for many of the species, but compromises always have to be made when trying to cover as many species as possible in a reasonably-sized tome.

In short, *Beetles of Eastern North America* is an excellent book that will be much loved by field naturalists and entomologists alike, especially given its very modest price.

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