

Myrmecological News	11	135-136	Vienna, August 2008
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Book review

FISHER, B.L. & COVER, S.P. 2007: *Ants of North America: a guide to the genera*

University of California Press, Berkeley and Los Angeles, xiv + 194 pp., ISBN 978-0-520-25422-0, USD 34.95

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Myrmecol. News 11: 135-136 (online 25 June 2008)
ISSN 1994-4136 (print), ISSN 1997-3500 (online)
Received 7 May 2008; accepted 7 May 2008

Showy insects like butterflies are popular subjects for field guides, owing to their aesthetic appeal and the readily discernible differences that exist among most species. Ants present a more difficult prospect. They have long been a source of fascination to the public because of their remarkable behavior and complex social organization, but they are not well suited to user-friendly identification guides. Of necessity ant taxonomy is based primarily on the worker caste, and the distinguishing features of species and higher taxa can be subtle and difficult to communicate. Preparation of point-mounted specimens – which is necessary for evaluating many of the key diagnostic traits – requires training, dexterity and patience. Access to a good microscope and appropriate accessories (lighting, specimen stage) is almost essential. Compounding these challenges, the taxonomic literature itself is highly dispersed, of variable quality and scope, and filled with technical terminology that can be intimidating to the layperson and beginning student.

The present book represents an attempt to overcome some of these difficulties for the genera of North American ants. It provides an accessible, well illustrated key to the 73 genera, followed by synoptic treatments of each subfamily and genus. The book also includes a short but spirited four-page introduction to ant biology, a list of described North American species, a glossary of morphological terms, and lists of taxonomic references that can be consulted for attempting species identification. It is a handsomely illustrated guide, with black-and-white figures placed strategically in the key, and Automontage color images accompanying the treatment of each genus. Another satisfying feature is the inclusion under each genus of enticing nuggets of natural history. This has a strong flavor of authenticity, much of it being based directly on the authors' own field experience. This flavor is reinforced by an informal, sometimes folksy, writing style.

The authors are irrepressible ant enthusiasts and the organizers of "Ant Course", an annual 10-day workshop that offers in-depth training in ant taxonomy and biology to students from around the world. Based at a field station in southeastern Arizona, this course has served as the testing ground for earlier versions of the identification key. As such it has gone through multiple iterations and sequential improvements. The reader thus benefits from a time-tested product, but it is important to realize that it is customized for the North American fauna. Both the features mentioned

in the key and those cited under the genus descriptions are diagnostic only for the Nearctic representatives of the genus. For example, some species of *Linepithema* and *Tapinoma* have erect setae on the pronotum but not those encountered in North America, so the absence of pilosity is used (couplet 15) to separate these two genera (and *Ochetellus*) from other dolichoderine ants.

Until interactive and matrix-based keys become available this guide will be the preeminent resource for those wishing to identify North American ants. I would like to have seen some information about the collection, preparation and curation of ant specimens. These are important (and often under-emphasized) aspects of the identification process. Such information is available both online (e.g., <http://academic.evergreen.edu/projects/ants/AntsofCostaRica.html>) and in other ant guides (e.g., SHATTUCK 1999, LATKE 2000, 2003). Even if not given here it would have been helpful to refer the reader to these sources.

Another useful addition that would be in keeping with the field guide format is range maps. Such maps could indicate simply the presence / absence of a genus in each state or province, similar to the distribution maps appearing in Kye Hedlund's online catalog of North American ants (<http://www.cs.unc.edu/~hedlund/ants/>). In Fisher and Cover's book the section under each genus entitled "Distribution and ecology" is informative but variable in content. For some genera (e.g., *Cardiocondyla*, *Polyergus*, *Strumigenys*) the North American distribution is not indicated while for others it is laid out in considerable detail.

Notwithstanding these minor criticisms, this book represents an important milestone in North American myrmecology. It is a significant "down payment" (the authors' modest term) on a replacement monograph for Creighton's classic but outdated *Ants of North America* (CREIGHTON 1950). Fisher and Cover focus on the feasible – distinguishing the genera – while recognizing that an updated species-level treatment remains out of reach for the moment. Bringing knowledge of the Nearctic ant fauna up to the level achieved for Japan (IMAI & al. 2003) and central and northern Europe (SEIFERT 2007) will require sustained effort by ant taxonomists. In the meantime we now have a concise and elegant overview that will stimulate scientific and public interest in ants and (one hopes) provide added momentum to the urgent and ongoing task of species delimitation.

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Jahr/Year: 2008

Band/Volume: [011](#)

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