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## Book review

### CAPALDI EVANS, E. & BUTLER, C.A. 2010: *Why do bees buzz?* Fascinating answers to questions about bees

Rutgers University Press, New Brunswick, NJ, and London, 229 pp., Paperback, ISBN 978-0-8135-4721-3, Price: USD 21.95

*Prof. Dr. Daniel Cherix, Department of Ecology and Evolution, Biophore, University of Lausanne, 1015 Lausanne, Switzerland; Museum of Zoology, Palais de Rumine, Place de la Riponne 6-CP, 1014 Lausanne, Switzerland.  
E-mail: Daniel.Cherix@unil.ch*

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Bees are not ants, as you know. Moreover, among the Apidae, up to 85% of the species are not even eusocial! Nevertheless, keeping an updated broad knowledge about bees is important for us as hymenopterists of another sort, and this book will help, especially if you do not find the time to read all the relevant bee papers in scientific journals. The new book by Elizabeth CAPALDI EVANS and Carol A. BUTLER will indeed bring you *fascinating answers to questions about bees*. The first author is associate professor of biology and animal behavior at Bucknell University (Lewisburg, PA). She studies the relationship between insect behavior and brain structure, exploring the neurobiological underpinnings of ecologically relevant behaviors. Her focus is on honey bees, but she also studies other bees found in temperate and tropical habitats. Her studies have been published in a wide variety of journals including *Nature*. The second author is a psychoanalyst and a mediator in a private practice in New York City, as well as an adjunct assistant professor at New York University. She became interested in insects in 2004 as a docent at the American Museum of Natural History's butterfly collection in New York. These experiences led her to develop an ongoing series of books on animals.

Why do we need to "buzz" with this book? As stated in the publisher's description, this book is accessible to readers of any level, while offering the latest research and theory to the more sophisticated reader. The authors give critical answers to more than one hundred questions about the lives of bees. Concepts including speciation, evolutionary adaptation and pollination, as well as historical details about topics such as Mayan beekeeping and the appearance of bees in rock art are made readily accessible via handy sidebars highlighting the text. Color and black and white photographs and drawings enhance the beauty and usefulness of this book.

The book is organized in 11 chapters: Bee basics, Bee bodies, Bee behavior, Bee love, Bees in the hive, Bees at

work, Honey, Bees on the move, Bee stings and other defenses, Dangers to bees, and Beekeeping. In each chapter you will find recent references on the questions addressed. Most of these references are papers published within the last ten years, so the book brings you the latest knowledge about bees. You will also find 15 boxes with more detailed information on topics such as "The honey bee colony as a superorganism", "Epigenetics", "Bees' learning abilities" and "How do plants attract bees for pollination?", as well as on more historical topics such as "Bees and honey in Judaism", "Honey in Islam" and "The story of Brother Adam".

To Question 5 of the first chapter – What is the earliest evidence of the existence of bees? – you get a very recent answer describing the discovery of a bee fossilized in amber by the entomologist G. Poinar. This specimen belongs to an extinct lineage of pollen-collecting Apoidea, sister to the modern bees (*Melittosphex*). In the references you find the paper by POINAR & DANFORTH (2006: *Science* 314: 614). In the same answer, you also learn about the history of the European honey bee and you are referred to the paper by WHITFIELD & al. (2006: *Science* 314: 642-645). These publications are good references to start new research or just to get valuable information on the subject. Another example of the quality of the book is how CCD (colony collapse disorder) is dealt with. This question is in Chapter 10 (Dangers to bees) where you learn that similar die-offs have been observed at least in 1869, 1915 (called Disappearing Disease), 1963, 1964, and 1965 (called Dwindling, Fall Collapse and Autumn Collapse, respectively). The finding of the Israeli Acute Paralysis Virus as a significant marker for CCD should be interpreted cautiously, the authors say. The recent work by BROMENSHENK & al. (2010: *Public Library of Science ONE* 5: e13181) confirms their statement.

Being a myrmecologist, I really enjoyed reading this book, one question after the other, going through the references and getting very valuable information on bees. *Why do bees buzz?* is part of a series of question-and-answer books published by the Rutgers University Press. Others in the series, also co-authored by Butler, answer questions about butterflies, bats, hummingbirds and salt marshes. Further titles are forthcoming. And why *do* bees buzz? I highly recommend you read the book to find out.