

Greatest hits in behavioral ecology

Model Systems in Behavioral Ecology. Integrating Conceptual, Theoretical and Empirical Approaches

edited by L.A. Dugatkin.

Princeton University Press, 2001.

£24.95 pbk (584 pages) ISBN 0 691 00653 9

In the closing thoughts of his edited volume, *Model Systems in Behavioral Ecology: Integrating Conceptual, Theoretical and Empirical Approaches*, Lee Alan Dugatkin states that the motivation for the book was provided by a graduate seminar at the University of California, Davis entitled 'Is behavioral ecology dead?'. Dugatkin believes that the answer is no, and compiled this book to chart 'the history and future of behavioral ecology'. We are students in the same seminar series that questioned the vitality of the field five years ago. Although this volume falls short of answering our question clearly, it provides a chance to read personal accounts of celebrated careers and will be particularly interesting to new graduate students.

Dugatkin begins his book by defining a model system as 'a species in which behavioral ecologists have undertaken detailed studies in an attempt to address fundamental questions of interest'. He asked each contributor to discuss how he or she came to work on their particular model system, how their research integrates conceptual, theoretical and empirical approaches, and their future

research directions. He also requested that, using a personal and informal style, contributors provide advice to students beginning a career in behavioral ecology. The result is a collection of 25 chapters, which Dugatkin organized by taxonomic category (insects and arachnids, reptiles and amphibians, birds, and mammals).

Dugatkin's liberal definition of a model system includes both classic systems, where a broad knowledge of an organism has been gained from work in multiple labs, red-winged blackbirds, for example, to less understood systems with the potential to become classics, stalk-eyed flies, for example. However, none of the species covered in this volume are model systems in behavioral ecology in the same sense that *Drosophila* or *Caenorhabditis elegans* are model systems in genetics. In fact, the greatest weakness of the book is that it did not answer a recurring question in our discussions: are there model systems in behavioral ecology? If so, what purpose do they serve? However, what we enjoyed most was learning that even renowned scientists suffer from the vicissitudes of research, and reading about their career highs and lows. Hence, this book is more effective as a collection of model careers than as examples of model systems. Geoff Parker, in an account of his career working with dungflies, perhaps summarized this best when he noted that 'writing this essay has felt rather like writing a part of one's own obituary'.

Although *Model Systems in Behavioral Ecology* is instructive and a pleasure to read, we wonder whether a collection of the greatest hits of behavioral ecology is the best way in which to demonstrate the

vitality of the discipline. Instead, a book about the history and future of behavioral ecology should emphasize the greatest strength of the discipline – its integration of diverse ideas, which routinely cut across taxon boundaries. Although this appeared to be Dugatkin's intention (integration of concept, theory and experiment), the taxon-specific theme of each chapter and personal, autobiographical style made it difficult for authors to show how behavioral ecology integrates diverse ideas and generates new hypotheses. We hope that future prognoses of the health of behavioral ecology will not be limited to a taxonomic framework or personal histories, but instead will emphasize new directions in this integrative field.

Alison M. Bell*

Population Biology Graduate Group,
One Shields Ave., University of California,
Davis, CA 95616, USA.

*e-mail: ambell@ucdavis.edu

Jeremy M. Davis

Jennifer L. DeBose

Sarah J. Long

Karen E. Mabry

Theodore Stankowich

Jason V. Watters

Animal Behavior Graduate Group,
One Shields Ave, University of California,
Davis, CA 95616, USA.

J. Chadwick Johnson

University of Kentucky, School of Biological
Sciences, T.H. Morgan Building, Lexington,
KY 40506, USA.

DOI: 10.1016/S0169-5347(02)02521-1