

***Evolutionary Behavioral Ecology*. Edited by David F. Westneat and Charles W. Fox.**

New York, NY: Oxford University Press, 2010, 664 pp. ISBN 978-0-19-533192-9 (paper), \$49.95; ISBN 978-0-19-533193-6 (cloth), \$150.00.

Behavioral ecology coalesced as a scientific discipline in 1978 with the publication of Krebs' and Davies' *Behavioural Ecology: An Evolutionary Approach* (Blackwell Science Ltd). This engaging and thought-provoking volume quite literally defined the field and laid its foundation. Three subsequent volumes were published every 6 years or so and took stock of selected topics deemed important by its editors. The books were much-anticipated by behavioral ecologists and generally provided the compass bearing for the field's research path. Unfortunately, *Behavioural Ecology: An Evolutionary Approach* was last published in 1997 and has been missed by behavioral ecologists ever since.

Fast-forward 13 years and the spirit and flavor of the "Krebs and Davies" approach is revitalized with the publication of *Evolutionary Behavioral Ecology* by Westneat and Fox. In their recent volume, Westneat and Fox charged an impressive roster of leading researchers with the task of identifying and encapsulating the pressing puzzles in behavioral ecology. As with any endeavor of this nature, there is a trade-off between how deeply a topic is covered and the total number of topics that can be included. That said, the current volume has a slightly different (and more ambitious) mandate than did Krebs and Davies in that Westneat and Fox sacrifice depth-of-coverage to focus on core concepts across a broader range of topics. This approach allows Westneat and Fox to beautifully achieve their grander goal of producing a book suitable for a comprehensive semester-long graduate course in behavioral ecology.

The chapters in *Evolutionary Behavioral Ecology* are short, concise (approximately 17 pages) and to-the-point. Each begins with a statement explicitly outlining the authors' goal(s) for the chapter and finishes with "future directions" and a short-list of "must-read" papers. The intervening pages are dense with ideas but not impenetrable and made more accessible by the generous use of inset boxes elaborating key concepts. For the most part, the material is presented in an engaging and enthusiastic style—a

quality that will certainly appeal to graduate students and other newcomers to the field. I was rather impressed with how generous the authors' were with their research ideas and in their effort to point out gaps in our knowledge. Take note rookie graduate student, several PhD theses (and research programs) lurk in these chapters.

Although more than five dozen authors contributed to 31 chapters, this book does not feel wayward and unfocused. On the contrary, the presentation, format, and style are consistent and flow very well from one chapter to the next. Credit the editors with this achievement.

This book's six sections contain several "must-read" chapters—too many to detail in this review. I will, however, note that every student of behavioral ecology would be well-served to read Birkhead's and Monaghan's excellent historical account of behavioral ecology's (sometimes bumpy) development, and maturation into a coherent scientific discipline (Section I: Foundations). Another paper from Section I that I highly recommend is Hunt and Hodgson's thought-provoking chapter entitled "What is Fitness, and How Do We Measure It?". In fact, I think that this essay should be periodically re-read by all investigators in order to re-affirm their ultimate research goal (i.e. understand the fitness consequences of behavior) and approaches to achieving it. I was delighted with the section devoted to reproductive behavior (Section V: Reproductive Behavior); these chapters were particularly well-integrated and rife with new avenues of research. I will undoubtedly make these chapters the foundation of my graduate course in animal behavior.

The book does an admirable job of highlighting new ideas and approaches that are shaping the future of behavioral ecology (Section VI: Extensions) with discussions of powerful techniques (e.g. genomic approaches) as well as boundary-challenging ideas (e.g. behavioral syndromes). However, conspicuous by its absence is the lack of any discussion of immunocompetence or ecoimmunology, perhaps the most rapidly growing behavioral ecological sub-discipline. Hopefully, future editions—and I do hope there are more volumes to come—remedy this omission. Another minor quibble is that the quality of writing among the chapters is occasionally uneven but, as the editors themselves point out in the preface,

this is a difficult challenge to overcome given a plethora of writing styles among a few dozen authors. There are a few typographical errors and grammatical mistakes requiring a sentence's re-read but these are hardly serious drawbacks.

Behavioral ecology is a young scientific discipline that is still experiencing growing pains. *Evolutionary Behavioral Ecology* will certainly ease those pains by providing "conceptual clarity and empirical excitement" for its practitioners. Time will tell whether "Westneat and Fox" will be a new generation's "Krebs and Davies;" for now; however, there is no denying

that this volume will set behavioral ecology's research path for the near future.

Clint D. Kelly  
 Department of Ecology  
 Evolution and Organismal Biology  
 Iowa State University  
 Ames, IA 50011, USA  
 E-mail: cdkelly@iastate.edu

Advance Access publication 16 September 2010  
 doi:10.1093/icb/icq137

***Investigating Science Communicating in the Information Age: Implications for public engagement and popular media.* R. Holliman, E. Whitelegg, E. Scanlon, S. Smidt, and J. Thomas, editors.**

New York, NY: Oxford University Press, 2009. 320 pp. ISBN 9780199552665 (paperback), \$39.95.

This book provides an overview of how public engagement and popular media influence the way science is communicated. This book, edited by Holliman, Whitelegg, Scanlon, Smidt, and Thomas, presents articles from multiple contributors engaged in research on science communication. The articles provide insight into their research, issues in science communication, and the different perspectives of science communication research. The text is organized according to six sections: Engaging with Public Engagement; Researching Public Engagement; Studying Science in Popular Media; Mediating Science News; Communicating Science in Popular Media; and Examining Audiences for Popular Science. Each theme consists of two or three articles that provide readers with definitions, current issues, and examples of each theme. Among the six sections, readers will notice two overarching themes, public engagement, and popular media. These themes provide readers with opportunities to think critically about society's outlook on the methods for communicating science. They also provide detailed discussions and definitions on concepts of popular media.

Section 1 begins with Irwin's article arguing "Science is central to the modern world. Public knowledge of science is a democratic, personal and cultural asset. Enhanced science communication is vital" (p. 4). This encourages the reader to look at the influence science communication has on society and society's understanding of science. Irwin then begins to describe the various perspectives of communication

(i.e., deficit model and dialogue) and the underlying results for each perspective. Throughout this section, Irwin grabs the reader's attention through the use of engaging examples (i.e., Secretary of State for Agriculture, Fisheries, and Food eating a beefburger with his daughter) and arguments for effectively engaging with the public. Next, the history of science communication is discussed by Stilgoe and Wilsdon in their article on the politics of public engagement. They examined three basic phases of communication (i.e., Public Understanding of Science; From Deficit to Dialogue; and Upstream Engagement) and provided examples of the how public engagement is enacted, viewed, and valued. They voice that there should be "a deeper debate about science's and government's relationship with the public" (p. 29). Section 1 is closed by Holliman's and Jensen's descriptions of science and the public and a review of their science outreach or public engagement (SCOPE) study. After Section 1 of the book, the book engages readers in a discussion of science dialogues with the public (Section 2) and science in the popular media (Section 3). In Section 3, articles briefly discuss the history, trends, and models of public understandings of science. Here, Hansen argues that a key issue in understanding the view and nature of science in popular media is being able to differentiate between different media and different genres. Leach, Yates, and Scanlon provide overviews of the transmission and ritual views of communication. They illustrate the differences between these modes of communication and how they emphasize, as seen in the ritual model, or fail to emphasize the context of communication.

The second half of the text begins with Section 4 on reporting science news. Allan details the role and characteristics of science journalism and goes on to discuss what constitutes a good science story. He notes that an important part of making science