

## HOW TO THINK LIKE A NEANDERTAL.

By Thomas Wynn and Frederick L. Coolidge. Oxford and New York: Oxford University Press. \$18.95 (paper). xi + 210 p.; ill.; index. ISBN: 978-0-19-932922-9. [First paperback edition published in 2013.] 2012.

## SOCIAL PREDATION: HOW GROUP LIVING BENEFITS PREDATORS AND PREY.

By Guy Beauchamp. Academic Press. Amsterdam and Boston (Massachusetts): Elsevier. \$49.95 (paper). xi + 317 p. + 4 pl.; ill.; index. ISBN: 978-0-12-407228-2. 2014.

Despite its somewhat unusual main title (the book does not deal with sociopaths), this is an extremely useful and well-written volume. The subtitle more accurately describes its contents. The book begins with two chapters on the ways in which grouping can benefit predators, by increasing their rate of encounter and capture of prey, while simultaneously creating costs due to competition. The next four chapters look at grouping from the perspective of prey animals, considering the various ways in which aggregating can reduce their risk of predation. The last three chapters, grouped as General Considerations, discuss optimal group size, mixed species groups, and a number of evolutionary issues. There is also a brief conclusion, tying things together.

The reviews of the theoretical and empirical literature in each of these chapters are reasonably complete, and although there are no new data included in the book, Beauchamp adds value in other ways. The reviews are critical, identifying areas where more data are needed—particularly to check the assumptions of theoretical models. This was particularly evident in the chapters that deal with topics to which Beauchamp himself has contributed, especially vigilance and producer-scrounger games. He also frequently identifies the need for more and better studies on certain questions, and often provides intriguing ideas for new research. A beginning graduate student will find lots of interesting thesis topics here, and even an old hand like myself found much to stimulate new thoughts on old subjects.

One issue that arose frequently throughout the volume is the taxonomic bias apparent in a number of research areas. For example, most of the work on vigilance and on producer-scrounger interactions has used small birds as the study subjects, and almost all of the work done on group-joining decisions has been with fishes. As the author rightly points out, our understanding of these phenomena would be deeper and richer if the range of study taxa were broadened.

One thing about the book annoyed me, but I am sure it is not the author's fault. A number of figure captions refer to color lines, and then say these can be seen in the online version of the volume, which must be purchased separately. It is understandable that the publisher may want to keep the production cost of the book as low as possible, but I would suggest a better way of doing this would have been to eliminate the color plates in the back of the publication, only one of which (on mimic coloration in shorebirds) enhanced understanding relative to the identical black-and-white photographs in the text. Despite this quibble, the overall production quality of the volume is high, and the comprehensive and critical review of the literature deserves a wide audience. I recommend it highly to anyone interested in animal behavior and/or ecology.

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## SEXUAL SELECTION: PERSPECTIVES AND MODELS FROM THE NEOTROPICS.

Edited by Regina H. Macedo and Glauco Machado. Academic Press. Amsterdam (The Netherlands) and Boston (Massachusetts): Elsevier. \$99.95. xxiv + 441 p. + 12 pl.; ill.; index. ISBN: 978-0-12-416028-6. 2014.

The main premise of this book is a good one: our knowledge of sexual selection, like many other evolutionary mechanisms, is heavily geographically biased. This limits our ability to test the generality of sexual selection theory since it largely underrepresents the most diverse areas of the planet. This volume represents an effort to alleviate this gap by showcasing a collection of high-quality research done by scientists in neotropical areas. The first chapter makes a convincing case for the importance of a more balanced geographic representation of model systems in our understanding of sexual selection. Wider geographic representation provides much-needed variation in the environmental factors driving evolutionary tradeoffs. For example, although energetic tradeoffs may be important in cold climates, parasitism is likely a much stronger force in the tropics, which has clear implications for our understanding of the Hamilton-Zuk hypothesis. Chapter 3 tackles precisely that by elegantly exposing our knowledge gaps in different components of parasite-driven sexual selection theory, and explaining how the broad biological variation in neotropical species can contribute to filling it. Chapter 4 does a similarly good job of outlining the place of neotropical butterflies in our understanding of mating systems theory. The majority of chapters are more descriptive and de-

voted to taxa with a high diversity of strategies, representing excellent systems for comparative evolutionary ecology from harvestmen (Chapter 5) to bats (Chapter 16).

A second premise for paying attention to the highly diverse neotropics is exposed in Chapter 2, which argues that their diversity often harbors unexpected behaviors and life histories that force us to revise theory. Although Chapter 2 attempts to make that case using reproductive behavior in scorpions, Chapters 6 and 9 represent more convincing and well-developed cases by providing fascinating theory-defying examples of sex role reversal in wolf spiders, and alternative reproductive tactics in fish.

Chapters vary in quality, as does the degree to which they are theory guided. Most of them focus on showcasing diversity, leaving any “big picture” synthesis to be done by readers. Although we enjoyed the intellectual exercise, some guidance from the experts would have helped. A similar statement could be made for the book as a whole, which left us wishing for a closing chapter that brought the message home. This could have been facilitated by organizing the chapters conceptually rather than taxonomically, and placing the exhaustive description of details into boxes to help the flow of argument.

We were surprised that one of the most exhaustively studied neotropical species in sexual selection, the guppy, was relegated to brief cameo appearances in some chapter introductions. Yet, it seems this is because the editors and authors take pride in showcasing understudied systems and underexposed neotropical research. We are left convinced of the important place of the neotropics in sexual selection theory. They can not only hide a diversity of examples that challenge our ideas of sexual selection, but also, as the authors rightly claim, foster high-quality research that challenges the preconception that great science comes from long-established Western economies.

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#### THE EVOLUTION OF INSECT MATING SYSTEMS.

*Edited by David M. Shuker and Leigh W. Simmons. Oxford and New York: Oxford University Press. \$125.00 (hardcover); \$64.95 (paper). xiv + 339 p.; ill.; index. ISBN: 978-0-19-967802-0 (hc); 978-0-19-967803-7 (pb). 2014.*

Insects display an impressive diversity of mating and social behaviors. Studying these systems provides insights into a wide range of evolutionary and behavioral issues such as the evolution of sex, sexual selection, sexual conflict, mate choice, sperm competition, and parental care. This edited volume provides an authoritative update of Thornhill and Alcock's highly influential book, *The Evolution of Insect Mating Systems* (1983. Cambridge (MA): Harvard University Press), which inspired adaptationist approaches to the study of reproductive behavior in animals overall, and not only in insects.

Published on the occasion of the Royal Entomological Society's International Symposium on The Evolution of Insect Mating Systems in September 2013, this work brings the empirical and conceptual scope of Thornhill and Alcock's original publication fully up to date, incorporating a wealth of new knowledge and research from the last 30 years. It explores reproductive contests and the evolution of extreme weaponry, and the role of sexual selection in shaping the evolution of mating systems. Selection arising via male-male contests competition and female choice (before and after copulation) are discussed, as well as the role played by parasites and pathogens in mediating the strength of sexual selection, and the role of parental care in reproduction.

The chapters are written by some of the main scientists in the field which attests to the quality and readability of this volume, and the obvious enthusiasm of the authors make the reading of the book a true pleasure. It is suitable for both graduate students and scientists interested in insect mating systems or behavior from an evolutionary, genetical, or ecological perspective. Due to its interdisciplinary and concept-driven approach, it is my contention that this volume will be of relevance to a broad audience of evolutionary biologists.

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