



## BOOK REVIEW

**Mammal Societies.** Tim Clutton-Brock editor. 2016. John Wiley & Sons, Inc., Chichester, West Sussex, UK. xiv + 744 pp. \$70.00 hardcover. ISBN 978-1-119-09532-3.

*Mammal Societies* is an authoritative and magnificently written synthesis of mammalian social behavior. As Tim Clutton-Brock states in the preface, his goal was to “. . . create an integrated account of mammalian societies. . .,” which he achieves with a seamless elegance honed through decades of long-term research on primates, ungulates, and carnivores. The book explains the fundamental theory underlying sociality, and then applies it to understand the diversity of mammalian behavior. Unlike previous syntheses that separate humans from non-human primates, and primates from non-primates, Clutton-Brock masterfully integrates his knowledge of these disparate literatures, and of behavioral diversity in general, to create a genuinely interesting and stimulating overview and synthesis of what we do and do not know about mammalian social behavioral diversity with implications for understanding ourselves.

After a historical perspective on modern socioecology (Chapter 1), the book divides questions about patterns of female sociality from males before pulling them back together. This is necessary because theory predicts, and data support, that females often prioritize access to resources, whereas males often prioritize access to females. Thus, to understand patterns of sociality, one must first examine them separately. Each chapter opens with an engaging anecdote to set the stage and pose a series of questions that are later answered. Chapters primarily about females focus on the types of female sociality (Chapter 2), dispersal and philopatry (Chapter 3), mating decisions (Chapter 4), maternal care (Chapter 5), social development (Chapter 6), communication (Chapter 7), competition between females (Chapter 8), and cooperation between females (Chapter 9).

A chapter on mating systems (Chapter 10) bridges the gap between males and females. Chapters about males focus on associations between males (Chapter 11), male dispersal and its consequences (Chapter 12), reproductive competition among males (Chapter 13), relationships between males in multi-male groups (Chapter 14), how males interact with females (e.g., coercion and reproductive conflict; Chapter 15), and paternal care (Chapter 16). The chapters on cooperative breeding (Chapter 17) and sex differences (Chapter 18) integrate and contrast males and females, including their respective roles. The final 2 chapters focus on hominins and humans (Chapter 19) and human behavior (Chapter 20).

Throughout, Clutton-Brock clearly deconstructs hypotheses and critically reviews both the logic and the data supporting them. He also identifies the key observations

required to demonstrate the adaptive utility of a range of socioecological questions and traits. He is constructively critical of many hypotheses that range from reciprocity in vampire bats to the grandmother hypothesis. *Mammal Societies* is a goldmine for graduate students and those establishing new studies about the adaptive value of sociality in any taxa. It would make an outstanding book to read in a graduate seminar and should be on the desk of any graduate student or academic interested in social behavior in any taxa.

Clutton-Brock uses contrasts between different species and a rigorously clear description of current theory to understand the adaptive value of social diversity, resulting in an integrative approach. He discusses proximate mechanisms and constraints, the development of some behaviors, and the evolutionary history of many questions of interest. He then uses this integrative toolkit to better understand adaptive diversity. For many topics, he highlights how behavioral decisions have population-level consequences, making this an important resource for those interested in modeling population dynamics. This is modern evolutionary behavioral ecology at its best and could be summed up as “all creatures great and small held together by integrative theory.”

The book is lavishly illustrated with color photographs of mammals, many of them engaged in social activities. Meerkats (*Suricata suricatta*) and prairie dogs (*Cynomys* spp.) have a good showing! The graphics are clear, illustrating and summarizing key points and studies. There are many thousands of citations making this the go-to resource for each topic discussed. At least one reference slipped through the proofing and was not in Chapter 19's bibliography (Anonymous. 1970). My one wish would be for a larger font to make it a bit easier to read, which likely will not be a problem if one reads the electronic edition.

In summary, *Mammal Societies* is an intellectual tour de force that will become a citation classic and will set the stage for the next generation of studies on the adaptive value of sociality. Although not an easy read, it is a must read for anyone interested in the diversity of social behavior and its implications for population demography, and the evolution and maintenance of animal sociality.

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## LITERATURE CITED

Anonymous. 1970. Effects of sexual activity on beard growth in man. *Nature* 226:869–870.