## Societies of Wolves and Free-ranging Dogs

By Stephen Spotte. 2012. Cambridge University Press, New York, NY, USA. 394 pages, 58.00 USD, Paper and Kindle, 133.00 USD, Cloth.

Stephen Spotte's book, Societies of Wolves and Freeranging Dogs, is a detailed account of wild wolves and free-ranging dogs (including dingoes) living throughout the world. It is well researched with 73 pages of endnotes, 50 pages of references, and a 16 page index. The volume is 394 pages but ends on page 238 before the citations noted above, and after 16 pages of Roman numeral introductory material. The jacket cover of the book accurately summarizes its contents: "Wolves are charismatic emblems of wilderness. Dogs, which descended from wolves, are models of urbanity. Do freeranging dogs revert to pack living or are their societies only reminiscent of a wolfish heritage? Focusing on behavioral ecology, this is the first book to assess societies of both gray wolves and domestic dogs living as urban strays and in the feral state. It provides a comprehensive review of wolf genetics, particularly of New World wolves and their mixture of wolf, coyote and dog genomes. Spotte draws on the latest scientific findings across the specialized fields of genetics, sensory biology, reproductive physiology, space use, foraging ecology and socialization. This interdisciplinary approach provides a solid foundation for a startling and original comparison of the social lives of wolves and free-ranging dogs."

I am not sure if the manuscript is a startling comparison of wolves and dogs but it is certainly original in how it combines the two canines into one volume. I found it very odd though that Spotte, a well published marine biologist, would write such a detailed book on the Canidae family, considering that he does not appear to have any prior publications on the topic and only cites one of his previous references (on zoos) in this book. That is not a negative comment, but rather more of a curiosity on my part. However, I would have at least liked for Spotte to have explained his decision to write such a treatise, even if briefly discussed. He certainly wrote the book with a different perspective than a full-time canid biologist, as I'll explain below.

I already have a fair bit of information (e.g., books, scientific papers, personal research) on wolves and coyotes, so in reading Societies of Wolves and Freeranging Dogs I learned more about dogs, both freeranging ferals and dingoes, than I previously had knowledge of, and will likely use this book as a reference on them. I found it useful to have behavioural information on city strays and feral dogs and to learn about dingo ethology which seems to be dramatically different than wolves and more of a mix of dog and wolf, including their reproductive cycle and ecology such as not living in packs and displaying questionable parental care of offspring. However, it was pretty clear that there isn't nearly as much scientific information published on dingoes and feral dogs as there is on

wolves, especially considering that most of the dingo literature that was referenced was dated and much of that was anecdotal (e.g., second hand reports of 1–2 sentences on some aspect of dingo ecology such as parental care).

The book is a literal encyclopaedia of information on what makes a wolf, what makes a dog, visual and tactile communication, olfactory and vocal communication, space, foraging, courtship and conception, reproduction and parenting, and socialization. Spotte did a commendable job of synthesizing knowledge on both wolves and dogs which is an enormous task. I did find many sections that were very "heavy" and lengthy to read; for instance, the introduction to chapters, such as Chapters 3.1 (p. 33–38) on metaphors and semiotics and 4.1 (p. 61–66) on odour and pheromone reception, were especially time consuming and philosophical despite being information filled. Thus, the book was more of a reference book than something to sit down and casually read. I found that it took me multiple hours to comprehend each of the 9 chapters and, as the author suggested on p. xii, I had a bookmark in the endnotes and reference sections. While I tried to simply peruse through the book I found the scientist in me constantly paging to the endnotes and then to the references to find the quoted works. This took me considerable time bearing in mind that each chapter had between 170–474 endnote citations. And herein lies my intrigue with the book: Spotte cites many references (50 pages) but relies disproportionately on older studies from the 1940s-1970s. While many of these volumes are seminal studies, such as Adolph Murie's (1944) The Wolves of Mount McKinley, Ian Cowan's (1947) The Timber Wolf in the Rocky Mountain National Parks of Canada, Lois Crisler's (1958) Arctic Wild, and Dave Mech's (1970) The Wolf, I thought that the author cited them way too much, especially considering the hundreds of new manuscripts which are more up-to-date and comprehensive such as Dave Mech and Luigi Boitani's (2003) Wolves: Behavior, Ecology, and Conservation which was cited much less frequently. However, to have 73 pages of endnotes is a massive undertaking and there are newer references mixed into those older works making the book certainly usable and for the most part current.

I found Spotte's perspective very interesting even if I disagreed with some of his premises such as his suggestion to name red wolves as "red coyotes" (p. 8), calling Great Lakes wolves the same as eastern wolves (page 7 note: most of the literature separates the two as Great Lakes wolves are believed to be eastern wolf × gray wolf hybrids), and his behaviorist viewpoint and repeated mention of animals unable to recognize the mental state of others (page 74) or that non-humans do not possess a theory of mind (page 34). My guess is that

Marc Bekoff, and many other scientists that study animal cognition, would disagree with this perspective. While Spotte casts doubt if admixed canids deserve species status (p. 5), I disagree as new research is informing us that hybridization is a natural process and the cause of rapid evolution in many groups of animals, such as canids in eastern North America, most notably the eastern coyote/coywolf (Canadian Field-Naturalist, 2013, 127: 1–16).

Despite my comments noted above, I do endorse the book as it is a valuable reference for anyone's book shelf and it provides a very well synthesized version of both wolves and dogs. However, the following are my four major criticisms of the book:

The first is simply the expense of book. When I looked at the price on Amazon.com I was stunned how expensive this simple soft-cover, nearly 400 page book was. In fact, the *sale* price for the Kindle edition was 36.80 USD, and 52.20 USD for paperback, and 110.44-126.35 USD for the hardcover version. I don't understand why the book is so expensive especially since it is black and white and could be printed on demand for significantly cheaper than that. The price alone makes it difficult to justify purchasing except maybe for an upper level college or graduate course.

Second and bizarrely, the book (page 238) just ends after the dingo socialization section of Chapter 9 with no conclusion whatsoever. I strongly believe there should have been a Chapter 10 that synthesized the information that I digested in the first 9 sections. Without this summary the reader is left wondering what the main take home messages of the book are.

Third, Spotte is a tad critical of previous studies and theories and is inconsistent with his criticisms. I think this may have a bit to do with the author not having a background studying canids even if he has a strong scientific understanding. There were many sections of the book that I just didn't feel right with but sometimes couldn't place my finger on exactly why I felt that way because I was trying to trudge through all of the infor-

mation (this would probably be similar to me writing a detailed book on marine mammals and then having a marine biologist review it). For instance, on page 67 Spotte claims that wolf scent marking as a territorial boundary is more anecdote than empirical yet he then repeatedly makes claims and references in the endnotes (especially some of the older citations noted above) supporting such behavior. I found it difficult to go back and forth from the chapter to the endnotes when reading these types of passages, especially where there is much scientific agreement on a given topic like canid territoriality and scent marking. In other words, the author is critical of the scientific literature in many sections (using philosophical arguments of why things like territoriality aren't proven) yet he then attributes many of his statements with older citations that may even be anecdotes themselves (like the books published in the 1930s-1950s).

And fourth, the book is repetitive in many sections, but this isn't a major complaint. While this may be expected of a major work I found the frequent references to go back to a specific chapter, reference, or endnote frustrating. But that was most likely because I was reading the book from cover-to-cover instead of using it as an encyclopedia-like reference whereby that repetition may be useful to the reader.

Despite some of my issues with Societies of Wolves and Free-ranging Dogs it is certainly a unique reference on wolves and dogs, which are now generally regarded as the same species. In one book, it synthesizes what is known on the most recognizable of all canids and I don't think that has been done before. Thus, despite me disagreeing with certain sections and viewpoints, I would recommend the book as a reference for canid enthusiasts if one can afford the price. However, the book is not for beginners on the subject matter of wolf and dog ecology and behavior as it is a time-consuming and exhaustive read.

JONATHAN WAY

89 Ebenezer Road, Osterville, MA, USA, 02655