BOOK REVIEWS

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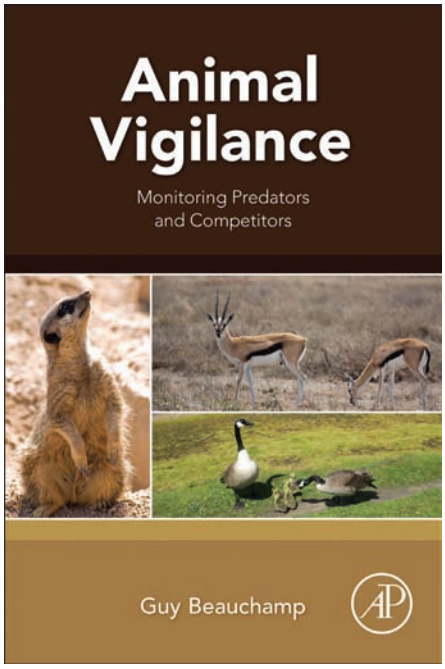

ANIMAL BEHAVIOR

Animal Vigilance: Monitoring Predators and Competitors (1st Edition). By Guy Beauchamp. 2015. Academic Press. (ISBN 978-0-12-801983-2). 254 pp. E-Book. $49.95.

Animal Vigilance is a comprehensive review of this aspect of the field of animal behavior. This text is designed for undergraduate and graduate students, as well as faculty with an interest in the topic. It begins by defining vigilance and the scope of this particular review, and provides a guide for students looking for research guidance. Beauchamp warns against some of the anthropomorphic terminology that still pervades in animal behavior, and provides a table that compares this language with the more suitable language of the field. I found this to be exceptionally helpful as I gained my footing with this subject, which I studied in college, but have not been involved in since.

After providing an overview of the field, Beauchamp explains why animals engage in vigilance, both from a proximate and an ultimate perspective. These reasons range from levels of corticosteroids and the acuity of vision (proximate) to maintenance of a harem and ecological considerations (ultimate). From there, Beauchamp explores the drivers of vigilance from a social and a predation perspective, moves to the theory behind group size and vigilance, follows that with empirical studies to support the theory, and ends with the applications of vigilance. This is an authoritative study of the field of vigilance, and Beauchamp has left no stone unturned in his exploration.

I received this book to review at the beginning of March Mammal Madness, and the excitement of creating my bracket along with my own interest in animal behavior (what I studied as an undergraduate) propelled me through the book. I was struck by the attention to detail, with a variety of studies to illustrate and support each argument. As someone who has been away from this field for some time, I most appreciated the level of attention given to defining concepts that a seasoned academic might not consider, like the difference between proximate and ultimate, and the explanation of meta-analyses.

This book would be a fabulous addition to anyone teaching undergraduate or graduate level science, as well as for high school teachers who either have an interest in animal behavior or have students who do research in this field. It has more detail than would be needed at a high school level or introductory college level biology course, but will certainly strengthen your knowledge of both animal behavior and research methodologies.

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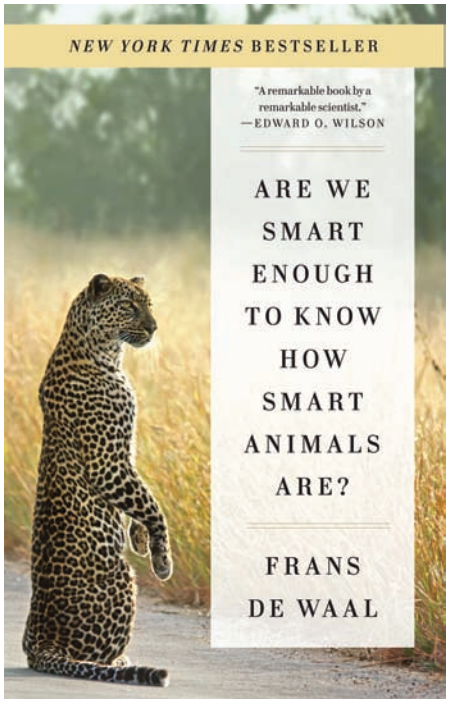

Are We Smart Enough to Know How Smart the Animals Are? By Frans De Waal. 2016. Norton. ISBN (9780393353662). 2756 pp (not including Appendices). Paperback. $16.95

What does it mean to have cognition? Based on many studies of animal (including human) behavior, this question has been answered, refuted, answered again, and refuted again. In the past, it was thought that humans were the only animals capable of having cognition, and other animals were seen as acting on instinct alone with little future planning, understanding of the past, or ability to plan. That we cannot compete with some animals on many tasks is irrelevant because cognition has many different dimensions beyond what can be easily understood through surface observations of behavior. In fact, countless studies have shown that many animals do indeed plan, persist, and process, and that the "ecology

The American Biology Teacher, Vol. 80, No 2, pages. 153–155, ISSN 0002-7685, electronic ISSN 1938-4211. DOI: https://doi.org/10.1525/abt.2018.80.2.153.