

Marmot Biology – Sociality, Individual Fitness, and Population Dynamics

By Kenneth B. Armitage. 2014. Cambridge University Press, University Printing House, Shaftesbury Road, Cambridge, UK, CB2 8BS. 407 pages, 66.20 CAD, Cloth.

This is a solid book. The author has spent nearly half a century studying the Yellow-bellied Marmot (*Marmota flaviventris*) which certainly gives him the foundation to write such a work. This book is a massive synthesis of marmot biology; there are almost 800 references ...another indication of the thoroughness of this book. There are some nice pictures, and some interesting lore in the first chapter, but largely, this is not meant to be a coffee table book but is going to appeal to ecologists, ethologists and hard core marmot enthusiasts.

Although there are 13 (according to table 1.2) or 14 (according to Figure 2.3) other extant marmots (including the widespread groundhog/woodchuck *M. monax*), the book's coverage is dominated by the author's own focus animal. One entire section (of six in the book) is exclusive to the Yellow-bellied, with the other sections heavy with it. I think that another section in the book, with chapters focussed on the other species, would have balanced the book. However, the information presented on the other marmots is enough to justify titling the book as it is.

The ecology of marmots is largely the concern of the book, and the coverage here is both in depth and thorough. However, the section on predators barely occupied three pages of text, and parasites were given simi-

lar short shrift. It is unclear whether this represents a dearth in the literature, or the author's purposeful exclusion. However, the other fields, whether habitat use, play behaviour or alarm calls, were well-developed.

The long-term, continuous nature of the Armitage's study, the second longest for any mammal, allows for multi generational analyses of his colonies. Breeding success, kinship, and more can best be studied by long term determination of a researcher. We read about the marmots which leave their natal colony, which stay and why this is beneficial. We also learn about home range changes, over wintering physiology and burrow usage.

Technically, data were largely well presented. A few of the graphs had too much information and could have benefited from splitting the multiple curves among two sets of axes. There were several tables which I found odd...normally columns in a table represent the variable(s) being measured, and the numerical data for one or more parameters. Instead, these odd tables had only text, sometimes as abbreviated sentences which may have been summaries of field notes. It is unclear why these passages were not just incorporated into the text.

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