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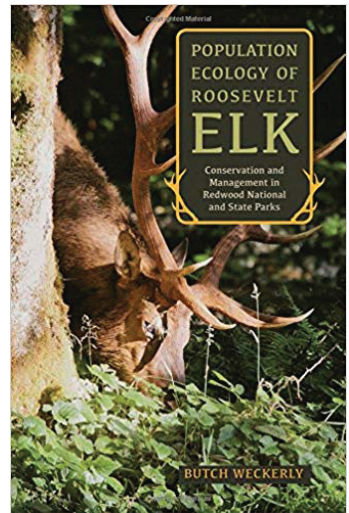
## BOOK REVIEW

### **Population ecology of Roosevelt elk: conservation and management in Redwood National and State Parks**

Butch Weckerly. 2017. University of Nevada Press, Reno, USA. 224 pages (hard cover). \$54.95. ISBN: 978-1-9438-5950-4

This book recaps Butch Weckerly's 20-year stream of contributions toward understanding the population ecology and behavior of Roosevelt elk (*Cervus elaphus roosevelti*) in and near Redwood State and National Parks in northwestern California, USA. The book calls heavily upon the current literature and Dr. Weckerly's personal experiences as he sorts through many of the ecological and behavioral questions he has addressed during his career. In a sense, this contribution resembles the efforts of Joel Berger in his book (*Wild horses of the Great Basin*), several of George Schaller's books (*The Serengeti lion*, *Stones of silence*, *Mountain monarchs*), Val Geist's work (*Mountain sheep: a study in behavior and evolution*), a recent work by Alan Rabinowitz (*An indomitable beast*), and James Estes' recently published account of his research career (*Serendipity: an ecologist's quest to understand nature*), wherein each of those authors incorporated many first-hand and personal experiences into the scientific material presented in those books.

Dr. Weckerly's book aims at understanding the population ecology and behavior of a specific population of Roosevelt elk, based on work that was often accomplished on a 'shoe-string' budget as characterized by the author. Its value lies in the fact that it provides in one treatise a summary and synthesis of decades of research on the ecology of those animals along California's northern coast. This book adds to similar efforts that have characterized elk populations from specific sites like that of Douglas Houston (*The Northern Yellowstone elk: ecology and management*), Mark Boyce (*The Jackson elk herd: intensive wildlife management in North America*), and Dale McCullough (*The tule elk, its history, behavior and ecology*). To date, most of the research published on Roosevelt elk in northwestern California has had its origin with students completing M.S. degrees at Humboldt State University. Several of those theses have resulted in important contributions to the literature but have been, out of necessity, the result of investigations that were of short duration. A very positive aspect of Weckerly's work is that it extends across a lengthy period, thereby allowing the author to have made observations and conducted investigations under a multitude of ecological or environmental conditions. During this extended period, Butch was able to document the independent dynamics of several subpopulations (herds) of female elk, follow and experience the extirpation of one of those subpopulations, establish the likelihood of a metapopulation of



elk within the parks, and arrive at some conclusions in the context of population persistence. Few authors have had the luxury of being able to put 20 continuous years of effort into a single species in a single study area, and Butch is to be commended for his persistence in doing so.

*Population ecology of Roosevelt elk* contains a very fine discussion of redundancy and resiliency that will be helpful to all concerned with populations of large mammals in this changing world. It will also serve as a fine example of what can be done with financial support that ranged from nearly nothing in the worst years to very little—even in the ‘good’ years—when an investigator puts his or her mind to it, and this work is a testament to perseverance. Although not written in layman’s language that is easily understood, members of the public that are interested in the ecology of large mammals, including naturalists, hunters, and individuals with a specific interest in Redwood State and National Parks, will find this work to be of value. I also see this work contributing substantially to the persistence and viability of Roosevelt elk in the Parks and surrounding area. Additionally, I suspect the work will be useful in college courses, and that it will be particularly valuable for use in graduate seminar groups or graduate courses centered on the population ecology and behavior of large mammals—and elk in particular.

I found the manuscript to be well organized, but transitions between chapters could be enhanced by a closing statement at the end of each chapter, and a well-worded statement at the beginning of the subsequent chapter that places the forthcoming information in the context of what had been summarized on the preceding page. Pure and simple, this book is about science. Weckerly is well-known for his attention to detail and for his quest for accuracy, and he has used an extensive list of sources and references that demonstrate his familiarity with the current literature, including references dated as recently as 2016.

This book is, in part, a synthesis of 20 years of publications on Roosevelt elk in the Parks, and relies heavily on the author’s long-term investment in time and on his prior contributions. Although not all the material presented is novel, the author has pulled prior results into the ‘context of conservation’ and, as such, it is extremely valuable. Although the text is technical, it provides a detailed summary of Weckerly’s extensive work on a large, charismatic herbivore inhabiting a relatively pristine area of California. Students of population ecology, natural history, and those with an interest in large herbivores in general will have an appreciation for the author’s efforts. I also suspect this work will provide the grist for graduate-level discussions at Humboldt State University for several years into the future.

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