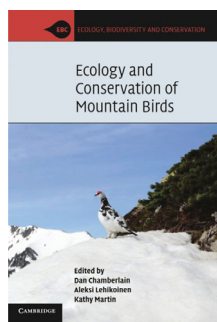


## Book review

### A helpful and long-overdue resource for work with mountain birds

Chamberlain, D., Lehikoinen, A. & Martin, K. (eds.): Ecology and conservation of mountain birds. Cambridge University Press. 2023. 450 pp. <https://doi.org/10.1017/9781108938570>



As an early-career researcher working in ptarmigan conservation, being asked to review a new textbook relevant to my investigations was a welcome opportunity that paid dividends. The newly published *Ecology and Conservation of Mountain Birds* compiled by Dan Chamberlain,

Aleksi Lehikoinen, and Kathy Martin, brings together the collective skill and experience of over 50 subject experts to give a clear roadmap for the future of alpine avian conservation and provide an understanding of what we still need to learn about this understudied niche. In less than 400 pages of text the authors have provided primary literature to methodically show the extent of our knowledge. Ten rationally divided chapters tackle a wide range of topics from avian adaptations and ecology to modelling and conservation priorities. The chapter on anthropogenic activities includes subsections like “The Impact of Skiing on Birds” and “Renewable Energy Development”. In this way the textbook can serve as a comprehensive educational tool for students or a quick reference guide for discerning wildlife scientists.

The first four chapters begin with a formal review of definitions so readers can appropriately frame non-trivial concepts like “‘high’ mountain birds” and “alpine habitats”. This builds a strong

foundation for the latter chapters to explore more robust introductions that preface the considered topics. All sections move through deep and balanced discussions ranging from the effects of grazing on alpine ecosystems to the impacts of climate change on avian breeding phenology. While more general statistical information can be found in the “Population Trends” chapter, detailed discussions of theory and physiology can be found in the chapter on “Avian Adaptions to High Mountain Habitats”. Each chapter then ends with acknowledgements and a full list of references.

Praise is warranted for the appearance of the front cover and spine which are lighter and brighter than many other recent biology works and should be easily recognizable on a shelf. The cover photo of a Rock Ptarmigan (*Lagopus muta*) shown on a snowy mountainside serves as an apt representative of the book’s contents. The binding was well done for the paperback version which is in-line with other core textbooks from Cambridge University Press. Crisp images of landscapes and birds along with figures throughout the book are rendered in black-and-white with several included in every chapter. Additionally, sandwiched in the center there are eight full-color plates showing descriptive maps, research results, and artistic illustrations of alpine species.

Of particular interest to Finnish readers, a coauthor of the textbook Aleksi Lehikoinen is a senior curator of the University of Helsinki’s zoological collections. Many of his contributions include references to Fennoscandia and Finland proper. This includes points in both chapter four and five where the text discusses local distributions for “Birds of Treeline Ecotones” and the “Population Trends of Mountain Birds in Europe and North America”. In general, however, the contents should be praised for providing generality and specificity that can allow researchers to

apply ideas and concepts to any system at any scale.

The authors note that due to expected ecosystem and range shifts in the future, high altitude habitats may become more important to the maintenance of avian biodiversity than they are today. Thinking in advance about the ramifications of such a shift becomes imperative to conservation success and puts readers of this text ahead of the curve. I was personally most impressed that the textbook managed to provide extensive resources for Africa while also acknowledging that the Global South is

severely underrepresented in knowledge and literature. This book serves as a modern tool that belongs in the collection of any serious ornithologist looking to continue work into the coming decades. For those of us focusing on avian alpine specialists, this textbook should be recognized as a groundbreaking and indispensable new resource summarizing the state of our field.

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