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## A new edition for Ecology of North America

Ecology of North America (2nd edn). Brian R. Chapman and Eric G. Bolen  
John Wiley & Sons, Ltd. 2015, 334 pp. ISBN13: 9781118971543  
[www.wiley.com/wiley-blackwell](http://www.wiley.com/wiley-blackwell)

The disciplines of ecology and biogeography are so closely intertwined that many scholars of these respective fields are, by necessity and shared interest, well versed in both (Jenkins and Ricklefs 2011). This overlap is evident in the layout of *Ecology of North America*. With a scalable subject such as ecosystems, the authors could have approached the discussion of their material from various angles. Their decision to employ a biome-structured theme to describe the assemblage of North American ecosystems is both logical and practical. This approach is certain to be appealing to biogeographers who use the textbook. In fact, this book could be used as a supplementary textbook in a biogeography class.

*Ecology of North America* will serve as a good introductory text for students interested in the ecology of the continent. The book begins with an overview chapter of basic ecological principles and terms, including sound explanations of succession, biodiversity, and biogeography. Subsequent chapters are individually devoted to various North American ecosystems/biomes. These chapters define the unique attributes of each biome and fluidly address the important abiotic and biotic components of each, along with representative plant and animal assemblages, interactions, and adaptations, as well as characteristic biome-level disturbances and ecological challenges. Both authors are wildlife ecology experts, yet their knowledge and understanding of plant ecology and their success in balancing the text between floral and faunal ecological discussions are both refreshing and impressive.

The authors are careful and right to point out the major differences between biomes and ecosystems, but with a text that relies on a biome-structured outline, the omission of tropical seasonal forest and tropical rain forest biomes is marked. The authors admittedly target an audience of “both undergraduate students and the general public” and aimed to write the text in a

“user-friendly format.” Oftentimes, content must be edited and limited to achieve such goals, but these two major biomes that cover vast expanses of Mexico and Central America should be included in a comprehensive text of North American ecosystems.

The inclusion of “infoboxes” is a meaningful addition; this type of aside succeeds in adding interest and depth to textbooks. Comprehensive bibliographies are included after each chapter, and the division of each one by chapter sub-headings is helpful. The chapters, however, could benefit from regional maps to remind students of the spatial distributions of each ecosystem, as well as brief, end-of-chapter summative and synthetic sections that include suggested questions for deeper thought. Such materials often help students see ‘big-picture’ applications of themes they have just read. Chapter 6, “Regional grasslands and related areas”, is a welcome expansion of the previous chapter on plains and prairies. I found myself wanting more of this type of expanded case-study approach for the other biomes addressed in the text. Chapter 12, “A selection of special environments”, is a similarly assembled and written chapter; I found these chapters to be two of the most interesting and well written in the book. Chapter 11, “Coastal environments”, is new to this edition and introduces key information on arguably the most ecologically important collection of environments in this age of globally warming temperature and sea-level rise.

Ecology is a dynamic field of study, and there are several comprehensive works that describe biomes and ecosystems on varying scales. Readers wishing to explore an exhaustive explanation of North American biomes, but with little mention of faunal interactions, should read Barbour and Billings (2000). Others (e.g., Molles 2015; Cain et al. 2013) offer well-written, comprehensive, and traditional ecology textbooks, but with a global focus that does not offer the same

continental level of detail as *Ecology of North America*. The new edition of *Ecology of North America* is a welcome addition to contemporary ecology textbook offerings. The authors have updated a good introductory text that is highly approachable and readable. It offers a worthy addition to textbook options in the discipline, and I recommend it as an essential resource for students and teachers of North American ecosystems.

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## References

- Barbour, M.G. & Billings, W.D. (2000). North American terrestrial vegetation. Second edition. Cambridge University Press, Cambridge, UK.
- Cain, M.L., Bowman, W.D. & Hacker, S.D. (2013). *Ecology*. Third edition. Sinauer Associates, Sunderland, MA.
- Jenkins, D.G. & Ricklefs, R.E. (2011). Biogeography and ecology: two views of one world. *Philosophical Transactions of the Royal Society B*, 366, 2331–2335.
- Molles, M.C. (2015). *Ecology: Concepts and applications*. Seventh edition. McGraw–Hill Education, New York, NY.

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