

Book Reviews

Grasses and Grassland Ecology. David J. Gibson. 2009. Oxford University Press, Great Clarendon Street, Oxford, England, OX2 6DP. 305 p., incl. references and index. \$70.00 softbound, ISBN 978-0-19-852919-4, \$150.00 hardbound, ISBN 978-0-19-852918-7.

Grasses and Grassland Ecology by David J. Gibson and Oxford University Press is a scholarly and comprehensive literature review, a physiology, ecology, and botany text, and a thorough treatment of grass plants and the ecology of grasslands. Right up front one notices the no-nonsense approach and the praiseworthy writing. This book covers information for scientists who want to study grassland ecology or improve grasslands or pastures. Horticulturists studying grass, forage, or prairie plants and interested in soils, nutrition, and grassland management will find this book an important addition to their personal library.

Only a few color photographs are in the center of the book. They are outstanding in quality and are well-chosen to illustrate different types of grassland biomes. The rest of the book is packed with graphs, tables, diagrams, and line drawings so that one hardly notices the lack of color. This text is scholarly with many crisp, clean, black-and-white illustrations, charts, and diagrams that are well-executed, well-labeled, and well-referenced. I found some of the abbreviations on the figures slightly confusing until I dug deeper into the text.

The reference section, and plant, animal, and subject indices cover 42 full pages and constitute a mini-library on the topic. The overall impression of the book is one of excellence. Every square inch of this book is filled with information that is well-presented, and it is obvious that the author worked the information to perfection. I could find only one typographical error, and it was so minor I might have missed it if I had not looked at the text so many times.

Some of the most interesting topics covered include a discussion of C_3 and C_4 plants, a history of grassland management, plant nutrition and soils, the evolution, morphology, anatomy, and physiology of grassland plants, and restoration and management of grasslands. In this book, grasslands are given clear economic value. Goods and services are quantified, and tourist value also is considered.

The book begins with a solid Introduction justifying the usefulness of this definitive literature review, then goes on to chapters on Systematics and Evolution, Ecological Morphology and Anatomy, Physiology, Population Ecology, Community Ecology, Ecosystem Ecology, World Grasslands, Disturbance, and Management and Restoration. I thoroughly enjoyed the last

three chapters and found myself reading and learning well beyond what would be required to review this book. It never sat on the table long.

In the Introduction, Grassland is defined in a dozen important references in an easy-to-read table, and a table of grassland terminology from Forage to Veld accompanies the definition table. The chapters on morphology and anatomy and physiology could be a stand-alone textbook just as they are. I appreciated the discussions on families, sub-families, and C_3 and C_4 plants, and the comprehensive approach to the botanical subjects. The book is like an auto-tutorial graduate seminar. It is such a good review of the research on grasslands and grassland ecology. The world distribution maps and biomass estimates are fascinating. A section on forage quality addresses the important issues for the rancher.

The production of the book is also noteworthy. The paperback is a slightly heavy stock, and the binding quality is good. The book is strong and well-constructed and has stood up to some heavy wear during the review. The book is an easy size to handle, and the pages open smoothly. The printing is as crisp and clean as the illustrations.

From the wealth of information provided, to the usefulness as a text and a reference, to the top-notch execution, I give *Grasses and Grassland Ecology* by David J. Gibson and Oxford University Press a five-star rating. I recommend it for upper-class college students or graduate students. It would make a fine basis for a graduate-level seminar course. I enjoyed the informative style and the spot-on diction and did not miss the plethora of color photographs.

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Sustainable Landscape Management. Thomas W. Cook and Ann Marie VanDerZanden, 2011. John Wiley & Sons, New York. 232 pages. \$85.00. Hardcover. ISBN 978-0-470-48093-9

Sustainable Landscape Management starts out in the first chapter by providing some historical perspective and discussing the emergence of the sustainability movement. In this introductory chapter, the authors state "Sustainable landscape management is a philosophical approach to creating and maintaining landscapes that are ecologically more stable and require fewer inputs than conventional landscapes."

The succeeding nine chapters discuss design, construction, retrofitting, ecosystems, environmental issues, soils, sustainable landscape management, lawns, and pest management. At the end of each chapter are study questions and suggested reading lists. A complete list of references for each chapter is provided in the back of the book.

The book is written such that it could be used in an existing landscaping course in a two- or four-year landscape program, providing sustainability options in place of a conventional approach. Thus, it could be used as a general-purpose landscape management text that emphasizes sustainable practices, or as a stand-alone book for a course specifically in sustainable landscaping.

Conventional approaches are included in cases where the authors address environmental issues, such as managing water on-site, avoiding soil compaction, and ensuring that irrigation systems are working properly. In the chapter on sustainable landscape construction (Chapter 3), the concept of "reduce, reuse, recycle" is explored in the context of hardscape materials, as are pervious concrete, porous asphalt, and permeable interlocking pavement.

In Chapter 4, a series of questions for conducting a site analysis on an existing landscape is provided, with sustainable and conventional issues being addressed. For example, fixing awkward bed lines (conventional) and replacing high-maintenance plants with lower maintenance plants (conventional/sustainable) and irrigating with non-potable water (sustainable) are included as options.

Environmental issues are discussed in Chapter 6, including: nutrient and pesticide leaching and runoff; human health and wildlife concerns linked to pesticides; air pollution and landscape equipment emissions; and overuse of water.

Overall, the book provides a shift in thinking for students of landscaping. It introduces the issues and provides many ideas for implementing practices that should prove to be more sustainable than some current practices. Some of the ideas presented are not new but should be part of "best management practices" for landscape designers and managers already. However, they often are overlooked for various reasons. Some concepts occur during the design process when avoidable problems are introduced. Others may be overlooked due to costs or lack of experience and knowledge about alternative practices. If students of landscape design and management are aware of environmental problems created or exacerbated by landscape practices, they will be in a better position to avoid them and to find solutions.

As the authors concede, landscaping is still part of creating an artificial environment, and "there will never be truly self-sustaining constructed landscapes, only landscapes that are more or less sustainable than our current efforts." The book aims to begin the process of creating sustainable landscapes and provides a good starting point for doing so. The book should prove useful in a well-rounded landscaping curriculum for the college-level student.

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