Reviews

Book Reviews

Designing Wildlife Habitats

John Beardsley (ed). Washington D.C., USA: Harvard University Press. $50.00 paperback. ISBN 9780884023852. 304 pages.

Designing Wildlife Habitats is a collection of essays by social scientists, landscape architects, and ecologists that were delivered at a symposium held at Dumbarton Oaks (Washington, D.C.) in 2010. The objective of this colloquium was to integrate expertise in ecology, landscape architecture, and history to explore the role of designers in the restoration and management of wildlife habitat.

This book represents a valiant attempt to integrate two disciplines with often conflicting objectives, and its title implies that within its pages is a practical guide to wildlife habitat design. The contents of the book are not quite 'as advertised," with the focus of many of the chapters on more theoretical abstractions and general themes. The true value of the book lies within the thoroughly articulated case studies of wildlife habitat design, illustrating a diverse set of challenges, as well as the approaches used in overcoming them. Thomas L. Woltz artfully describes the re-design of a 3,000-acre sheep farm on the East Coast of New Zealand (Chapter 9) to accommodate both agricultural production and wildlife conservation, stressing the importance of both solid conservation interventions (e.g., invasive predator removal, creation of scale-dependent habitat mosaics), as well as the inclusion of local cultural groups into the restoration process (e.g., access to historic burial grounds, employment of tribesmen at nurseries producing the plants used for reforestation efforts). Steven Handel's narrative (Chapter 10) provides several examples of urban greening projects, most notably the design of the Orange County Great Park (California), which highlights the need to maintain landscape linkages in large-scale public land use planning to promote plant and wildlife movements. HNTB Engineering and Michael Van Valkenburgh Associates directly address a human-wildlife conflict through the design of a wildlife design crossing system "kit of parts." The volume also emphasizes consideration of several factors that will likely influence the long-term success of wildlife habitat design. Stuart Green's essay provides a framework for local and non-local stakeholder interactions throughout all phases of the design process, and Jane Carruthers implores that we abandon the notion of "fortress conservation," and instead design conservation areas that welcome human uses where appropriate. Kristina Hill examines large-scale conservation planning in relation to climate change, citing the need to account for the dynamics and stochasticity associated with a rapidly changing environment. Finally, Kongjian Yu and Joshua Ginsberg dedicate their contributions to understanding and integrating landscape designs across spatial and temporal scales.

However, the book falls short of its goal in some ways as well, mostly due to the lack of fluidity among the contributed chapters (although this is a shortcoming shared by many edited volumes). Beardsley's introductory chapter incites excited anticipation of the cohesiveness of the essays to follow and solidly lays the foundation for how the contributions should complement each other. However, the reader comes to the disappointing realization that this is not the case only a few pages into Chapter 2. While human perceptions of what is wild, and humankind's relationship with wild animals, sets an important backdrop for how we view the importance of wildlife conservation, these points are buried deeply within a verbose and arguably peripheral discussion of the definition of the term "wild," and the history of wildlife domestication. There are no clear connections to current wildlife habitat design. Chapter 3 continues to digress from the stated central goal of the book by stepping further back in time with a description of 16th century Ottoman Gardens and menageries. This essay may be valuable to inform human-purposed, cultural, or artistic landscape design, but it has limited value in guiding contemporary wildlife habitat design or restoration. An additional outlier occurs in Chapter 6, with a highly personalized narrative of the loss of birds in the Neotropics, due in large part to hunting by local indigenous communities. The chapter concludes with a weak attempt to tie this larger conservation issue into habitat design, which reads more like an add-on than a logical conclusion drawn from the preceding text.

As a conservation biologist, I found Shahid Naeem's chapter on biodiversity, ecological function, and landscape design to be most poignant. In this Anthropocene period, the human footprint pervades all of nature. Biodiversity is critical to ecosystem function, which in turn dramatically improves human quality of life through the provisioning of ecosystem services. Landscape designers are bestowed the freedom to create imagined landscapes, and with that, the power to influence human interpretation of what is natural and beautiful. These artists must decide whether to perpetuate the facade of an Edenic Landscape or Peaceable Kingdom, or instead to embrace to dynamics of natural ecological and evolutionary processes and to promote the persistence of biodiversity and resultant function through informed ecological landscape design.

The case studies and design considerations described above are an important read for any landscape architect ready to accept the challenge of ecological design, although designers must be aware that these essays only begin to scratch the surface of the complexity that comes with designing landscapes for wildlife. Conservation biologists will find this book less useful as a practical guide, although

they would benefit from understanding the designers' perspectives of landscapes and habitats. Continued strides toward the successful integration of these two disciplines can only be achieved through mutual understanding and open communication, as this volume aptly demonstrates.

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The Carnivore Way: Coexisting with and Conserving North America's Predators

Cristina Eisenberg. Washington DC, USA: Island Press. $29.00 Hardcover. ISBN: 9781597269827. 328 pages.

Cristina Eisenberg's recent book on carnivore conservation in the Rocky Mountain West, *The Carnivore Way,* explores not only the geographic range of critical carnivores—grizzly bears, wolves, wolverines, lynx, cougars, and jaguars—but also the range of threats that they face. The "Carnivore Way" that she describes is an expansive swath of land stretching from the Sierra Madre Occidental mountain range in Mexico through to the Arctic Ocean in Alaska.

The book is divided into two parts, each of which breaks down into nine total chapters. Part one of the book ("Wildways") focuses fundamentally on the ecology of both corridors and carnivores, as well as offers an introductory-level summary of the wildlife conservation policies in place in Canada, the U.S., and Mexico, touching briefly on relevant international treaties. This landscape-scale overview provides a platform that contextualizes her follow-on discussion of specific carnivore populations. Part two ("Where Carnivores Roam") profiles six species of large carnivores and explores the variety of threats—climate change, habitat encroachment, oil and gas drilling, etc.—to their survival.

The book opens by explaining the concept of wildlife corridors, which are ecological pathways through which large carnivores disperse and that conservationists have identified as a mechanism by which to ensure that large carnivore populations can be protected. Eisenberg illustrates one such corridor with the story of a peripatetic lynx named "BC03M02" in Colorado. In so doing, she characterizes wildlife corridors as appropriately viewed on a "continental scale," a position espoused by conservation biologist Michael Soulé (one of her mentors), among others. Eisenberg then cites the construction of successful wildlife crossing structures in Banff, Alberta to illustrate how continental-scale networks can be reconnected at local sites. In chapter two she turns to the different ecological roles that carnivores may play in trophic cascades. Throughout the discussion, Eisenberg thoughtfully covers the academic controversy on this question and presents several bodies of research (i.e., Ripple et al. 2001, Hebblewhite et al. 2005, Kaufman et al. 2010, and her own, Eisenberg et al. 2013 [46–52]) to acknowledge that there is no decisive conclusion about the role of carnivores in trophic cascades. Instead, she notes that even contradictory findings offer insight, since "given the astonishing complexity of our world, such findings reveal fascinating facets of nature and add to our growing picture of food web relationships" (52). In the final chapter of Part one, Eisenberg provides a cursory overview of both international policies (e.g., CITES) and domestic laws intended to conserve large carnivores, as well as the political challenges of doing so transnationally.

The remainder of the book is structurally straightforward. In Part two, Eisenberg profiles each of six large carnivore species, providing an overview of their ecology and natural history, relevant conservation policy, current and looming threats (such as climate change), and the difficulties facing human coexistence with these species. Each chapter invites the reader into the habitat of the carnivore by opening with an anecdote drawn from Eisenberg's own field experiences. By utilizing this narrative device—that is, detailing her travels through the Carnivore Way—she provides a nice framework for contextualizing the otherwise secluded and secretive nature of wild animals. For example, the wolverine pelt hanging behind the register at a gas station in Haines, Alaska helps make palpable the tension between wild value and commercial utility. By shifting from field research and policy to personal narrative, Eisenberg engages the reader in a dialectical struggle between the unobstructed lives of wild nature and the natural resource development challenges bearing down on each species. In the final chapter, Eisenberg emphasizes the need for coexistence, though this term in and of itself "means different things to different people" (256). Indeed, this sage observation cuts to the heart of the issue: how do we see ourselves in the matrix of large carnivore conservation, and how do we reconcile competing ideas of coexistence to find and achieve common goals?

Eisenberg's writing is conversational and approachable, though readers who have more familiarity with the issues associated with carnivore conservation may not find the depth or detail that they might expect from, for example, a peer-reviewed journal article. Thus, the audience for this book isn't necessarily experts, but it will appeal to interested laypersons and students. It would be a suitable text for an environmental or science writing seminar, particularly as the author is skilled at translating complex ecological

ideas into prose. The book will be particularly appealing to the non-scientist, since it brings to light some of the challenges associated with conserving mesopredators, such as the wolverine and lynx, that are not yet as high-profile or controversial as, say, the wolf or the cougar. She summarizes the work of many of the key researchers in the carnivore conservation arena and thus provides a solid bibliography for those readers interested in digging deeper. Throughout the book, ecological concepts are clearly defined and often set apart in italics, and references are provided for those readers who would like to delve into the original published research. She also incorporates her own personal experiences, observations, and anecdotes throughout the book, which helps bring the reader into the field with her.

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Keeping the Wild: Against the Domestication of Earth

George Wuerthner, Eileen Crist and Tom Butler (eds). 2014. Washington, DC: Island Press. $23.95 eBook; $24.95 paperback. ISBN: 9781610915588. 248 pages.

Description and Purpose

"Keeping the Wild" is a group of essays compiled by George Wuerthner, Eileen Crist, and Tom Butler. The compilation is evidently an outcome from a meeting held between many of the author contributors (there are 27 listed for 22 relatively short essays, including the Introduction by Tom Butler) in Denver, Colorado, organized and sponsored by the Weeden Foundation. The Weeden Foundation's mission is to protect "biodiversity as its main priority" and it "supports organizations that protect ecosystems and wildlife and "those that work towards population stabilization and sustainable consumption" (www.weedenfoundation.org). It is not clear when that meeting was, but it was hosted by Michael Soulé, who helped convene the meeting. Six of the papers, however, were either republished from other sources, or shortened versions of essays appearing in other places. As a result, reading the "book" is more like reading a conference or meeting proceedings. Developing the book could have been the purpose of the meeting, but sharing ideas was probably the more significant outcome among those invited to attend. There were never any cross references among the papers, or efforts to coordinate the papers to avoid repetition, that this reader detected.

In the Introduction, Butler makes it clear that the book is a ". . . book about ideas . . . conceived to confront the notion of human hegemony and also to join the growing conversation with the conservation movement about the so-called Anthropocene" (p. ix). From the Introduction it is clear that the purpose of this compilation of "ideas" is to mount arguments against embracing the "Anthropocene" as a term describing the age of human dominion of Earth, increasingly used to justify further domestication of the planet. A primary force instigating both the meeting in Denver and this compilation of papers was evidently a paper published in 2012 by Kareiva, Marvier and Lalasz, that represents the "new conservationist" viewpoint. Harvey Locke's essay, "Green postmodernism and the attempted highjacking of conservation," in Part 2 describes and responds to the Kareiva et al. (2012) paper most completely, not only critiquing the primary philosophical shortcomings of the Anthropocene concept, but also pointing out that the paper was not peer reviewed, it was published online to allow wide dissemination, it contained many erroneous facts, and it included unnecessary personal attacks on Thoreau, Emerson, Abbey, Carson and Muir, all influential writers in the conservation movement.

Butler also articulated in the Introduction the seven primary points of contention with the "new conservationists" as: in the Anthropocene humans are now de facto planetary managers; all pristine wilderness is gone now and focus on wilderness has poorly served the conservation movement; nature is resilient, not fragile; conservation must serve human aspirations, primarily regarding economic growth and development; maintaining "ecosystem services," not preventing human-caused extinction, should be conservation's primary goal; conservation should emphasize better management of the domesticated, "working landscape," rather than establish new, strictly protected natural areas; and conservationists should partner with corporations to achieve better results. Most essays included in the compilation address some aspect of these points of contention.

Organization

The compilation of essays is introduced by Butler and then in three parts presents essays addressing: 1) Clashing Worldviews; 2) Against Domestication; and 3) The Value of the Wild, with an Epilogue by Kathleen Dean Moore. There is very little break in flow across Parts 1 and 2. Most essays included in these two Parts are pointedly aimed at describing the points of contention with the Anthropocene concept (best articulated by Soulé in the 7th essay) as being the foundation of the "new conservationists" and their optimistic description of a future with economic well-being for rural and poor communities that partner for economic development with large corporations. This approach evidently leaves traditional conservation aimed at protecting wildness and biological diversity behind. In fact, this explanation, with specific finger pointing at Kareiva et al. (2012) and certain supporting academic institutions and non-governmental organizations, is repeated across most essays in the first two Parts. I entered a note in the margins of page 57 that by this point I had pretty much reached saturation of both the problems with the Anthropocene and the contrasting importance of continued efforts to protect biodiversity and expand our National Wilderness Preservation System. Brendan Mackey's departure from this repeated statement of arguments was a welcome respite during Part 2, with his essay titled, "The future of conservation: An Australian perspective."

Part 3, purportedly containing essays that define the "value of the wild," is less confrontational and moves on to a nice set of ideas about the importance of wild places, ending with the always enjoyable writing of Terry Tempest Williams and her "An Open Letter to Major John Wesley Powell." Often, as has usually been the case in much of wilderness science and management efforts, this section does heavily repeat descriptions of attributes of wilderness and identifies threats to those attributes, more than values, but it is okay that the values are largely unspoken and probably unite this community of authors more than anything else. That is the awe of wilderness. They certainly agree that wilderness means more than recreation and that wilderness protection from "gardening" threats protects many values of nature, even the difficult to define intrinsic values of nature. The Epilogue is a nice ending to the book, a good description of being in a specific wild place that contrasts to the surrounding landscape and wishing a promising future with the return of more wild places.

Overview: Who is it For?

In the end, I asked myself who this compilation of essays is for. First of all, I would suggest any reader simply pick and choose the authors and titles that sound interesting and not necessarily read the book in the order the essays appear. The essays in Parts 1 and 2, could have better served the reader by asking the authors to team up to produce one or two excellent articles that clearly articulated "Clashing Worldviews," why domestication is a bad idea, and how boosting of the Anthropocene concept contributes to this bad idea. The reader instead might pick one or two essays from the first Part so you understand the purpose of the book well, read one or two from Part 2, read all of the essays in Part 3, and the epilogue to finish.

But in the end I felt like most amateur environmentalists could have trouble getting through the first Part with the repeated descriptions of the problems with the Anthropocene. As mentioned previously, saturation comes quickly. Most professional environmental scientists and academics engaged in wilderness protection and restoration will likely question the narrow description of both the threats identified as flowing from the Anthropocene boosters, lack of acknowledging any good points or alternative applications of the concept, and the incomplete description of benefits of wilderness protection described in the Part 3 essays. At last I settled on students (broadly defined) and the value this book could be to them in their understanding of current discussions of the Anthropocene and deciding for themselves the approach they might take in the future to understand and protect wild places on this earth. When one of my colleagues, struggling with the neo-green attitude expressed repeatedly by another member of a committee we were all on, said, "If I hear him use the word Anthropocene one more time. . . .," some of the irritation often expressed in these essays was apparent. I think many of us are unsure what the implications of that term are and we don't know if use of the term also expresses full support of the "new conservation" movement, as these authors suggest. For this book we are expected to take a pretty specific interpretation of the threats associated with the sometimes rabid use of the term as if it is a new idea and just acknowledging the role of humans in the environment will suddenly lead us to poor solutions to conservation issues. You can read these essays yourself and see how you

feel about use of this term, what you perceive the implications are of boosting this concept, and your beliefs about the direction future conservation should take. I'll pass my copy on to the next inquisitive student that visits my office, but I will make suggestions about which essays to read in it and explain why it exists.

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Hawaiian Plant Life, Vegetation and Flora
Robert J. Gustafson, Derral R. Herbst and Philip W. Rundel. 2014. Honolulu, HI: University of Hawai'i Press. $65.00 Hardcover. ISBN: 9780824837105. 320 pages.

Coyote. Chambers, W. and R. Chambers. 1881. *Encyclopaedia—A Dictionary of Universal Knowledge for the People*, Philadelphia, PA: J. B. Lippincott & Co. The Florida Center for Instructional Technology, fcit.usf.edu.