BioOne COMPLETE

Saving the Dammed: Why We Need Beaver-Modified Ecosystems. By Ellen E. Wohl

Author: Law, Alan

Source: Mountain Research and Development, 40(2)

Published By: International Mountain Society

URL: https://doi.org/10.1659/mrd.mm253.1

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

Mountain Research and Development (MRD)
An international, peer-reviewed open access journal
published by the International Mountain Society (IMS)
www.mrd-journal.org

MountainMedia

Saving the Dammed: Why We Need Beaver-Modified Ecosystems. By Ellen E. Wohl

Oxford, United Kingdom: Oxford University Press, 2019. viii + 164 pp. £ 22.99. ISBN 978-0-19-094352-3.

Alan Law
alan.law1@stir.ac.uk

Biological and Environmental Sciences, University of Stirling, Stirling FK9 4LA, United Kingdom

© 2020 Law. This open access article is licensed under a Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/). Please credit the authors and the full source.

Saving the Dammed is Ellen Wohl's homage to beavers, describing their unique engineering prowess, the wider environmental impacts they exert, and why we should care. Throughout the book, Wohl binds a lifetime of professional riverine experience, observations of her local beaver population, gray literature, and primary literature to convey the benefits of beavers and convince the reader why we need more beaver-modified ecosystems. At first glance, the book title is a strong statement (and having a pun as a title will likely split the opinion of readers; personally, I think the title is fantastic)—though it suggests that humans have a role in saving beavers, which is ironic given our previous role of hunting them to the edge of extinction.

Beavers (*Castor fiber* and *Castor canadensis*) were once widespread in their native range across Europe and North America, respectively, but their numbers were severely reduced because of hunting and habitat loss. Recently, populations have been reintroduced and translocated in several countries and locations, because there is growing evidence of wider environmental benefits associated with their dam building (known as ecosystem engineering), such as increased biodiversity, flood alleviation, and sediment storage. Wohl has entered a busy market: several new and old books are available that detail the effects of beavers on the environment, ranging from layman's descriptive books to highly specialist, academic literature reviews. So how does this book stand out from the others? The main feature is that the book chapters are organized into months, starting in January and continuing until December. Each chapter follows a formulaic approach, starting with an exploration of Wohl's local beaver wetland at North St. Vrain Creek, Colorado. During these explorations, Wohl provides observations and anecdotes of monthly transitions seen in the physical and biological environment, often tied to historical landscape evolution, with anecdotes that are refreshingly and not unduly descriptive but instead are onomatopoeic and easy to conjure: "soft plashing of the moose's footsteps" (p 35).

Wohl's own observations are intertwined with those from long-established beaver books (drawing heavily from Enos Mills's 1913 *In Beaver World* and Hope Ryden's 1989 *Lily Pond*) but made contemporary by using North St. Vrain Creek to epitomize past and present beaver endeavors in the context of wider developments induced by humans, such as changes in land use, loss of key habitats, and river alterations. Wohl puts it nicely herself: "I see the world in the North St. Vrain beaver meadow" (p 7). Each chapter's observation of a seasonal or monthly change is then related to beaver ecology (eg kits born in spring) or an ecological process instigated by beavers (eg preparing food caches for the long winter) before returning to the original observation. This monthly approach works well, and even when the environment is relatively quiet (in the winter months compared with summer), the chapters are padded out with historical context of beavers and ecological examples.

This book has a potentially broad appeal, because it straddles both observational nature writing and more formal scientific-type writing, and I can see academics, practitioners, and naturephiles all encountering snippets of information that will fascinate them—and scratching their chins in contemplation. However, it is not a coffee-table book or at times an easy read, because it makes you ponder—and certain chapters (eg carbon cycling and biogeochemical changes discussed in May) require a bit of brain power to process and may be impenetrable for nonspecialists. It suffers from the same problem as most books that straddle the science and the naturalist writing continuum: Just how much detail is needed? Enough to convey beauty and complexity, but not too much as to be impervious—and Wohl achieves this most of the time.

A hint of Wohl's scientific foundations is the excellent use of academic references and evidence throughout, all organized by chapter at the end of the book. However, an index for keywords would have been useful for readers to jump to specific themes, because they are often split among chapters: for instance, if a reader wanted to find examples of biodiversity benefits provided by beaver engineering, they would have to finger through several chapters worth of pages. The inset section has a beautiful selection of color photographs detailing mountain landscapes, seasonal changes, ecological processes, and maps—these will most likely be the first pages that a reader flicks to. The photographs are replicated in black and white in each chapter when referred to. However, being in black and white, the details are almost impossible to make out, and I question why both versions are included when color could have been sufficient on its own.

Most of the book is dedicated to the holistic, indirect impact of beaver wetlands and what beavers have done for us and nature. Every now and then when reading the book, I had a feeling that it is biased (as most beaver engineering examples given seem to state the positives), but this is not the case. The sheer weight of evidence demonstrating positive impacts of beavers far outweighs the negative impacts (and the studies referred to do not aim to prove positive impacts). Therefore, *Saving the Dammed* provides a

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use

plethora of clear, concise evidence as to why we need beaver-modified ecosystems. Wohl points out that the only other single species to have such an impact on its environment is humans, but "our landscape engineering benefits very few species beyond ourselves" (p 136). So perhaps Wohl is giving back to the beaver by using her own engineering (research and writing) to proclaim the benefits of beavers to a wider audience, thus benefiting many species beyond ourselves.

REFERENCES

Mills E. 1913. *In Beaver World*. Boston, MA: Houghton Mifflin.
Ryden H. 1989. *Lily Pond: Four Years with a Family of Beavers*. New York, NY: William Morrow & Co.

Downloaded From: https://bioone.org/journals/Mountain-Research-and-Development on 29 Mar 2024
Terms of Use: https://bioone.org/terms-of-use