

to expand both knowledge and appreciation of this fish fauna. Let us all hope these wishes are realized.

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THE FISH IN THE FOREST: SALMON AND THE WEB OF LIFE.

By Dale Stokes; photographs by Doc White. Stephen Bechtel Fund. Berkeley (California): University of California Press. \$29.95. viii + 159 p.; ill.; no index. ISBN: 978-0-520-26920-0. 2014.

This is a short, eminently readable book on Pacific salmon life histories. The title is restrictive as it hides a much broader range of interesting topics between its covers. The text is organized into six chapters: the geological history, geographical distribution, and evolution of Pacific salmon (Chapter 1); the distinctive marine and freshwater life histories of each salmon species from egg to death, including physiology and migration (Chapter 2); identifying chemical signatures of salmon (Chapter 3); food webs and ecological paradigms (Chapter 4); the role of salmon in forest communities (Chapter 5); and integration of the previous information (Chapter 6). The text flows very well between topics and is highly informed and current, providing readers with a rich assemblage of examples that define the physical and biological ecology of the pelagic, coastal, and terrestrial habitats of the North Pacific. Although not to detract from the author's efforts, the amount of detail is excessive for issues that appear trivial to the theme of the book, but is very thin for others that are more substantive to understanding salmon. For example, we are presented with much detail of the subtle functioning of cell membrane ion transport as well as descriptions of bubble feeding in humpback whales, relationships that are quite tenuous to the book's theme. Yet, important studies such as the positive feedback system in Alaskan estuaries between salmon carcasses, plankton abundance, and salmon smolt feeding success are not included nor are the multiple impacts of clearcut logging, such as increased sedimentation in spawning gravels, stream velocity, and temperature extremes. As well, given the book's title, I expected this theme to emerge in each chapter yet this was largely restricted to the fifth chapter.

The narrative highlights some of the important historical players in the discipline of ecology including Haeckel, Elton, Hutchinson, Gause, and Grinnell. Such background is useful for general understanding of the growth of ideas in ecology, although it is not clear as to how the contribution of these players benefit understanding of the "Salmon Forest." More puzzling is that none of the

primary researchers, such as Mary Willson, David Suzuki, and the late Jeff Cederholm are mentioned, yet each played a seminal role in focusing societal attention on the ecosystem-level contributions of salmon to coastal forest ecosystems. Although their research is discussed, equally anonymous are important players such as Merav Ben-David, Grant Hilderbrand, Chris Darimont, Morgan Hocking, and Katie Christie who were some of the first to identify the uploading of salmon nutrients to coastal forests. *The Fish in the Forest* is incomplete without these connections.

The final chapter is a lucid integration of the volume, focusing on the ecosystem implications of the widespread collapse of salmon populations throughout the North Pacific and on linkages between salmon and the extended history of indigenous cultures in both the northwest and northeast Pacific. This chapter is reflective and clearly shows the author's deep commitment to the preservation of salmon as a dominant player in an immense ecological theatre. To conclude the book, the author struggles to find a cultural metaphor to characterize the life history of the salmon, including their signatures in the forest canopy and our responsibilities, and settles on the resurrection in Christian mythology concluding that: "As we are the keepers of the salmon, and the forest, our true moral test will be whether the story will continue or whether it will be lost, and then, as in the Way of the Cross, we will find ourselves performing acts of atonement" (p. 145). This metaphor is fundamentally flawed, as it was European Christianity that on initial contact with First Nations destroyed their culture and then introduced the commercial fishing fleets and industrial logging that collapsed the salmon populations. The effort to link Christianity with First Nations belief systems greatly devalues the latter and undermines an otherwise informative and enjoyable book.

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EURYHALINE FISHES. *Fish Physiology, Volume 32.*

Edited by Stephen D. McCormick, Anthony P. Farrell, and Colin J. Brauner. Academic Press. Amsterdam (The Netherlands) and Boston (Massachusetts): Elsevier. \$119.95. xxi + 559 p. + 12 pl.; ill.; index. ISBN: 978-0-12-396951-4. 2013.

Most fishes are only able to live in either seawater or in freshwater, and only 3–5% are euryhaline and can live in both. Although only a small minority of fishes are euryhaline, these are often of interest for commercial and recreational fishing, and knowledge about their biology is also important to understand how the stenohaline majority osmoregulate. Euryhalinity is now a topic of a volume in the noted series