throat trout is a welcome aspect of the book as these species that are rarer and generally less commercially valuable tend to get bypassed in reviews. The volume concludes with an assembly of short works on methods used to study Pacific salmon and trout in the ocean. The largest contributions of this work to the field are twofold. First, substantial new information is brought forth, most notably substantial research published in Russian. Long has the language barrier plagued knowledge exchange between west and east; a divide that led salmon researcher Bill Ricker to famously teach himself Russian and eventually publish a technical Russian-English dictionary that is still used today. The incorporation of original Russian research not only shrinks the gap between worlds, but also helps illustrate the evidence that has led to divergent world views concerning the role of salmon in the ocean. Second, the book serves a veritable roadmap for addressing the most pressing

The Behavior and Ecology of Pacific Salmon and Trout. ***Second Edition.***

By Thomas P. Quinn. Published in association with the American Fisheries Society, Bethesda (Maryland) by the University of Washington Press, Seattle (Washington). $60.00 (paper). xii + 547 p. + 10 pl.; ill.; index. ISBN: 9780295743332 (pb); 9780295743349 (eb). 2018.

Summarizing the behavior and ecology of fishes of such fascination and connection to human societies through millennia as Pacific salmon and trout is a Sisyphean task; as soon as one rolls the massive stone of literature to the top of the hill of knowledge, it rolls back down again owing to the stone's ever expanding size. *The Behavior and Ecology of Pacific Salmon and Trout* is a seriously updated (36% longer, expanded citations; outstanding color graphics and

images) second edition of the initial 2005 offering by Thomas Quinn.

The Introduction begins with a brief explanation of terms describing key life-history stages and patterns (with delightful explanations on the origins of peculiar words such as "redd," "parr," and "alevin") and considers whether or not salmonids are "typical" fishes (they are not in many respects). The author then, importantly, outlines the environments of Pacific salmon and trout, that they are products of these environments and, consequently, that they display one of their most notable attributes (at least to ecologists and evolutionary biologists)—an amazing degree of geographic variation in myriad traits. The Introduction concludes with informative life-history summaries of the key "characters" within *Oncorhynchus* and *Salvelinus*, a discussion of taxonomy and systematic relationships, and evolutionary history now with incorporation of at least some fossil data. The Introduction, especially with the striking images and drawings, makes an excellent summary for those new to this group of fishes.

The bulk of the book (Chapters 2–17) is organized by life-history stage and environment (e.g., Migration in Coastal Waters and Estuaries; The Ecology of Spawning Salmon and Their Carcasses), which is a highly digestible way to summarize the complexity of life history, behavior, and environments of salmon and trout. The chapters on lake and stream biology have been broadened to better reflect the fact that, in addition to sockeye salmon, most other species may also use lakes, and that streams may be important feeding and growth habitats for all life stages. Next is a chapter on the evolution and structure of populations (both of which have been the topics of entire volumes) that efficiently explains the basics of natal site fidelity ("homing"), isolation, and subsequent evolution in adaptive and neutral traits and its importance to conservation. A quibble I have is lack of information on conservation unit definition and policy outside of the United States. For instance, Canada encompasses a huge portion of the range of Pacific salmon and trout and has developed independent conservation procedures and policies that bear mention. The final chapter discusses trends in the past, present, and future abundance and diversity of salmon and trout. It includes important new sections on dam removals and climate warming, and makes the point that *if* humans provide "*cold, clean, complex*, and *connected*" (p. 442) habitats, salmon and trout populations can usually rebound. This is a critical point in a time of declining populations and conflicting policy choices facing these (and other) fishes. This volume focuses, however, on the *biology* of salmon and trout and avoids, wisely I believe, overt advocacy, but is still essential reading for those involved in salmon and trout conservation. There is no one better to synthesize more than a century of research on behavior and ecology of Pacific salmon and trout. Quinn has marshalled his extensive experience in conducting salmon and trout research from Alaska to New Zealand to produce a technically comprehensive, highly readable, and beautifully illustrated volume as befits these noble fishes.

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Narwhal: Revealing an Arctic Legend.
Edited by William W. Fitzhugh and Martin T. Nweeia. Hanover (New Hampshire): IPI Press and Washington (DC): Arctic Studies Center, National Museum of Natural History (Smithsonian Institution); distributed by the University Press of New England, Lebanon (New Hampshire). $35.00. xxviii + 233 p.; ill.; index. ISBN: 978-0-9967480-1-8. [This book is the companion to the exhibit *Narwhal: Revealing an Arctic Legend* at the Smithsonian Institution's National Museum of Natural History.] 2017.

Biology and Conservation of Musteloids.
Edited by David W. Macdonald, Chris Newman, and Lauren A. Harrington. Oxford and New York: Oxford University Press. $125.00 (hardcover); $60.00 (paper). xvii + 701 p.; ill.; index. ISBN: 978-0-19-875980-5 (hc); 978-0-19-875981-2 (pb). 2017.

From the cosmopolitan badgers, weasels, and otters to the highly endangered pygmy raccoon, European mink, and red panda, Musteloidea is the most species-rich superfamily within Carnivora with over 90 described species. Equally impressive is the great ecological diversity, with species exhibiting arboreal, fossorial, or aquatic lifestyles in nearly every major biome across the world as well as a variety of diets ranging from the generalist diets of raccoons, skunks, and badgers to the specialized diets of the herbivorous red panda, hypercarnivorous weasels, and piscivorous otters.

This book presents the first compilation of the natural history and current research of musteloids. The editors, who have over 90 years of experience working with wild musteloids, have assembled an all-star team of 70 of the leading musteloid experts across the world to showcase the diversity and ecological impacts of musteloids.

The volume is organized into three parts. The nine chapters of Part I review the major groups of musteloids and their natural history. These chapters summarize the most up-to-date information of everything known about musteloids, including their evolution, functional morphology, behavior, ecology, conservation, and interactions with humans. The 20 chapters