


## ESSAY

# Writing and Publishing Scientific Book Reviews as a Teaching Tool in Fisheries

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Writing and publishing fisheries book reviews serves as a useful teaching tool that can provide a variety of skills, including critical thinking, scientific writing, collaboration, and the publication process. Here, I describe the process my students and I have followed over the last 25 years in publishing 19 student-oriented book reviews, and highlight some of the lessons learned.

Scientific books synthesize large amounts of information into concise packages often reflecting an author's entire career. Unfortunately, the average American spends less time reading now than they did in 2003, when such statistics were first gathered (Bureau of Labor Statistics American time use survey; <http://bit.ly/35BHfvg>), with minimum times reported for people in their late teens and early twenties. These trends suggest that we are creating a culture where our students are reading less than ever before. Personally, instead of reading entire books, I now tend to read a lot of book reviews, as they help me select the few books I do have time to read. Unfortunately, many scientific book reviews are either dense with information or tend to be superficial in nature, are rarely critical, and even less commonly directed towards students. Many years ago, when I started teaching, it occurred to me that we don't often see book reviews written by students and that integrate a student perspective. Such a perspective would be valuable for authors, publishers, and students themselves, as many of these books target a student audience. And so I decided to write my first academic book review in collaboration with students, and have continued to do so to the present day. I've learned that such an exercise not only forces the students (and myself) to read books carefully, and hopefully inspires them to love books as much as I do, but it has provided another way to teach critical thinking. Plus, if the review is submitted for publication in a journal, it helps new graduate students learn about the publication process, and how to develop critical writing skills. And for many of the students I have done this with over the years, it has been their first journal publication, even if not peer-reviewed. Our reviews tend to be less dense than standard academic reviews, and yet much more thorough and critical than the superficial ones. Here I want to briefly describe the process, from selecting the book and target journals, to writing and publishing the review, and share some of the lessons we've learned over the years. Our particular process has been course-based, but there are potentially other ways to accomplish the same goal.

Our book reviews have generally come about as part of a fisheries ecology and management course, which I have taught at the University of Massachusetts–Amherst and the University of Victoria. This course is senior-level and usually attracts both undergraduates (many) and (fewer) graduate students. In order to get full credit, the graduate students have to complete additional work as part of a seminar. A component

of this work generally includes writing and publishing a book review. The first task is to select a book. I generally aim to steer students towards a book that has something to do with “fisheries.” One of the great advantages of being the AFS Book Review Editor is that I am aware of most fisheries-related books that are recently published. I accumulate such relevant books and bring them to the first meeting. On that first day, I briefly discuss the process, share some previous reviews and let students look at the books. We then try to make a choice. We have learned that writing reviews of single or multi-authored books are usually the most satisfying. In contrast, edited collections of papers or chapters rarely lead to very insightful reviews, as the individual chapters are generally quite disparate, vary in quality, and seldom connect across chapters. Only in situations where the book has been carefully edited, do “chapter books” function more like a multi-authored book. Nonetheless, we have reviewed both, including a few “textbooks.” Once we have selected a book, I try to get copies for all of us to read. Publishers are often reticent to send 5–6 copies of a book, but this task is now easier with the advent of e-books. On occasion, we've had to purchase a few copies of the book ourselves. The second initial task is to find a relevant journal that will agree to publish the review once completed (having an editor commit provides an incentive for students, beyond just the grade). Unfortunately, fewer journals publish book reviews than 10 years ago and most of them like to solicit their own reviewers. It has taken some time to convince book review editors that a review written mainly by students is worth publishing. However, that task has also become easier as those editors have noted the quality of our previously published reviews.

Once we get access to the book, we split the chapters up among the students in the class. At this stage, if the class is small, or the book is big, I sometimes invite other graduate students not registered in the class to join the effort. Each week a student leads a discussion on the current chapter (sometimes two chapters or more a week depending on the book). That same student writes a summary of the chapter and our discussion of it, which is made available to the other students. Generally, the discussions get more interesting as the weeks go by and we get further into the book, as we can compare current chapters to previous ones, and predict what might be coming next. As we are finishing reading the book, we begin to discuss how we will write the review and our major conclusions. I then ask for a student to put all the chapter summaries together

and write a first draft in exchange for first authorship. At first I did this myself, but soon realized it was much better if this aspect was also student-led. We edit drafts of the review until we all agree it is ready to submit. We generally try to complete the review within the same term as the course, but sometimes for longer or more difficult books, the process gets extended through the next term, and never longer than 9 months after we begin. Once proofs arrive, we all read and approve them.

Although there are always differences in the level of interest among individual students, I have not found the book review process to lead to many pedagogical challenges or limitations. Each student contributes by presenting and summarizing their assigned chapters, each is queried in the discussion (by me) and students have worked well together in structuring the final review. All participating students are generally excited by the idea of a publication, which increases their motivation. And because this exercise represents only a small part of the final grade and the workload is light, students have tended to be similarly active, thus minimizing inequitable workloads.

Academic book reviews can either be written in a free-flowing narrative style or be more structured. The former can be challenging to write, especially for inexperienced writers. We have generally tended to write reviews structured into three sections. The first section introduces the book and its authors, the justification and need for writing it, and highlights the intended audience. The second section is the “meat” of the review, where the contents are summarized. Such a summary can be done in various ways, from a chapter-by-chapter description to a more thematic review. The third and most contentious section provides the critique. Topics commonly include: What is the quality of the writing? Are there substantial grammatical or typographical mistakes? Are graphs, drawings, and images easy to read, effective, and necessary? Do chapters stand alone, or is there an attempt to connect across them? Are there chapter summaries? Are references complete and up-to-date? We finish this section with a general opinion of the book’s quality, its potential use and demand, and the audience we think it might target best.

The first book we ever reviewed was the class textbook when it was first published 25 years ago. Since then, we have published 18 others in a variety of journals (e.g., *Fish & Fisheries*, *Reviews in Fish Biology and Fisheries*, *Journal of Fish Biology*) and have covered topics from trophic cascades to scientific communication (detailed list available: <http://bit.ly/3qeCceg>). The exercise continues to be an excellent teaching tool, promoting many valuable skills, including leading sometimes heated discussions, summarizing often difficult text, writing reviews of others’ work while framing such critiques in a constructive fashion that balances positive and negative feedback, and understanding the complexities of the publishing process. Most importantly I hope that through these book reviews I have shared my love of books with the next generation of scientists.

The general availability of e-books may change how this exercise works in the future. In a recent survey of reading habits (<https://pewrsr.ch/2n7mmVs>), the Pew Research Center found that since 2011, the decline in book reading was paralleled by an increase in reading of e-books. As stated above, e-books are easier to get from publishers and more university libraries are purchasing them (particularly in pandemic times), which allows virtual access to the entire content without having to share limited hard copies. Individual chapters are also more readily available and can be shared across the group. But, perhaps more importantly, as the e-book platform continues to evolve, readers will have access to multi-media content and reviewers will need to develop a broader skill set to critique videos and other interactive material. Development of such multi-media reviewing skills will rapidly become another feature making book reviews useful teaching tools.

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