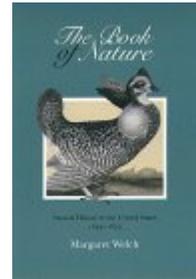




Margaret Welch. *The Book of Nature: Natural History in the United States, 1825-1875.* Boston: Northeastern University Press, 1998. xiv + 289 pp. \$50.00 (cloth), ISBN 978-1-55553-342-7.



Reviewed by Jon-Paul Dyson (Strong Museum)

Published on H-SHEAR (April, 1999)

Reading Nature

Scholars have recently produced a multitude of works in two subdisciplines of American history: the history of our relationship with the natural world and the history of the book. Given the long history of the designation of nature as a book, it is not surprising that an author would attempt to meld these two approaches. Margaret Welch, in *The Book of Nature: Natural History in the United States, 1825-1875*, uses the methodologies of the history of the book to study nineteenth-century natural history. In the process she has produced an exhaustively researched book that, despite some limitations, will be useful for those interested in the history of science in America.

Welch concentrates on the production, distribution, and influence of books that are self-consciously about natural history. The author justifies her focus by arguing that books were the prime means of disseminating information about the subject in United States; in contrast to England, where there existed relatively strong institutions devoted to the study of natural history, Americans interested in the subject often worked in relative isolation and thus had to rely on what books could tell them. As she puts it, “a social history of natural history in the United States should favor individual response and dis-

semination over institutional history” (p. 4). It is questionable whether individual authors can so easily be divorced from institutions, for institutions often provided crucial support to individual authors and amateurs, as her extensive use of the Smithsonian correspondence testifies. Yet she is undoubtedly justified in her decision to emphasize the individual over the institution since most Americans interested in studying nature were not members of scientific organizations. Furthermore, this approach keeps the book tightly focused.

Welch’s work is divided roughly into three parts. In the first three chapters, it concentrates on the production of key works of natural history. The fourth and fifth chapters, easily the work’s best, discuss how a variety of popular genres, such as magazines, textbooks, and children’s literature, lifted words and images from the more elite books and disseminated them to a larger, more popular audience. Finally, the work closes by briefly bringing the argument up to the present day. The entire book is clear, straightforward, and easy to grasp.

After sketching the conduct of natural history before 1825, Welch launches into a discussion of the production of natural history monographs, both large and small.

Here she surveys the types of works that were written, attempting to discover what was unique about them, and what they contributed to an American natural history. Readers of this type of history will find some of these conclusions familiar. American naturalists were interested in promoting American science. American naturalists tended to rely on direct observation rather than closet research because they had access to fewer scientific resources than European scientists. American naturalists' extensive contact with the natural world led them to empathize with their subjects and eventually become concerned about the loss of species and their habitats. The American approach, both in written and pictorial depictions of nature, tended to isolate the individual subject, removing it somewhat from its background. Welch hypothesizes that all of these tendencies combined to create a distinctive American style of natural history monograph that emphasized observing rather than theorizing. This approach, according to Welch, meant that Americans would make distinctive contributions to the study of nature without falling into the trap of useless theorizing (though one wonders if theorizing, while certainly leading some observers astray, has not sometimes produced greater insights into the subject of natural history than mere collection of data ...).

This section of the book, while evidencing a great deal of research, could have been made even more insightful. Attentive readers will observe how points are repeated over and over as Welch examines different disciplines, different authors, and natural histories concerned with different geographical locales. Too often, the evidence does not seem to prove sufficiently the broad conclusions the author reaches. For instance, while noting that nineteenth-century naturalists were less concerned than modern biologists with the relationship of species to their ecology, she argues that scientists "literally focused on the single specimen with background blurring" (p. 78). As evidence for this contention the author relates a Thomas Say anecdote from the Long expedition to the Rocky Mountains. Say remembered that, "Whilst sitting in the large earth-covered dwelling of the principal chief, in presence of several hundred of his people, assembled to view the arms, equipments, and appearance of the party, I enjoyed the additional gratification to see an individual of this fine species of *Blaps* [dung beetle] running towards us from the feet of the crowd. The act of empaling this unlucky fugitive at once conferred upon me the respectful and mystic title of 'medicine man,' from the superstitious faith of that simple people." According to Welch, the quote "tellingly reveals this fascination

with a single specimen representing the species" (p. 78). Yet just because Say took the time to collect a specimen does not prove that he ignored the habitat in other situations. What committed entomologist would have passed up such an opportunity? Furthermore, it is questionable whether, for Say, the "background [was] blurring." Indeed, he seemed acutely aware of the effect of his actions on his native hosts. Welch's contention is undoubtedly true, for nineteenth-century biologists did concentrate less on the habitat of the creature than their modern counterparts do, but the anecdote is poorly chosen. This is typical of a number of times when the evidence insufficiently supports the broad generalizations the author makes.

The fourth and fifth chapters of the book detail the production of texts and explain how audiences responded to them, and Welch's research shows to good effect here. Her superb knowledge of many of the important natural history texts holds her in good stead, for she ably traces how natural history descriptions and illustrations made their way from scientific texts into popular literature, magazines, and the words and drawings of readers themselves. In the process, she shows that natural histories of the period reached an audience far out of proportion to their fairly small press runs. Welch does an especially nice job of highlighting how the physical nature of book production, especially the use of wood engraving, ensured that certain key images would be used over and over again. These chapters offer valuable insights into the distribution of scientific knowledge in nineteenth-century America and contribute to our understanding of one aspect of nineteenth-century print culture.

Welch also tries to understand the readers' response to these texts. Again the extent of her research shows through as she recites example after example of readers' responses to natural history books. Yet despite the numerous good examples, the discussion of these readers' responses often remains curiously flat. The examples begin to sound familiar after a while: this student of nature enjoyed botanizing, another young man learned the names of birds from books, and a future entomologist found his calling in a book on insects. Welch often presents these anecdotes uncritically, spending far more time on description than on analysis. Thus, the many readers' responses are only rarely woven into any analysis that tells us much about the readers themselves or the country they lived in. There is a lot of description here, but the book could have profited from more thick description. This is perhaps to be expected, for given the paucity of resources available to historians, the study of

readers' responses, while sounding good in theory, has too often proved difficult to put into practice. Yet books like Cathy Davidson's *Revolution and the Word* prove that it can be done in ways that add greatly to our knowledge of the readers, the subject, and the broader cultural context.

Her book also could have stood a closer look at the relationship between natural history and the broader culture. For a book that aims at studying the relationship between text and reader, this remains an internal history, concerned almost exclusively with the world of American natural history. Too often missing is the relationship between American science and the broader scientific world and the dominant American culture. For instance, Welch mentions, in passing, on a few occasions, that natural history was often published because it was deemed harmless, especially to political or religious sensibilities. She could have explored this more, for by the end of her time period this supposition was not always accepted. Even before Darwin (a name that fails even to appear in the index), geologists felt the need to preface their works with long arguments for the compatibility of religion and science. After Darwin, books about nature, although often given to warm reassurances about the harmony of science and religion, could not as easily be construed as harmless. In addition, for increasing numbers of Americans, these new scientific approaches to nature provided the means of breaking free of old mental strictures. Historians of science of course know that the older conceptions of nature survived long after the publication of Darwin's *Origin of Species* in 1859, but Welch misses an opportunity to explore how these new scientific ideas affected the readers of these natural history texts.

Furthermore, while she is correct that books were crucial to the distribution of knowledge about natural

history in the United States, books themselves held a somewhat problematic status in the world of natural history. As she herself points out, early American naturalists made a virtue of their limited access to scientific works; they argued that unlike their European colleagues, they were seeing nature as it actually was, not as it was portrayed in books. The most popular American scientist of the mid-nineteenth-century, Louis Agassiz, was widely known for urging that students of the subject go to nature directly, without the potentially blinding assistance of references. Educational journals picked up these themes in the 1850s and 1860s, urging the study of science directly, without the aid of books, especially through the use of object lessons. In these contexts, books were seen as potential hindrances to the proper study of nature. This is not to deny the ultimate importance of the book as a guide to nature for nineteenth-century naturalists, but it was a guide that was viewed as problematic, and potentially damaging, by many commentators. Welch does her work a disservice by not exploring these many ways in which the book itself was seen as an inferior guide to nature.

In the end, then, this is a good, but limited, book. Students of nineteenth-century science should read it, for it offers a rich source of information. In addition, her analysis, although sometimes overly narrow, is often perceptive. Those who might be interested in the broader context of science in America, however, are best steered elsewhere, for this work never grapples fully enough with the complex relationship between natural history and the broader American culture that surrounded it.

Copyright (c) 1999 by H-Net, all rights reserved. This work may be copied for non-profit educational use if proper credit is given to the author and the list. For other permission, please contact H-Net@h-net.msu.edu.

If there is additional discussion of this review, you may access it through the network, at:

<https://networks.h-net.org/h-shear/>

Citation: Jon-Paul Dyson. Review of Welch, Margaret, *The Book of Nature: Natural History in the United States, 1825-1875*. H-SHEAR, H-Net Reviews. April, 1999.

URL: <http://www.h-net.org/reviews/showrev.php?id=3013>

Copyright © 1999 by H-Net, all rights reserved. H-Net permits the redistribution and reprinting of this work for nonprofit, educational purposes, with full and accurate attribution to the author, web location, date of publication, originating list, and H-Net: Humanities & Social Sciences Online. For any other proposed use, contact the Reviews editorial staff at hbooks@mail.h-net.org.