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Review of: All Creatures: Naturalists, Collectors, And Biodiversity, 1850-1950 by Robert E. Kohler

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All Creatures: Naturalists, Collectors, and Biodiversity, 1850–1950 by Robert E. Kohler

Review by: Kristin Johnson

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of sexuality and the history of the body. And since Darby shows that the rise of circumcision is also a story of medical innovation and the construction of medical expertise, his claims deserve to be considered by historians of medicine more generally.

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ROBERT E. KOHLER, *All Creatures: Naturalists, Collectors, and Biodiversity, 1850–1950*. Princeton and Oxford: Princeton University Press, 2006. Pp. xiii + 363. ISBN 978-0-691-12539-2. \$35.00, £22.95 (hardback).

doi:10.1017/S0007087407000192

Caveat emptor: although not evident from the title, book jacket or table of contents, this book is about the very specific topic of natural history surveys in North America, by (almost completely) US naturalists. We learn this on page nine of the first chapter, although the frontispiece – C. Hart Merriam’s map of the principal life areas of North America – does provide an early hint. This would be a minor point if the book jacket description and first chapter did not both open with descriptions of how little we know about the earth’s biodiversity, implying that the book is an account of the worldwide effort to collect, record and name ‘all creatures’. Despite Kohler’s defence that the title *All Creatures* should not be taken literally, the broad subtitle (*Naturalists, Collectors, and Biodiversity*) is particularly frustrating given Kohler’s emphasis on the fact that natural history survey ‘opens a window on a cultural landscape as distinctive as the natural landscapes in which its work was done’ (p. 226).

Kohler explains that he undertook the research upon which this book is based in order to help explain what led naturalists to launch hundreds of expeditions to every corner of the world from the 1880s and into the 1930s (the ‘age of natural history survey’), culminating in the modern legacy of ‘millions of specimens assembled and lovingly preserved’ (p. 271) in museums. The result is a book that certainly does provide a rich context to survey natural history in the United States through a series of chapters organized by broad topics. ‘Nature’ examines how the infrastructure along which naturalists travelled (what Kohler calls the ‘inner frontiers’) developed, while ‘Culture’ examines the history of recreational customs – from camping and sport hunting to visiting natural history museums’ dioramas – that made the study of nature an aesthetically, morally and intellectually respectable pastime for the middle class. ‘Patrons’ traces how those involved in intensive survey collecting obtained funding, namely through convincing those with money – both public and private – that collecting masses of specimens was a self-evidently legitimate activity. ‘Expedition’ and ‘Work’ focus on the logistics of expedition organization and management, and participants’ experience as survey naturalists. The former includes a fascinating section on how collection practices shifted towards the collection of series of specimens to demonstrate the range of variability within species, while the chapter entitled ‘Knowledge’ provides the intellectual context for this work through a discussion of the rise (and demise) of subspecies. A concluding ‘Envoi’ delves into what this history may imply about the future of biological inventory. Many of these chapters are the result of detailed minings of archives, and based upon the close study of the correspondence of well-known and not-so-well-known survey naturalists. The exchanges between naturalists working in museums and naturalists working in the field are especially fascinating, as Kohler uses their own words to great effect to illustrate how they orchestrated expeditions and – more importantly – changes in collecting practices.

One of the most pleasing aspects of this book is that it contributes an important new dimension to various historians’ recent efforts to add museums back into the history of early twentieth-century life sciences. These institutions were largely absent from Kohler’s previous book,

Landscapes and Labscales: Exploring the Lab–Field Border (Chicago, 2002). Here Kohler brings out the ramifications of naturalists' efforts to study specimens from the field within the museum-based disciplinary frameworks of taxonomy and systematics. Indeed, in many ways these two books can be profitably read in concert; *Landscapes and Labscales*, for example, helps provide the background for why naturalists have been so concerned about what laboratory biologists think. Kohler occasionally refers to naturalists' preoccupation with the status of natural history in the current work, but usually, and refreshingly, keeps the focus on naturalists as important subjects of study in their own right. In the case of the US natural history surveys, his book does a beautiful job of demonstrating that 'scientific ambitions alone are not what put collectors in the field, but rather conjunctures of environmental, cultural, and scientific trends' (p. 284).

Kohler points out that he intends his work as a springboard for further historical research. In this spirit, potential questions that came to mind while reading this book include the following. First, Kohler ties survey work in the US 'inner frontiers' to what he calls the middle-class vacation complex. If this is the case, expeditions from US institutions to South America – common in the book's photographs but not explicitly differentiated from survey work closer to home – would seem to rely upon quite a different (and potentially fascinating) context. Second, although archives are highlighted here, the knowledge that naturalists actually ended up producing from all this work in the form of journal articles is not. Mark Barrow's study of the history of American ornithology can fill this gap for the ornithologists, but more research needs to be done surveying both general natural history journals and journals devoted to other vertebrates, invertebrates and plants. Finally, transcultural comparisons will be a crucial next step in order to evaluate how far the story told here may be extrapolated to other times and places.

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SHARON E. KINGSLAND, *The Evolution of American Ecology*. Baltimore: The Johns Hopkins University Press, 2005. Pp. x + 313. ISBN 0-8018-8171-4. £33.50 (hardback).

KIM CUDDINGTON and BEATRIX BEISNER (eds.), *Ecological Paradigms Lost. Routes of Theory Change*. London: Academic Press, 2005. Pp. xxiv + 435. ISBN 0-12-088459-3. £49.95 (hardback). doi:10.1017/S0007087407000209

As a science with truly global ambitions, ecology remains an intriguingly fragmented discipline, wedded to distinctive national research traditions. Ideas about what wilderness is, what is natural and how humans fit into the natural order are notoriously embedded in webs of local cultural and political discourses. In the current international debates on sustainability, climate change, the biodiversity crisis and the regulation of agricultural biotechnology, the long view which only history provides could well help to ease some of the disagreements by mapping their sources. This is a magnificent task for the history of science, but there has always been a regrettable lack of interest in the history of ecology by professional historians of science. Only a handful of practitioners, among them Sharon Kingsland, Robert Kohler, Gregg Mitman and Peder Anker, have applied the methodological arsenal of modern history of science to ecology. Kingsland's new book on the American tradition in ecology is therefore a welcome addition to this small corpus.

The birth of American ecology is usually depicted as taking place at the land-grant universities in the Midwest and their agricultural research stations. Kingsland, however, takes the unusual stance of giving the New York Botanical Garden, founded in 1891, a pre-eminent position in this story. And she manages to make a convincing case. Under the leadership of Nathaniel Lord Britton (1859–1934), the New York Botanical Garden energetically pursued three activities around which the embryonic field of ecology could develop and acquire respectability: exploration and