

job of filling in holes in the historical record with other relevant supplementary stuff. Of course, Hunting leans on the usual sources: a published account of the expedition in the *Hartford Daily Courant*; the indispensable Schuchert and LeVene biography of Marsh (1940); a few brief newspaper notices; a list of topics and stories Marsh intended for an autobiographical book that he never wrote; and a Peabody Museum ledger of specimens collected. These were sufficient to provide an outline of the expedition, but not to tell a complete story. So, what does the author do to plug the gaps?

“Some of what happened,” she explains, “we must infer.” The author’s best and most creative inferences include beautiful details about a soldier’s life on the bleak Kansas plain in the 1870s, including guide Edward Lane’s penchant for profanity; design flaws of the US Army-issued Sibley tent; expedition member Benjamin Hoppin’s night spent lost on the prairie; and speculations about her great-grandfather’s personality based on a minute examination of his photograph by an expert portraitist. The author naturally wants to tell the reader something about Russell’s reaction when he found his spectacular fossil, but, unfortunately, the discoverer left no record. Therefore, she cleverly substitutes a vivid, first-hand account of George F. Sternberg’s discovery of a beautiful duck-billed dinosaur skeleton covered with skin impressions. Hunting makes it easy to imagine that Russell was every bit as excited as Sternberg was.

For want of wings is an entertaining read that makes a valuable contribution to the growing literature on history of American palaeontology.

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ROSCHER, Mieke, KREBBER, André and MIZELLE, Brett (editors). *Handbook of historical animal studies*. Walter de Gruyter, Berlin and Boston: 202. 637 pp.; illustrated. Price £141.00 (hardback). ISBN 9783110534290.

Multi-author handbooks are notoriously difficult to conceive and assemble but even more difficult to review. The editors and authors of the *Handbook of historical animal studies*, however, produced a fine volume that is a welcome exception to the rule. Although the depth, breadth and width of the material covered is astounding, the structure of the book itself and the individual chapters guide the reader smoothly through the growing, and at times disparate, field of historical animal studies. This field is closely related to human-animal studies in general, which, as the editors stress in their excellent introduction, “seeks to trace and make visible the active engagement and entanglement of animals on and within human societies and their ability to live their lives in accordance with their desires and needs”.

In their introduction Roscher, Krebber and Mizelle chart the expanse of animal histories in space and time. In fact, the book spans a long timeframe and most of the globe, at least its landmasses – and here the editors readily concede that aquatic animals and the oceans feature very little. Yet, there is not much else that the book does not cover.

In the first section “Timelines”, three chapters (“Pre-Domestication”, “Domestication” and “Post-Domestication”) cover the *longue durée* of how humans and other animals have inhabited the same space. As the editors admit, the volume overtly covers European history but many chapters are successful in having a global outlook or are explicitly non-Eurocentric. Consequently, the second section of the volume covers area studies beyond Europe. Starting with “American Studies” (this only means US-American however – Central and South America are present in other chapters), it moves to “African Studies”, “Australasian and Pacific Studies” and “(East) Asian Studies.”

The third and fourth sections look closely into the subfields of history, diverse historical approaches and adjacent fields. These 18 chapters cover classic fields like social, economic or diplomatic history but also more recent approaches like feminist intersectionality studies or multispecies ethnography, and many more.

The final part is entitled: “History of Human-Animal Interactions” and includes chapters on pets, zoos, circus animals, animal iconography, veterinary medicine, animal experiments, agriculture, slaughter, hunting, war, animal finds and animal collections/taxonomy.

All chapters, including the introduction, are structured in the same way. They start with an “introduction and overview” on the main specific research areas they cover. Then they outline important “topics and themes” before tackling “methods and approaches.” A final section describes the “implication (s) of the animal turn”, highlighting what a focus on non-human animals could mean in the specific fields, disciplines and approaches.

A helpful index is provided to navigate the chapters and there are multiple cross-references within the chapters. Many authors are not only referencing anglophone literature; the diversity of authors in respect to locale, gender and career phases is especially noteworthy. A few chapters are richly illustrated and do engage poignantly with the visual sources. Readers of *Archives of Natural History* will especially appreciate that natural history plays a central role in many chapters, not least in the last chapter on taxonomy and collections. As many handbooks however, this is not first and foremost a book for specialists. As a historian of early modern epizootics and insect collecting / entomology, I, not surprisingly missed a few details and more recent literature in the chapter on veterinary history or taxonomy, respectively. Other specialists will find gaps and omissions in specific chapters but this is hardly avoidable. If you miss important literature in some chapters, you may find it in others. The book will be useful for introductory history courses or other humanities which centre on non-human animals. I learned a lot especially from the chapters outside my own specialization. All in all, this is an important textbook which will hopefully inspire a growing interest in an exciting research field. Congratulations to the editors for putting together a volume that will be standard reading for a long time to come. A more reasonably priced paperback edition will be published soon.

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SARASOHN, Lisa T. *Getting under our skin: the cultural and social history of vermin*. Johns Hopkins University Press, Baltimore, Maryland: 2021. 296 pp.; illustrated. Price US\$30.00, £22.00 (hardback); US\$30.00 (ebook). ISBN 1421441381 (hardback), ISBN 9781421441399 (ebook).

Lisa Sarasohn, Professor Emerita of History at Oregon State University, is a specialist in European intellectual and cultural history, and the history of science informs and shapes this book. She says her musings on the lice men featured in *The description of a new world, called the blazing-world* (1666), the parody of the Royal Society by Margaret Cavendish (1624–1674), Duchess of Newcastle, in addition to the works of the early microscopist Robert Hooke and her personal encounters with vermin, prompted her to produce this publication.

According to the publishers this text will appeal to “anyone who has ever scratched”. Whilst unlikely that all scratchers would relish it, this scholarly but readable text does have quite broad appeal. It has something to offer to academics and non-experts interested in the cultural and social history of vermin, pest control, entomology, animal history, public health and hygiene, modernity and “othering”, to name but a few broad fields. There has been growing interest in invertebrates and pests as subjects for animal histories and this book is a valuable addition to the genre. Those interested in reading an earlier work may enjoy Dawn Biehler’s *Pests in the city* (2011) or Lucinda Cole’s *Imperfect creatures* (2016).

Sarasohn focuses on the interactions of humans with other animals, human and non-human, which have been branded as verminous, and how they have shaped us socially, culturally and politically. As wide ranging as the vermin themselves, the chapters on bedbugs, lice, fleas and rats offer a smorgasbord of fascinating, insightful, disturbing and sometimes comedic references and discussions, traversing hundreds of years to the current day. The focus is on Great Britain and North America, but the former is often discussed in a European context. The smorgasbord is a little messy in places and some of the author’s assumptions require stronger support but there is plenty to enjoy.

One major theme is our change in attitude to and treatment of vermin, from the pragmatic tolerance of an everyday nuisance in earlier times, to the paranoia and stigma associated with infestation in the eighteenth century. Despite the emergence of the pest control industry and improved personal hygiene for