

Book Review: *A Companion to Biological Anthropology*. CS Larsen, ed. 2010.

By: Robert L. Anemone

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Abstract:

The publication of a new volume in the Blackwell Companions to Anthropology series provides an opportunity to reflect on the nature and breadth of our discipline. According to the publisher, the aim of this series is to offer “comprehensive syntheses of the traditional subdisciplines, primary subjects, and geographic areas of inquiry...and a cutting edge guide to the emerging research and intellectual trends in the field as a whole.” In this, the seventh title in the series, editor Clark Spencer Larsen and a large (N = 40), diverse group of authors have succeeded brilliantly in describing the wide range of issues and themes of interest to biological anthropologists, as well as summarizing what we know, and sometimes what we don't know, about these questions. As the editor explicitly points out in his Introduction, the central paradigm of biological anthropology is evolutionary theory. I should say that I use the term paradigm in the sense of a lens or explanatory framework with which we view our subject matter—humans and other primates. Our focus on evolutionary theory provides the metaphorical glue that binds together biological anthropologists who work in such seemingly disparate areas as genetics, epidemiology, behavior, biomechanics, physiology, growth, nutrition, and paleontology. My sense is that the shared focus and identity that evolutionary theory provides us as biological anthropologists is a much-valued feature of our field that is perhaps missing from some of the other subdisciplines of Anthropology.

Keywords: anthropology | book reviews | evolutionary theory | biological anthropology |

Article:

A Companion to Biological Anthropology. Edited by Clark Spencer Larsen West Sussex, United Kingdom: Wiley-Blackwell. 2010. 572 pp. ISBN 978-1-4051-8900-2. \$199.95 (hardcover).

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The volume under review begins with a chapter on the history of our field (Little and Sussman) and ends with one on the challenges of teaching evolution in a country (the United States) in which nearly half of the adult population rejects the notion of human evolution (Nickels). The heart of the book comprises 29 chapters in three sections that focus on anthropological analyses of living humans and primates (The Present and the Living), the fossil record of human and primate evolution (The Past and the Dead), and cross-cutting analyses of aspects of both living and dead primates (The Living and the Dead). The editor has chosen the authors of the individual chapters well: many of them represent the leading scholars and teachers in our field and their work will be familiar to the readership of this journal.

Although the coverage of topics of interest to biological anthropologists is not exhaustive, it is extremely broad and well considered. For example, evolution and genetics are covered in a general overview article (Weiss and Buchanan), as well as separate chapters on population genetics (Relethford), molecular genetics (O'Rourke), and ancient DNA (Kaestle). Skeletal biologists will enjoy the excellent chapters on paleopathology (Buikstra), forensics (Ubelaker), bone biology (Gosman and Stout), and incremental growth of dental tissues (Guatelli-Steinberg). The papers on primate and human evolution provide an authoritative and up-to-date summary of paleontological knowledge of the earliest primates (Gunnell and Silcox), the evolution of the catarrhines (Begun) and the earliest hominins (Simpson), and early members of the genus *Homo* (Rightmire). But, my favorite article in this section, and perhaps in the entire book, is Fred

Smith's on the origins and evolution of modern humans and their middle to late Pleistocene forebears. After a useful discussion of species concepts and models of speciation, Smith lucidly presents the complex fossil record of late Pleistocene Homo. From Homo heidelbergensis to Neanderthals in Europe and from transitional populations to the earliest modern Africans, Smith describes the mutually opposed viewpoints of modern human origins that have become so entrenched in the literature (i.e., recent African origins and multiregional evolution). Smith's own assimilation model of modern human origins provides an appealing way forward in which a small contribution of genes from archaic populations is expected as modern populations expand out of Africa into the rest of the Old World. The assimilation model has been spectacularly supported by the recent sequencing of the entire Neandertal genome by Svante Pääbo's team in Leipzig (Green R.E. et al., 2010. A draft sequence of the Neandertal genome. *Science* 328:710–722), which demonstrated 1–4% overlap between the genomes of Neandertals and modern non-African populations. Case closed.

Every reader will have his or her own sense of topics they would have liked to have seen greater coverage of, while recognizing editorial constraints on length. This reviewer, whose interests lie mainly in primate and human paleontology and functional morphology, would have welcomed the inclusion of chapters on the South American fossil primate record and on the “hobbit” from Flores. Only two chapters explicitly cover living, nonhuman primates: I would have liked to have seen more, including perhaps a review of the conservation status of living primates and a piece on ape cultures. But, these are minor issues that do not detract from the merit and value of this volume. The quality of the writing (and of the conceptual content) is very high throughout: the individual authors and the editor are to be commended for putting together an authoritative volume that successfully captures the essential nature of biological anthropology at the beginning of the 21st century.