BOOK REVIEW

A Companion to Biological Anthropology.

Edited by Clark Spencer Larsen. Wiley-Blackwell, Chichester, 2010. ISBN 978-1-4051-8900-2 (cloth). xxiv + 572 pp. £125.

Emerging research trends in biological anthropology, as well as new and old approaches for solving the mystery of how extant primates and their ancestors have evolved into the present day, are but a part of the many topics discussed in this recent addition to Blackwell's *Companions* series. This volume features in-depth overviews of different "themes, concepts and areas of knowledge" within the field by a significant number of renowned experts and edited by renowned bioarchaeologist Clark Spencer Larsen. In the introduction, Larsen states that a focus on evolution is what gives this field, with a myriad of research interests, the glue that binds it together. This is evident throughout the volume's 31 chapters, as discussions within different chapters often merge with one another, allowing for the trademark holistic approach that anthropological investigation is based upon.

Two essential chapters flank the book's three main parts; the first of which (Little and Sussman) provides a concise history of the field of biological anthropology, starting in the late 19th century from theories of human race and variation by physicians and anatomists, through its maturation post World War II to the holistic and model-driven field it is today. The concluding chapter (Nickels) subsequently switches gears, paying special attention to the teaching of biological anthropology in today's classrooms (with a particular focus on the United States); discussing challenges for the educator when lecturing to young-earth creationists, who reject the basic tenets of evolutionary biology and the scientific method.

The middle three parts, which encompass the main corpus of the book are aptly titled according to the bodies of data used to develop and test out theories: II. The Present and the Living, III. The Past and the Dead, and IV. The Living and The Dead. Each chapter provides a brief background of a topic as well as a synopsis of new ways to analyze and interpret data, informing the reader about current research trends within biological anthropology.

Part II begins with two essential subjects for anyone studying biology: 1) evolutionary theory and 2) the different approaches into the classification of living organisms. The former (Weiss and Buchanan) provides a thorough description of the four categories by which genetic changes within a population can arise and vary over time. The authors also take on several pressing questions that would trouble junior students, such as whether life is adaptive, or how deterministic is evolution. In the latter (Wood), introduces classificatory schemes for organizing and relating past and present forms of life, describing nomenclature, as well as explaining

possible applications of this organizational method.

Within the book, broad themes too multi-faceted to be discussed briefly are touched upon in more than one chapter as well as in different parts of the book. For example, the topic of non-human primates is separated into their physical defining characteristics (McGraw), behavior and sociality (Strier), origins and earliest ancestors (Gunnell and Silcox), and the rise of Old World monkeys and apes (Begun), indicating how far these research interests have advanced. Furthermore, different fields, such as genetics and paleoanthropology are brought together (Kaestle) to resolve long-standing mysteries, like speciation events or large population movements and bottlenecks. The methods discussed in this chapter and others throughout this volume underscore how deeply interlinked different subfields within the discipline have become and how collaboration between researchers from different backgrounds result in more robust findings.

A chapter I particularly liked reading examines the ongoing evolution of human populations via gene cline frequencies across the globe (Madrigal and Willoughby). The authors explore the selective advantages of certain genes, whether good or bad (such as those for lactase persistence or for sickle cell anemia), that allowed them to be selected for and propagated in regional populations. Studying these frequencies also allows anthropologists to determine the make up of a population and to retrace its origins, just as in the case of the small population pockets in South America originating from fugitive Africans slaves. The case studies presented are here but a few of the ways in which microevolution continues to drive change within our species—something that is often overshadowed by discussions by paleoanthropologists about the evolution and spread of our hominin ancestors.

One minor oversight I noticed within the book is the placement of the chapter about demographic estimation (Gage). I feel this topic would have fit better within Part IV for two reasons. First, a chapter discussing estimation of population numbers seems somewhat out of place when located in-between four chapters dealing with the adaptation of human populations within the Holocene in regards to climatic factors (James), coevolution and the geographical spread of pathogens (Sattenspiel and Herring), nutrition (Dufour) and the origin and distribution of genetic polymorphisms (Madrigal and Willoughby). Second, within the chapter itself, the discussion of different methods for reconstructing population structure, both in ethnographic and archaeological contexts, would be more adequate within the section where technical approaches for studying living and archaeological populations are examined.

Overall, the quality of this volume is outstanding. It may almost seem indispensable for a junior scholar to obtain in order to quickly brush up on a subject before class discussion. However, these chapters would be the most useful for students of physical anthropology who wish to inquire in

greater depth about subjects presented in class or fill-in any outstanding gaps of knowledge. The high level of academic merit from collaborators is exemplified by the effective way in which they communicate their ideas, and the structure in which the chapters are written makes it accessible to wider audiences outside of anthropology, whom can perhaps one day make a difference in the way that evolution-related themes are taught across the US. I thoroughly enjoyed browsing through *A Companion to Biological Anthropology*, putting it down with a sense of awe—witnessing how much this field has achieved in the few decades since its golden age, and eagerly waiting to see the direction in which the au-

thors featured in this book along with others, will take it over the next century.

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