

## A Companion to Biological Anthropology

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Clark Spencer Larsen (ed.). 2010. *A Companion to Biological Anthropology*. Wiley-Blackwell, United Kingdom, 572 pp. ISBN: 978-1-4051-8900-2.

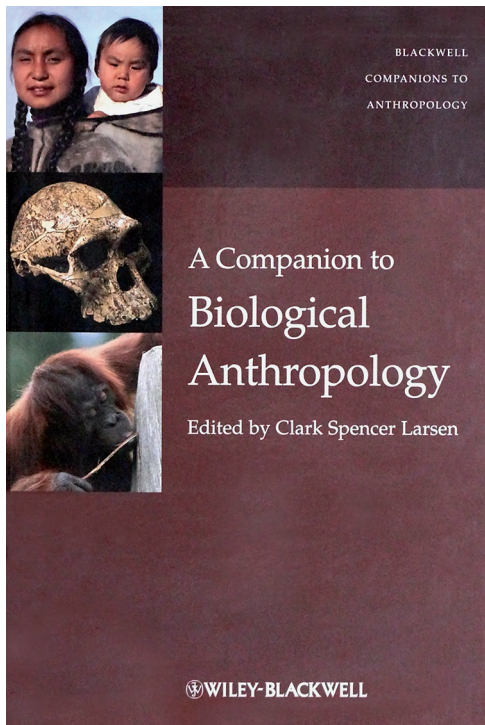
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This book is a very useful, complete compendium of contemporary anthropology recognised as “holistic approach to under-

standing the human condition, both from cultural and from biological perspectives”.

*A Companion to Biological Anthropology* edited by Clark Spencer Larsen and published in 2010 by Wiley-Blackwell is organized along the line that studying the present populations can inform our understanding of the past ones. The book consists of thirty one chapters which have been grouped in five parts presenting key aspects of biological anthropology from evolution, genetics, phylogeny and behaviour in humans and primates in general to the variation in health and lifestyle, forensic applications, population history and ancient DNA study, dietary reconstruction as well as biology and function of the skeleton and dentition both in past and living humans.

The first chapter is devoted to the history of biological (physical) anthropology in the United States – anthropology as an exploration of human origins and human variation. The second and the third chapter concerns human evolution, systematics, taxonomy and phylogenetics. The fourth chapter contains basic information essen-



tial for understanding human population genetics, mechanisms that cause evolutionary changes and examples of studies of human population structure and human population history. This chapter has provided the discussion about patterns of genetic variation and the origin of modern humans focusing on the debate over replacement versus assimilation continues in prehistoric Europe, where Neandertals and modern humans overlapped in time before the Neandertals disappeared. This chapter also contains examples of studies of recent natural selection in human populations. One of the example is dispersal of humans into different environments which has led to differences in human pigmentation. Another example of recent human evolution through natural selection is the selection for lactase persistence in populations with history of dairy farming. The following two chapters concern human molecular genetics providing some molecular basics as well as overview of population genomics, adaptability and human geographic variation. The next five chapters focus on the growth, development, senescence, aging, physiological adaptations, epidemiology and coevolution of human pathogens, as well as demographic estimations, nutrition and health of human populations. The following chapter deals with how natural selection, gene flow and genetic drift have affected human populations after the last expansion (including the Neolithic transition in Europe). The last three chapters in part II concerns modern and archaic primates - skeletal morphology, life history and reproduction, behaviour, sociality and evolution of human brain, cognition and speech. The third part of the book consists of nine chapters focused on fossil record of primate origin and evolution, the earliest hominins, evolution and dispersal of early members of genus *Homo*, origin of regional human diversity, radiation of modern hu-

mans as well as basics of bioarchaeology, paleopathology, paleogenetics (ancient DNA analyses applied in anthropology) and some issues in forensic anthropology. The fourth part of the volume (consisting of six following chapters) concerns odontology and biomechanics. It is focusing on the reconstruction of diet and paleoenvironmental conditions using stable isotope analyses, enamel growth and dental development in reconstruction of hominin life histories, mechanobiological skull function and locomotor function across primates. The last chapter is dedicated to the relation between science education and biological anthropology.

All parts are written by leading American specialists in physical anthropology (auxologists, odontologists, paleobiologists, forensic anthropologists). These specialists include among others Barry Bogin, Jane Buikstra, Rachel Caspari, Debbie Guatelli-Steinberg, Douglas Ubelaker, Peter Ungar. Each chapter provides comprehensive discussion of current issues and, what is very important, considering future directions within the field.

This book provides a complete overview of the intensively growing field of biological anthropology. I agree with Tim D. White from the University of California, Berkeley who has noticed that "Clark Larsen has created a comprehensive sourcebook covering all facets of contemporary biological anthropology (...) which will be an indispensable reference" for professional biological anthropologists, medical and forensic specialists as well as students at all levels seeking to learn more about contemporary anthropology.

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