

Book Reviews

SKIN: A NATURAL HISTORY. By Nina Jablonski. Berkeley, CA: University of California Press. 2006. 266 pp. ISBN 0-520-24281-5 \$24.95 (cloth).

Nina Jablonski does not need to be introduced to the readers of this journal. Having worked on a multitude of topics, from the evolution of gibbons to theories on bipedalism, Jablonski has established herself as a prolific biological anthropologist. Now Jablonski has written a general-interest book on human skin, and she succeeds (most of the time) in making this seemingly unexciting topic very exciting. The casual reader might be surprised to discover, however, that 91 of the book's 266 pages are devoted to the glossary, notes, and index.

As the title indicates, the book is a natural history of skin, primarily human skin. Thus, it discusses the evolution of skin beginning with multicellular organisms, the properties of skin, skin abrasions, and even skin as a canvas for human art and expression. Given how broad these topics are, some chapters are not altogether coherent. For example, the chapter "Skin's Dark Secret" covers everything from melanin production, to zebrafish genes, to albinism, to sex and age variation in skin pigment, to methods of measuring skin color. In my opinion, the chapter lacked coherence.

An anthropological vision is palpable throughout Jablonski's book, and it made the topic delightful and the reading enjoyable. Indeed, I frequently thought that this book would be a great way to introduce a non-anthropologist to the anthropological perspective. Whenever it is possible, Jablonski incorporates archaeology (e.g., the presence of pigments in the archaeological record), linguistics, by explaining the origin of everyday phrases that invoke skin—"it makes my skin crawl;" and much, much cultural anthropology. In these days when departments of anthropology are becoming polarized along disciplinary lines, it is refreshing to see a four-field anthropologist looking at a topic in a truly holistic manner. Indeed, the parts of the book that were disappointing were those in which this complex and multidisciplinary lens was missing. Such was the case for the chapter on skin damage and injuries.

Otherwise, there are numerous examples of how comprehensive an anthropological perspective is. In her chapter on the experience of touch, Jablonski talks about the biology of the transmission of the feeling of touch. Then she expands on the cross-cultural differences in the importance of touch, from the embarrassment associated with meeting someone from a culture with a very different idea of what is proper touch, to the issue of mothering. I found this last topic highly relevant and beautifully written. Jablonski makes an excellent case for rearing human babies in close proximity to their mothers with frequent breast-feeding. She discusses not only the biological benefits of breast-feeding for mother and baby, but also the experiences of children reared in orphanages with and without caring touch. A well rounded, four-field comparative view of the topic of touch, indeed.

As biocultural as Jablonski's writing is on the subject of touch, it could have been more so in her chapter on human alterations to the skin in the form of makeup, tattoos, etc. I would have been interested in learning not only about how tattoos are created but also about how their ritual importance varies in different cultures. How is the act of getting a tattoo in a tattoo studio in a busy nightlife district in the United States different from getting a tattoo in various cultures in Melanesia?

Jablonski also discusses human skin color variation, including the various hypotheses that have explained contemporary human diversity and the distribution of such diversity. She provides a nice overview of prehomine skin evolution, which I found interesting and helpful. Then she turns to the issue of hominine skin-color evolution. Although she is probably right when she says that "the australopithecines were not yet naked apes" and that "early members of the genus *Homo* . . . were darkly pigmented" (pp. 77–78), I wish that she had been more cautious in these statements. Indeed, she refers her readers to a color plate of hominine species that shows reconstructions, not photographs, of these species. There are some things about our evolutionary past that we cannot be 100% certain about, and it is important to convey this to the general public.

When it comes to discussing the distribution of human skin color, Jablonski does a phenomenal job tying this variation to the concept of race. She stresses the lack of sharp boundaries and the adaptive value of skin color, which might evolve fairly quickly should a population migrate. In addition, she directly challenges the validity of using skin color as a proxy for genetic ancestry, a trend that is unfortunately becoming more frequent in biomedical research. Jablonski writes: "In recent years, an increasing number of studies have used skin color in medical research as a surrogate for 'race' or a genetically distinct group. This approach is disturbing, because it ignores the role of sociocultural factors in mediating the relationship between skin color and various disease processes. Skin color is not an accurate proxy of ancestry and must be used with great caution" (p. 95). Next to these sentences, I wrote a big "BRAVO!"

Lastly, I would like to pinpoint a feature of writing that is normally absent in research papers: beautiful prose. Of this, there is much in Jablonski's book. Phrases such as "the deliciously acute sense of touch" (p. 170) or "the pleasure of sexual intimacy comes from the exquisite expectation of touch and the delight and relief of skin-to-skin contact" (p. 119) made me wish I could write in such a style more often. In sum, I found Jablonski's book well rounded and enjoyable by specialists and non-specialists alike. It puts forth the best our discipline can offer: holism and cross-cultural relativism in a very attractive prose.

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THE COMPLETE WORLD OF HUMAN EVOLUTION. By Chris Stringer and Peter Andrews. London: Thames and Hudson. 2005. ISBN 0-500-05132-1. 240 pp. \$39.95 (hardcover).

RECONSTRUCTING HUMAN ORIGINS: A MODERN SYNTHESIS, 2ND EDITION. By Glenn C. Conroy. New York: W. W. Norton. 2005. ISBN 0-393-92590-0. 592 pp. \$78.10 (paper).

PRIMATE AND HUMAN EVOLUTION. By Susan Cachel. New York: Cambridge University Press. 2006. ISBN 1-521-82942-9. 488 pp. \$130.00 (hardcover).

Authors of books on human evolution have a ticklish task. Coupled with the fact that their intellectual contribution will soon be out of date and in need of revision is the requirement to present contentious topics and ambiguous data succinctly, coherently, and with more than a nod to impartiality. As one who regularly teaches human evolution to both undergraduates and graduates, I find myself picking the most recent text for a course rather than an older favorite in order to provide students with up-to-the-minute fossil discoveries, dates, and revised taxonomies. The last two years have thus been bountiful, yielding two new human evolution textbooks as well as a treatise on hominin behavioral evolution. What is even more remarkable is that all are thoughtful, engagingly written, and pretty evenhanded when it comes to controversial issues. Or, as Glenn Conroy writes in the preface to his volume, "While I am certain my own biases percolate through on occasion, I have made every effort to present the reader with what I take to be a balanced view of the major events and issues in human evolution" (pp. xvii). Regardless of one's thoughts about different interpretations, all three books empower readers with information and analysis but leave them free to disagree with the authors.

While all the books aim to explore and explain hominin evolution, they differ in organization, emphasis, detail, and length. To begin with the leanest of the three, Christopher Stringer and Peter Andrews's volume is a delight on several levels. It is so beautifully illustrated (with photographs, line drawings, and colorful reconstructions) that even the most frugal undergraduates will hang on to their copies rather than sell them back to the bookstore. The engaging prose is concise and substantive. The authors have deliberately emphasized theory and methods over detail about any one taxon. For this reason it is a comprehensive stand-alone book for an introductory course on human evolution, but it could also serve as a basic text for an upper-level course if supplemented with articles from the primary literature.

The main body of the book has three sections. The first (ca. 60 pages) is devoted to methods and approaches including dating, the study of animal function, and taphonomy. Of note is a thorough section on paleoenvironmental reconstruction that provides six case studies ranging from the Early Miocene (Rusinga Island) to Late Pleistocene (Gibraltar). The second section, a spare 100 pages, is a chronological tour of the fossil evidence, from primate and anthropoid origins through the origins of anatomically modern humans. Moderns, Neanderthals, and Miocene catarrhines are particularly well covered in this section, but I would have liked more detail on the australopiths, who receive just 13 pages of attention. The final section of the book, 50 pages of special topics

having to do with interpretation of the fossil and archeological records, covers locomotor and dietary reconstruction, hominin dispersals, tool use, art, and the reconstruction of ancient human behavior.

Stringer and Andrews are to be commended both for fitting a remarkable amount of detail into their abridged version of human evolution and for the fair presentation. If you expect these proponents of the Out of Africa theory to hit you over the head with evidence supporting it, you would be wrong. They provide ample critique of early problems with the mitochondrial Eve hypothesis, and when discussing Neanderthal-Cro-Magnon relations, they note: "whether the two populations could have interbred successfully, we cannot say . . . whether their [the Neanderthals] replacement was absolute remains to be seen" (p. 165).

Glenn Conroy's *Reconstructing Human Origins* is a second edition of his 1997 text. The update differs in several ways, and at just under 600 pages of text and illustrations, it is a *tour de force*. New features include an expanded preface, which presents two sample hominin taxonomies: a splitter's dream version as well as an alternate in which all hominins, chimpanzees, and bonobos are placed in genus *Homo*. This sets up Conroy's concerted effort to highlight diversity of opinion when it occurs.

The first chapter, on primate biology and anatomy, is new and is illustrated with the precise, two-tone, shaded artwork that graces the entire volume. Three background chapters are on climate and time scales, finding and dating fossils, and naming and classifying hominins. The topics of the remaining nine chapters are structured according to traditional stages; we are introduced to Miocene hominoids, the australopiths, early *Homo*, *H. erectus*, archaic *Homo*, and moderns and Neanderthals.

One departure from more traditional hominin classifications is the abandonment of robust and gracile subdivisions of the australopiths. South and East African australopiths have their own chapters (new in this edition) detailing sites and fossils, and a third chapter is devoted to their paleobiology and phylogeny. The origin of *Homo* then follows, and here tool traditions and lifestyle and behavioral reconstructions are interwoven with overviews of sites and specimens. By the time we get to the chapter on *H. erectus*, it is clear the author is sympathetic to a multiregional explanation of evolution in *Homo*, but he nonetheless presents other opinions as he first describes individual fossil specimens and then interprets them in a "Current Issues and Debates" section. Archaic forms from Europe (excluding Neanderthals), China, and Africa are considered in the next chapter. The Dmanisi fossils are mentioned briefly here as *Homo cf. ergaster*; but these fossils would seem more logically to belong in the preceding chapter.

The origin of anatomically modern humans is covered in the last two chapters. The first of these sets up the Out of Africa and multiregional models and then deals with the molecular evidence, while the second gives an overview of the relevant fossil record of moderns and Neanderthals. The molecular section focuses on mitochondrial evidence, and to a lesser extent, the Y chromosome and does not include much evidence from other genetic markers. An inclusion of Maryellen Ruvolo's

synthesis of mitochondrial and nuclear DNA coalescence times would have been welcome here. The more morphological chapter, in which anatomy and genetics of Neanderthals are covered, is subtitled "Reality Check." In it Conroy discusses his concerns with the Out of Africa model and ends by citing Willermet and Clark (1995, *Journal of Human Evolution* 29: 487-490) who noted that, whether deliberately or not, researchers tend to privilege fossils and other data that support their positions, a sobering thought on which to end a textbook.

Susan Cachel's *Primate and Human Evolution* is a provocative, refreshingly nonconfrontational, structured set of musings on hominin evolution—what strikes me as a nonconformist's take on pattern and process in human evolution. Cachel brings to the table less direct experience with fossils than the authors discussed above, yet her background is impressively broad. She has published on topics ranging from the history of science to speciation, ranging patterns, paleoecology, growth and allometry, functional morphology, and diet.

The book is not easy to pigeonhole. To begin with, it is not really about primate evolution in the sense that it does not provide a comprehensive overview of the primate fossil record. Instead, the author wants to impress upon her readers the value of nonhuman primate studies—indeed, mammalian behavioral ecological approaches in general—in reconstructing and explaining the stages of hominin evolution. She is up front about eschewing "chimp-centric" and other primate referential models (*sensu* Tooby and DeVore, in *The Evolution of Human Behavior: Primate Models* [1987]) that have dominated reconstructions of hominin behavioral evolution over the last 40-odd years. Instead, she looks to nonprimate mammals that evince high levels of cooperation, with the notion that this fundamental aspect of modern human behavior requires explanation.

Chapters 1 and 2 offer historical perspectives on evolutionary thinking and anthropology with a special focus on primatology. Chapter 3 introduces the fossil record, in the form of a few Miocene primates, but not in detail. Instead, these taxa are used as examples to begin to introduce theories about competition and ecology. Chapters 4-7 deal with primate speciation and extinction, the primate body, captive primate studies, and a summary of key aspects of the catarrhine "substrate." The latter, although brief, is one of the meatiest chapters in the book; the author has distilled down many aspects of catarrhine biology in an attempt to reconstruct the primitive catarrhine behavioral morphotype. This is more challenging than it might appear, since modern catarrhines are represented by two very different, derived groups. In many cases, for any given trait, we do not know if the last common ancestor of extant catarrhines was like living hominoids, cercopithecoids, or something else.

Chapters 8-10 also focus on living primates, and here the emphasis is on sociality and primate psychology. In this section, Cachel begins to build a case that human intelligence derives not from primate sociality *per se* but from attentiveness to the natural world. Chapters 11-13 deal with body size, the nature of the fossil record, and bipedalism. She offers some intriguing insights, including the observation that sexual dimorphism is sensitive to food stress and that we should be cautious when making inferences from the fossil record, since in times of plenty the size of males will increase disproportionately. She calls attempts to reconstruct the origin of pair bond-

ing via reconstructions of body size dimorphism the pursuit of a mirage.

Occasionally, Cachel presents controversial views without opposition. For example, in Chapter 13, the author notes that because the Late Miocene European hominoid *Dryopithecus* was suspensory, it is an "ineluctable conclusion" that hominin bipedalism "evolved directly from arboreal suspensory posture and locomotion" (p. 281). This ignores differences of opinion about which mode of locomotion predated bipedalism. It also presumes the adaptations of *Dryopithecus* bear directly on hominin origins, a premature conclusion given disagreement about its phylogenetic position (i.e., is it more closely related to all great apes, African apes, or *Pongo*?) and the poor Late Miocene record in Africa.

Chapter 14 deals with "The Hominid Radiation," and we are led from *Sahelanthropus* to *Homo sapiens* in 18 pages. The final four chapters focus on the author's view of hominization, one which she characterizes as a "behavior first" model. Critical to this model, as mentioned above, is a comparative mammal approach to reconstructing prehominin behavior that explicitly rejects female philopatry as associated with too much intragroup competition (i.e., among matrilineal). Instead Cachel posits a more cooperative ancestral society characterized by eusocial groups incorporating communal breeding, sentinel behavior, helpers at the nest, and provisioning. The advanced sociality of the callitrichids is mentioned, but as this is tied to their unusual pattern of twinning, she instead emphasizes communal breeders such as the banded mongoose and the meerkat in forming a conceptual model for hominin origins. In this she is bolstered by recent work by Tim Clutton-Brock, who has noted that the generalized reciprocity that can occur among unrelated mammals and the advantages of group augmentation and mutualism might be relevant to understanding the evolution of human cooperative behavior.

Undeveloped is the corollary that a eusocial hominin ancestor implies a eusocial *Pan-Homo* last common ancestor (LCA). While a cooperative LCA would have facilitated increased social dependence in hominins, dramatically different social evolution would then have had to occur in *Pan*. With *Gorilla*, *Pongo*, and dimorphic Miocene hominoids as ever more distant outgroups, a cooperative LCA seems incongruous. While high to moderate body-size dimorphism and its associated intense male-male competition do not negate cooperation (take lions, for example), highly sexually dimorphic, cooperative species are unusual. However, the wide array of different social structures and behaviors in living hominoids (contrast the two species of *Pan*) suggests that rapid social behavioral evolution is possible. In this context, a reconstruction of the LCA as being unlike any extant hominoid is plausible. Cachel's model also leads to some interesting speculations. For example, she notes that cooperative sentinel behavior would have been important for the development of bipedalism: small-bodied, slow-moving bipeds vulnerable to predators would be aided by conspecifics vigilant on their behalf. Sentinel behavior is further suggested to have been a first step in evolving the observational abilities needed for the evolution of what she refers to as natural history intelligence.

Alas, the clock has been ticking on these texts since their publication, and they already need to be supple-

mented with late-breaking information on the Neanderthal nuclear genome, anatomically modern skulls from South Africa, etc. However, all the major stages and events, as well as the finer nuances of what we know about human evolution as of 2006 are richly covered in these books. Apart from their value as textbooks, biological anthropologists want these three volumes to peruse for fun, for information, and with the same enduring fascination that no doubt prompted the authors to write these books in the first place.

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THE OSTEOLOGY OF INFANTS AND CHILDREN. By Brenda J. Baker, Tosha L. Dupras, and Matthew W. Tocheri; drawings by Sandra M. Wheeler. College Station, TX: Texas A&M University Press. 2005. 178 pp. ISBN 1-58544-465-0. \$34.95 (paper).

This is an excellent text for anthropologists, archaeologists, and others interested in identifying juvenile skeletal remains. The book is divided into 10 chapters covering excavation, identification, siding, major developmental changes, and age estimation of subadults at all stages of development. The book teaches students to recognize individual skeletal elements, and the more experienced practitioner in the field finds a reference manual for distinguishing human and nonhuman bones. In addition, researchers can access handy reference charts for age estimation.

Part One of the book begins by addressing the importance of juvenile remains in our understanding of demography, growth, disease, and the positive identification of an individual. The authors rightly state that students seldom receive any formal training in the recognition of subadult remains and often later confuse them with nonhuman bones in the field. Chapter 1 also briefly discusses bone chemical composition, basic gross bone structure, the essentials of endochondral and intramembranous ossification, and anatomical terminology. The chapter concludes with a brief section on terminology (e.g., infant, child, adolescent, etc.) and the difficulty of sexing subadult remains.

Chapter 2 covers the recognition, preservation, and excavation of subadult remains in the field. The authors discuss sample bias due to differential preservation and mortuary treatment, and several beautiful black-and-white photographs are included that display Egyptian subadult remains *in situ*. Sufficient detail on excavation tools, documentation of the burial, removal from the soil, and preservation techniques used by conservators is provided. The final section discusses laboratory treatment and curation, including labeling, inventory forms, and storage.

Part Two of the text covers the skull and teeth and contains three chapters. Chapter 3 and Chapter 4 introduce the bones of the cranial vault and of the face, respectively. The chapters are set up similarly, describing the appearance of and major stages of development for each individual bone; differentiation of bones that may look similar; and siding techniques. Each bone is accompanied by clearly labeled, black-and-white illustrations depicting various views. Chapter 5 discusses the dentition. The authors take us step by step through five stages in tooth identification: tooth type (incisor, canine, premolar, or molar), deciduous or permanent, maxillary or mandibular, position in the dentition, and right or left side. Direc-

tional terminology is covered along with basic tooth function and morphology (e.g., number of roots, cusp size). Detailed discussion of specific morphology, such as the names of fissures, is not provided. Both deciduous and permanent dentitions are discussed and illustrated.

Part Three (Chapters 6–9) addresses the infracranial skeleton. As in the preceding chapters on the skull, elements of the infracranial skeleton are presented logically through description of the major growth stages, basic morphology, possible confusion with other bones, and tips for distinguishing left and right sides where relevant. Illustrations are large, clear, and well labeled. The authors do not present the elements in the characteristic regional manner (upper limb, lower limb, etc.) but group similar elements, beginning with the vertebral column and pelvic girdle, chest and shoulder girdle, upper and lower limbs, and hands and feet. Those using the book as a field manual will appreciate this organization, especially when attempting to differentiate limb bones and hand and foot bones.

The final chapter serves as a summary for the entire book. Five tables provide summary information on approximate ages for the appearance and fusion of the epiphyses. Twelve age-related templates illustrate all of the skeletal elements at various stages of development and allow a quick and easy visual review of the elements present. The book concludes with a nice reference section including the main sources of studies on subadult skeletal remains.

The highlights of this book are many. It offers an affordable alternative to the higher priced and technically dense manuals available. It functions well as a textbook and field guide without being unduly burdened with extensive detail. I especially liked the presentation of the long bones, which are illustrated with age progressions, and the large illustrations of smaller elements such as epiphyses and hand and foot bones. The presentation of the infracranial bones—grouping similar elements—lends itself to ease of identification in the field or the lab. The book has a logical and consistent organization and clearly labeled illustrations.

There are a few drawbacks, which may be particular to this reader. I would have liked to have seen a more in-depth discussion of ossification in Chapter 1. The data in the tables in Chapter 12 are not cited, so the sources of the specific information are unclear. This is a concern throughout the text wherever age information is presented. The illustrations are quite good, although some lack detail, making depth and contour a bit flat. I felt the chapter on the dentition was the weakest. It is the only chapter to include adult morphology, and the text skipped back and forth in a sometimes confusing manner. The illustrations in this chapter were adequate, although I found that many adult and deciduous teeth

looked quite similar except for size differences, and the occlusal surfaces of deciduous molars were nearly identical. It should be noted that the reader should be familiar with adult osteology or learning it at the same time, as bony landmarks are not illustrated here but are treated in the text as though the reader is already familiar with the terms.

Overall, *The Osteology of Infants and Children* is an excellent source for the classroom and for the more experienced practitioner who desires a field reference manual with large, clearly labeled illustrations. It is suitable for undergraduates, graduate students, or professionals who are familiar with adult osteology. The authors succeed in their stated goal to provide a field and laboratory manual on juvenile osteology and a text-

book for osteology courses. This book fills the void that existed for an affordable, clear, well organized, and not overly technically burdened text on subadult osteology. I certainly will be placing an order for my next osteology class.

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INFECTIOUS DISEASES IN PRIMATES: BEHAVIOR, ECOLOGY AND EVOLUTION. By Charles L. Nunn and Sonia Altizer. New York: Oxford University Press. 2006. 384 pp. ISBN 0-198-56585-2. \$49.50 (paper).

Primatologists, ecologists, and epidemiologists have traditionally studied health issues to varying degrees, using disparate methodologies for entirely different motivations. As a result, discipline-dependant assumptions about the role of disease in the ecology of nonhuman primates (NHPs) and the role of NHPs in the evolution of infectious diseases have emerged. Recently, our lack of information and understanding of the ecology of health and disease issues in wild NHPs has been exposed by emerging diseases such as the Ebola virus and SIV/HIV and a host of other new issues.

The stated goal of *Infectious Diseases of Primates* is “to identify key questions in a framework that integrates existing knowledge of host-parasite interactions with what we know about primate sociality and behavior, while also examining the implications of this knowledge for primate conservation and understanding of human evolution” (p 5). The authors of this text performed a valuable service to our collective multidisciplinary community by attacking this problem in three ways. First, they provide a comparative review of approaches used to study NHPs, ecology, and health, which gives us a baseline from where to begin interdisciplinary work. Second, a summary of existing knowledge, synthesized across disciplines, of NHP health and disease issues helps clarify the scope of available information and identify important gaps in our knowledge. Finally, the author’s conclusions provide an in-depth outline of multidisciplinary research needs in this area for the next 10 years. It is my opinion that this is an invaluable addition to the library of anyone interested in primatology, epidemiology, or wildlife conservation and medicine.

This book progresses in a logical flow through nine chapters, beginning with a review of the relevant underlying principles of microbiology, primatology, and epidemiology and progressing to an examination of the interaction among factors such as immune function, behavioral strategies, and social systems in the primate host, parasite, and the environment. The final third of the text discusses implications for conservation, human health, and evolution, and outlines suggestions for the future. All chapters are accompanied by very legible, useful, and well-described figures and call-out boxes highlighting relevant material or examples.

Of particular use to novices of multidisciplinary primate health issues are the first four chapters. The first chapter justifies this text through a review of current knowledge, showing just how much we do not know. Standardized definitions of parasite and disease set the table for the entire discussion. The second chapter provides a list of terms and concepts that all of us should understand to properly evaluate and contribute to the literature. An added bonus is the discussion of virulence and the trade-off hypothesis, which states that parasites evolve to an intermediate level of virulence rather than a benign state as many assume; this is crucial to any discussion of emerging diseases. Chapter 3 focuses on host traits and disease risk and provides good information from the primate socioecological perspective. Further discussion of the use of parasite intensity would be useful to help interpret the wealth of macroparasite studies available since many peer-reviewed publications use egg counts (some would say incorrectly) as indicators of this variable. Epidemiologists will at first be disappointed with the discussion of risk or risk assessment, but it soon becomes evident that it is an issue of terminology, not approach, leaving some comparative educational work to be done. Chapter 4 gives a basic introduction to the epidemiological perspective on this issue and one of the better basic disease modeling summaries I have read.

In the fifth chapter, disciplines begin to integrate in a more complex way. It begins with another basic lesson, this one in immunology. However, it is quickly integrated with behavioral strategies for parasite removal (i.e., grooming and medicinal plant consumption) and avoidance (via habitat use, diet, parental care, and conspecific interactions) and the role of parasites on mate selection and fecundity. This is followed by a more in-depth discussion (Chapter 6) of interactions between microbial life cycles and primate social systems. This chapter illustrates that health is truly a complex, dynamic, iterative process affected by many factors.

Chapter 7 broadens the perspective to include a very good review of external factors that influence the health of NHP communities. An introduction to the concepts of emerging disease and anthropogenic change highlights the important challenges to conservation-habitat destruction, direct animal off-take and removal, and human-associated pressure on parasite evolution and how they affect disease dynamics. It is followed by a review of emerging strategies to combat these issues. Chapter 8 transitions from anthropogenic change to the

evolutionary relationship between NHPs and humans, the co-evolution of parasites in humans, and the issues of both zoonotic and anthro-zoonotic disease transmission. This chapter provides recognition of the strong overlap between health issues in all primate communities and is a very good addition.

We are at a time when we are no longer asking *if* disease is important to primate conservation, but are beginning to focus on questions of Why?, How much?, and What can we do about it? As such, this book is incredibly well timed and one of the better interdisciplinary books I have read. While providing a much needed summary of the state of the art in wild primate health research, there are also many original analyses that could have been published elsewhere, and that add a great deal of value to

the text. Most importantly, this book provides a well thought-out, well-organized, science-based list of important questions for our general community to focus on in the near future.

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BIOARCHAEOLOGY: THE CONTEXTUAL ANALYSIS OF HUMAN REMAINS. Edited by Jane E. Buikstra and Lane A. Beck. Burlington, MA: Academic Press. 2006. 606 pp. ISBN 0-123-69541-4. \$74.95 (hardcover).

Buikstra states in the preface to *Bioarchaeology: The Contextual Analysis of Human Remains* that the purpose of the book is to present both the history and future of bioarchaeology as a distinct discipline in North America. She has done that admirably and has presented a future worth pursuing. Anthropologists have long needed a benchmark evaluation of bioarchaeology, and Buikstra and Beck have gathered the best in the field to contribute to the endeavor. In fact, the 150-page bibliography of the major works in bioarchaeology would be enough to warrant buying this book, and each of the three sections of the text would serve well as course readings for various graduate and upper-level undergraduate courses.

The book's first section, "People and Projects: Early Landmarks in American Bioarchaeology," is a detailed history of skeletal analysis and how physical anthropology developed in the United States. All anthropologists should read this history. It explains how bioarchaeology evolved as it did in the context of the larger discipline of anthropology and situates current research programs in an extensive body of work. Within this section is one of the most interesting yet disquieting chapters, "Invisible Hands: Women in Bioarchaeology." This chapter surveys the contributions of women to the development of bioarchaeology, and its 14 authors do an excellent job of highlighting the important work of a seemingly misplaced roster of long-neglected women. They remind us of the societal pressures that denied female scholars the support or recognition they deserved and take some steps to honor them now. It is bittersweet to see pioneering women get their due so long after it does them any good personally, and it is perhaps sadly surprising that in the 21st century there is still a clear need to devote a chapter to the missing gender in our histories.

While the first section is beneficial for all anthropologists, Section II, "Emerging Specialties," will be more appreciated by bioarchaeology graduate students and professionals working in the field today. Its primary focus is gross examination of skeletal material, a more traditional approach to bioarchaeology that some of the chapters in the final section seem to set aside. This section is an interesting counterpoint to the future-focused final section, with traditional topics of behavioral inference, paleodemography, genetic distance, paleopathology,

and dental anthropology, each given its own chapter containing a topical history as well as a discussion of the current state of the science.

The four chapters of the final section, "On to the 21st Century," project into the future a thread that runs throughout the work, the need to collaborate with scholars outside of physical anthropology. Many different kinds of collaboration are explored. Larsen, in Chapter 13, emphasizes the need to work collaboratively with "those who study ancient DNA, bone geometry, or tooth microwear" (p 372). He sees scientific and laboratory advances as the fundamental ways that bioarchaeology will proceed in the future, but he may not be taking strictures placed on researchers adequately into account. It is not always possible to get money or permission to perform destructive tests on bone. As Roberts warns in the final chapter, "destructive sampling for biomolecular analysis should be carefully controlled and restricted to proposals of real scientific value" (p 435). This is directly at odds with Larsen's view of the future of the field. Goldstein, in Chapter 14, stresses the need to have more integration between archaeologists (her specialization) and physical anthropologists. This sentiment reiterates decades of such pleas, and one wonders if we will ever be able to stop arguing for this collaboration and just do it. Buikstra's chapter (Chapter 15) on repatriation issues shows that bioarchaeology in the United States will require cooperative efforts among politicians, Native Americans, archaeologists, and bioarchaeologists if it is to continue to thrive. Finally, Roberts presents an account of how bioarchaeology has grown as a discipline in Britain. Through her account, we see why it is vital to keep bioarchaeology firmly rooted in four-field anthropology (p 439).

I believe that all anthropologists who want a firm grasp of whence our discipline has come and where it is going will benefit from this volume. It will serve as a worthwhile resource for bioanthropologists for years to come.

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BOOKS RECEIVED

- Carpenter K (ed.) (2007) *Horns and Beaks: Ceratopsian and Ornithomimid Dinosaurs*. Bloomington: Indiana University Press. 369 pp. \$49.95 (cloth).
- Crawford M (ed.) (2007) *Anthropological Genetics: Theory, Methods and Applications*. New York: Cambridge University Press. 476 pp. \$65.00 (paper).
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- Estrada A, Garber PA, Pavelka M, and Luecke L (eds.) (2006) *New Perspectives in the Study of Mesoamerican Primates: Distribution, Ecology, Behavior, and Conservation*. New York: Springer. 600 pp. \$139.00 (hardcover).
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Published online 14 May 2007 in Wiley InterScience
(www.interscience.wiley.com).

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- Uerpmann H, Uerpmann M, and Jasim SA (eds.) (2006) *Funeral Monuments and Human Remains from Jebel al-Buhais*. Tübingen: Kerns Verlag. 385 pp. €69.95 (cloth).
- Willoughby PR (2006) *The Evolution of Modern Humans in Africa: A Comprehensive Guide*. Lanham, MD: AltaMira. 462 pp. \$49.95 (paper).
- Zimmer C (2005) *Smithsonian Intimate Guide to Human Origins*. New York: Collins. 176 pp. \$15.95 (paper).

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