

## Book Reviews

BURIAL TERMINOLOGY: A GUIDE FOR RESEARCHERS. By Roderick Sprague. Lanham, MD: AltaMira Press. 2005. 274 pp. ISBN 0-7591-0840-4. \$34.95 (paper).

The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) had a profound impact on how biological anthropology, is practiced within North America and also stimulated osteological research on curated skeletal collections in anticipation of their repatriation. The creation and approval of NAGPRA emphasized the need to standardize osteological data collection and resulted in the 1994 publication of the widely used *Standards for Data Collection from Human Skeletal Materials* edited by Jane Buikstra and Douglas Ubelaker. In a similar vein, *Burial Terminology: A Guide for Researchers* presents a classification scheme meant to standardize the description and recording of burials to allow meaningful comparisons across space and time. Roderick Sprague, a long-time advocate for the repatriation of human skeletal material, highlights the need to produce a clear set of terms that are defined and used in a standard way in order to fully realize the wealth of data possible from burial contexts.

In Sprague's own words, the objective of *Burial Terminology* "is to define and outline that broad cultural complex commonly known as disposal of the dead and to further define the various terms used in describing the archaeological manifestations of the complex" (p. 2). *Burial Terminology* provides an overview of the use and definition of English-language terms describing burials in North America and, to a lesser degree, Western Europe, Australia, and Asia. This book contains four chapters. Chapter 1 highlights the need for a standard nomenclature and classification system and the difficulty of comparing and extracting data when these are not present. Chapter 2 presents an historical overview and discusses previous classification systems for describing burials. Sprague's classification system is outlined in Chapter 3; the logic and literature behind its formulation are presented in Chapter 4.

The classification system is intended for use in prehistoric, historic, and ethnographic burial descriptions and includes 13 mutually exclusive categories: form of disposal, body preparation, individuality, articulation, position, deposition, orientation and alignment, grave goods, disposal container, feature, description of disposal area, and demography and excavation data. Under each category, Sprague lists preferred terms and contrasts them with terms "to be avoided." For example, under the deposition category, there are five preferred terms for describing how the body is deposited in the grave container: on back, on face, on side, sitting/seated, and standing (p. 31). Sprague recommends the terms "on back" and "on face" over terms "to be avoided": supine, prone, procumbent, decumbent, resupine, reclining, dorsal, ventral, lateral, and stretched (p. 31). According to Sprague, to-be-avoided terms have been used by various researchers and are inconsistently applied, defined, and understood, thereby making comparisons between researchers difficult. To ensure that all readers will define and use the preferred

terms within the various categories, the author has provided numerous illustrations. Additionally, to ensure that researchers and excavators are collecting all the pertinent information, the final category, excavation data, contains a checklist that includes a variety of items under headings such as identification, chronology, conditions, samples, soil, and excavation methods (pp. 34–36).

Chapter 4 is the most substantive of the book. Sprague surveys the (primarily) North American literature, highlights and critiques the usage of various terms, and points out flaws in logic (and grammar) and inconsistencies in usage. In essence, this chapter justifies the choices behind the terms included under the preferred and to-be-avoided headings. The references contained within Chapter 4 and the examples of burial descriptions across time and space would be of interest to any anthropologist working with burial assemblages. Chapter 4 is organized into sections according to the 13 categories listed above. However, it would be easier to read and consult if each section were further organized according to its preferred terms, with a clear definition of the term at the beginning of each subsection. As it stands, the discussion jumps from term to term or subject to subject, and since the highlighted literature does not use the terms in a consistent way, one often forgets which category or term is being discussed, much less its correct usage. To his credit, Sprague does italicize the preferred terms, but this would be more effective if he presented the terms in a similar order to Chapter 3 and discussed each term from the various categories. Because of the organization of the material, his classification system does not itself seem to be well defined.

Readers familiar with Sprague's 1968 *American Antiquity* article, "A suggested terminology and classification for burial description," will no doubt be familiar with the classification system he presents in this book. *Burial Terminology* contains five new categories (orientation and alignment, disposal container, features, description of disposal area, and excavation data) and excludes two 1968 categories (location of disposal area and vehicle of disposal) in addition to reordering the categories, excluding some terms (particularly semiarticulation and vehicle of disposal) and adding additional terms. However, on the whole, it seems surprisingly little has changed in almost 40 years. In fact, throughout *Burial Terminology*, the 1968 text appears virtually word for word, although Sprague has added current references and further expanded his discussions (e.g., compare p. 479 of the 1968 article on "form of disposal" to pp. 59–60 of the present text).

By his own admission (p. 6), Sprague's literature survey is not complete, but his bibliography still provides an impressive overview of a vast amount of material. However, it is comparatively lean on recent material; two-thirds of the references are dated 1990 or earlier. The inclusion of a name index in addition to a subject index allows the reader to locate information about a specific topic or work by a specific researcher. There are a variety of line drawings throughout the text, most of which are quite useful in clarifying in-text descriptions. There are very few editorial errors. Sprague's critiques of and negative comments about other researchers, which at times seem petty and condescending, are the least appealing and successful as-

pect of the book. Apparently this was an issue identified by the editors, since he thanks them for keeping his negative comments under control (p. xii). This book would be a useful source for undergraduate and graduate students studying burials or mortuary archaeology. It is important for all researchers to be aware of the various ways of describing burials, and this book provides a set of criteria that are logical, adequately described, and situated within the relevant literature.

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ST. MARTIN'S UNCOVERED: INVESTIGATIONS IN THE CHURCHYARD OF ST. MARTIN'S-IN-THE-BULL RING, BIRMINGHAM, 2001. By Megan Brickley, Simon Buteux, Josephine Adams, and Richard Cherrington. Oxford: Oxbow Books. 2006. 252 pp. ISBN 1-84217-201-8. \$65.00 (cloth).

In 2001, in the process of continued adaptation of Birmingham, England, to new market demands, the churchyard of St. Martin's-in-the-Bull Ring was scheduled for redevelopment. The opportunity to learn more about individuals living in the eighteenth and nineteenth centuries was acknowledged, and archeological excavation of the churchyard was undertaken. This book's primary objective is the presentation of results from the analysis of skeletal remains; however, other sources of information were also recorded and are presented.

Collectively, the results are used to generate an image of life during the Industrial Revolution in Birmingham, contrasting the differences between working- and middle-class citizens. St. Martin's excavation is an argument against commercial clearance of churchyards, as well as against simple archeological watches or sampling, which can fail to provide full appreciation of the past. This report demonstrates how much information can be recovered while working with stiff time restrictions on excavation and analysis. The protocol used reveals how a balance between development and archeology was achieved through good planning and early establishment of research aims.

In Chapter 1, Hodder explains why the project was undertaken, and its objectives are presented. The remains of individuals who lived and died during a period of extreme change in Britain can help reveal much regarding these times, such as changes in mortality and health associated with the Industrial Revolution, funerary practices, and other details that were not recorded in their day. Chapter 2 provides a historical background of St. Martin's, originally founded in the thirteenth century, and its parish. The use history of the churchyard, with its extensions, intrusions, burial relocations, and landscaping, is addressed. The archeological excavation is the focus of Chapter 3. Excavation methods are presented in relation to the necessary ground level reductions. This chapter details the excavation of graves, variable preservation of coffins and human remains, burial patterns, and construction of vault and brick-lined graves.

Chapter 4 focuses on the primary objective of the book: the examination of skeletal remains. Methods used in analysis are detailed. Brickley et al. address the differing prevalence of disease and trauma between sexes, ages, and socioeconomic groups, and compare them with Christ Church, Spitalfields, and other sites throughout Britain. A wider array of pathological conditions is presented than is usually encountered in basic skeletal reports. Brickley et al. were highly considerate to devise

protocols to facilitate interstudy comparisons, especially since the St. Martin's remains have been reburied.

Chapter 5 consists of specialist reports on coffin and coffin furniture styles, coffin wood, textiles, jewelry and personal items, and botanical funerary offerings, revealing regional differences when compared with southern England and giving a better understanding of funerary practices of working and middle classes. Chapter 6 presents documentary research on identified families encountered during excavation, representing middle-class families from the vaults and brick-lined graves. Adams provides a useful description of the resources that provided data regarding where people lived and worked, the impact of increasing wealth, involvement with the church, and wills. Documentary research confirmed high infant mortality rates, business relationships of siblings, intermarriage of business families, and the importance of family in general. Chapter 7 portrays the socioeconomic conditions of all classes represented by the individuals at St. Martin's, providing a broader social context than Chapter 6. Adams et al. focus on socioeconomic issues that could impact bone, such as occupation, health, diet, and living and working conditions. Chapter 8 discusses the role of the church in life and death and the rise of the funerary trade, especially as a means of expressing social status. Chapter 9 continues the theme of contrasting social status by presenting two funerals that occurred in 1856. While some aspects of the retelling are speculation, these accounts are based on documentary and archeological evidence.

One of the most appealing aspects of this book is the accompanying CD, which contains appendices. These are not likely to interest the casual reader but will be of much use to specialists. Subjects presented in the appendices include; pottery finds; grave marker inscriptions; church and churchyard foundation analyses; biological data of poorly preserved skeletal remains examined *in situ*; a catalog by individual of basic biological data, including age, sex, stature, cranial index, skeletal and dental disease, and nonmetric variants; additional tables of biological indicators, measurements, and crude prevalence rates; bone presence and preservation; details on coffin wood analysis; and a catalog of textile and fiber analysis.

This book is an excellent example of how biological data from skeletal remains can be used to provide insight into past populations. It demonstrates how biological, archeological, and documentary evidence can be used in conjunction with, rather than in exclusion of, one another. The authors effectively demonstrate that skeletal analysis can augment historical documentation and how contemporary written records do not always provide a full description of conditions or events in the past. The level of detail recorded and made available to other researchers is the crowning achievement of this project. While Brickley et al. considered their examination to be basic, they were able to provide more data than some other studies that were not

confronted with the same limitations of time or funding. Considering the increasing likelihood of redevelopment of other churchyards in Britain, the St. Martin's project should be used in support of archeological churchyard excavation, as well as a model for optimizing results while working within project limitations.

The authors recognize their potential audience as those who have an interest in past health, English funerals and funerary industry of the eighteenth to nineteenth centuries, and social history and do not assume a background in biological anthropology. The authors try to accommodate the laymen as well as the specialist by using language and descriptions easily understood by the general reader and by providing detailed data that can be utilized by other

researchers. This book would fit easily into a course on bio-archeology, demonstrating the application of skeletal data to understand past populations while still learning the techniques of skeletal analysis.

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THE METAPHYSICS OF APES: NEGOTIATING THE ANIMAL-HUMAN BOUNDARY. By Raymond Corbey. New York: Cambridge University Press. 2005. 238 pp. ISBN 0-521-83683-2. \$70.00 (cloth).

From its startling title to its well crafted conclusions, Raymond Corbey's latest foray into the debate over our relationship to other life is provocative in the original sense of that word: it calls on the reader to examine the history of our relationships to and thinking about our animal cousins. Such relationships are, of course, often downplayed, but any attempt to dismiss the relevance of our connection to other animals has its ironies. While with one hand we salute the importance of science to our worldview, with the other, slighting hand we make scientific facts disappear with facile phrases like "humans and animals." *The Metaphysics of Apes* uncovers this trick, pulling back the curtain on the peculiar, if culturally sanctioned, intellectual ploys used to maintain a gulf between humans and our closest evolutionary cousins. As Corbey shows, "One presumably unique human characteristic after another was redefined or abandoned when animals were found to qualify" (p. 179). Corbey addresses this complex, interesting story through a straightforward historical review beginning in the seventeenth century. Although this review is not systematic (it could hardly be in a 200-page book), it is lucid and scholarly. Throughout, the tone and substance avoid the shortcomings of polemical discourse, even though Corbey's implications and conclusions are provocative.

Corbey's stated goal in this book is to "trace the struggle regarding the dignity and animality of humans and apes" from the seventeenth century to "recent controversies on what apes are capable of and, ethically speaking, entitled to" (p. 178). Earnest reflections by leading scientists such as Darwin notwithstanding, there have often been, Corbey makes clear, sociocultural pressures to deny our obvious connections to other animals. Citing Ernst Mayr on the difficulty of studying scientists' own "basic ideologies... because they are rarely articulated" (p. 178), Corbey provides historical examples of profoundly influential denials of our links with nonhuman animals and similarities to other apes. Corbey supplies much material to support the argument that such denials were inspired or backed by reactionary religious views. Because such denials have been profoundly influential in our Western world, the result has been a "persistent repudiation of apes and apishness" (p. 181). In Chapter 7, "Beyond Dualism," Corbey challenges such dichotomies:

Numerous anatomical and behavioural features have been used as markers of humanness, casting humans as uniquely superior. Such markings have been regularly adjusted whenever human hegemony was endangered by new data. Among these qualitative *Homo*-centric yardsticks were erect gait, tool making, self-recognition, and language" (p. 179).

In the concluding chapter, Corbey examines modern philosophical debates focusing on Hilary Putnam's theory of knowledge. He notes that contemporary efforts such as the Great Ape Project, which promotes fundamental moral and legal protections for our fellow great apes, have challenged what Mary Midgley termed the "absolute dismissal" of all nonhuman lives. A parallel development not addressed by Corbey is the emergence of animal law courses in more than seventy American law schools, including top schools like Harvard. These developments reflect ferment on the "nonhuman issue" prompted by the insightful work of scientists, philosophers, historians, and others who, like Corbey, have for decades been building a formidable corpus documenting our relationship with nonhuman animals (e.g., Corbey's 1995 *Ape, Man, Apeman: Changing Views Since 1600*).

Corbey's subtitle in this latest book, *Negotiating the Human-Animal Boundary*, reflects this ferment in our view of the natural world. Our "negotiations," which challenge our self-inflicted ignorance about the natural world, now take myriad forms. One of these is the burgeoning field of human-animal studies, which includes approaches going by names such as anthrozoology. Corbey's book is a fine model for the ways in which scholarship and science can be combined to produce a helpful re-envisioning of our approaches to the natural world.

Corbey's work manifests a limitation common to much of contemporary human-animal studies, namely, an exclusive focus on the Western intellectual and cultural tradition. It is a failing of the Western academy to assume that its particular preoccupations with humans alone and with Western forms of thinking and reasoning are the leading, even definitive, mode of thinking about and valuing the nonhuman world. This isn't unusual, for it is a daunting challenge to see the whole spectrum of human approaches to the world around us. Focusing on our own culture's dismissal of other animals, though, misses the diversity of human interactions with the life around us. Based on a review of many different cultures, it is every bit as human to be inclusive of nonhuman forms of life as it is to be preoccupied with humans alone. Diversity is perhaps most evident in indigenous tradi-

tions but is also found throughout the traditions of (in order of antiquity) Hinduism, Buddhism, Judaism, Christianity, and Islam.

Corbey's concentration on the Western intellectual tradition has its virtues, though. His thinking is both philosophically sophisticated and sensitive to the wonderfully human possibility of connecting with other lives. Corbey's scholarship and vision reflect how wideranging and engaged the human mind can be when it is humble about other lives around us. He shows that a historical bent, a philosophical nature, and an open mind can lead quite readily to a more open embrace of those biological similarities and connections that led Linnaeus (quoted on p. 46) to remark:

I demand of you, and of the whole world, that you show me a generic character . . . by which to distinguish between Man and Ape. I myself most assuredly know of none. I wish somebody would indicate one to me. But, if I had called man an ape, or vice versa, I would have fallen under the ban of all ecclesiastics. It may that as a naturalist I ought to have done so.

Speciesist solipsism of the kind unmasked by Corbey isn't healthy for science let alone for our ethical instincts. His book is an extended invitation to engage responsibly with past facile negotiations of the animal-human boundary. It is also, implicitly, an invitation for modern

societies to challenge any ban, whether ecclesiastical or secular, that affects those who wish to explore our obvious connectedness to the rest of life. If such bans can be recognized, we can challenge our societies and their institutions to support open-minded inquiries into our own animality that honor both our scientific and ethical natures.

Corbey thus challenges all of us, but particularly those who choose to remain myopic about such connections and their recurring invitations to our ethical and communal abilities. Who are the others we can care about, treat well, and live with? Are we our fullest selves when we fail to recognize our connections to and community with the rest of life? If we engage in any history of our own significance without considering such basic questions, our account of ourselves and our values will be incomplete and possibly invalid.

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SEASONALITY IN PRIMATES: STUDIES OF LIVING AND EXTINCT HUMAN AND NON-HUMAN PRIMATES. Edited by Diane K. Brockman and Carel P. van Schaik. New York: Cambridge University Press. 2005. 570 pp. ISBN 0-521-82069-3. \$120.00 (hardcover).

The great American ecologist Henry S. Horn perceived progress when questions arising from his work diverged from those that launched the work in the first place. By anyone's measure, *Seasonality in Primates* meets that standard for worthy scientific undertakings. Seasonal effects on life history and behavior constitute more of a bite than most care to chew all at once; but editors Diane Brockman and Carel van Schaik tackle this long-neglected challenge with notable success and convey the topic's astonishing breadth and complexity and its evolutionary consequences for primates including ourselves.

*Seasonality* seeks to illuminate how annual cycles of change in tropical environments impact primate life histories, foraging, reproduction, ranging, and social behavior. These factors necessarily concern investigators of ecological function as well as any pursuing biochemical, neurological, or socioecological mechanisms underlying species-typical patterns. For field workers, the actual assignment is huge. Seasonal performance must be examined not only among the primates of interest but also among community-mates (predators, prey, mutualists, parasites, commensals) and across demographic classes. This book's chapters illuminate interactions within and across biological scales and demonstrate how anthropologists can expand their scope of inquiry by drawing upon the fuller reach of twenty-first century integrative biology. With generally fine writing throughout, this book combines a fine primer in basic issues with intriguing new comparative analyses, fruitful exploratory treatments, and empirical updates from some of primatology's most important long-term study sites.

The volume's two central sections review effects of seasonality on primate socioecology and reproductive biology. Hemingway and Bynum examine primate responses to resource scarcity with special focus on behavioral flexibility. Greatest foraging flexibility is found outside of species-typical preferences: during tough times, folivores take greater fruit diversity than frugivores, while frugivores take greater leaf diversity than folivores. Whether these results reflect unusual flexibility, intelligent omnivory, or nonadaptive cluelessness outside of species' specialities is unknowable without measures in domains the authors deliberately set aside: comparative metabolic, nutritional, and reproductive physiology.

Contributors who do focus on physiology clamor for more such research, as surprising outcomes accompany the additional detail. Reviewing adaptations to seasonality in nocturnal primates, for example, Schmid and Kappeler find that torpor may function to minimize predation rather than optimize circannual energy budgets. Rasmussen's report on lemurid cathemerality—which alternates short periods of activity and sleep across 24-hour cycles—also identifies predation risk as the best explanation for the scheduling of torpor's homolog, sleep. Predator avoidance likewise explains why nocturnal and diurnal primates are active when each would prefer, metabolically speaking, not to be. Nights are cold for tiny nocturnals while, as Hill's chapter makes clear, hot tropical sun can constrain large diurnals' foraging time. Rasmussen's suggestion that cathemeral lemurs have evolved specific risk perceptions explains why my own brown lemur subjects, when relocating, bolted madly—and maddeningly—like a band of desperate fugitives, while adjacent groups of ringtailed lemurs swaggered past exuding the same terrestrial confidence and vigilance behavior seen among baboons and patas monkeys.

The volume's midsection presents big ideas and bigger datasets. Patterns are sought in various ways, and varied explanations of results are tried on for size. Mitani and Watts's survey of hunting seasonality in nonhuman primates provides context for the succeeding chapter on hominid hunting, although seasonal changes in neither nutrient availability nor intake from hunting are known for any nonhuman primate. Seasonal patterns are found alternatively determined by primate traits, prey traits, and constraints specific to particular habitats. Bliege Bird and Bird suggest that male and female humans respond differently to seasonal changes in prey availability because doing otherwise would undermine sex-typical social goals: men's competition to "demonstrate hidden qualities related to gaining social benefits" (p. 263) and women's to provision most reliably. This conclusion's relation to established concepts in ethology and sexual selection is unnecessarily oblique. The tradition holding humans to be deeply different from other animals and disproportionately dependent on culture, learning, and the like calls out to biological anthropologists to ground their ethological work in more than catchphrases like "intelligent omnivore" or hypotheses popular primarily because they might be relevant to hominid evolution. Every organism relies on its genes, physiology, and socioecology to produce variable responses according to its species, sex, lineage, social status, personal history, and current circumstance, and anthropologists must integrate this biological reality into their explanations of human adaptation.

Brockman and van Schaik review seasonality of primate reproduction and extend a model in which *income breeding* females time their reproductive phase of greatest metabolic burden (generally midlactation) to the season of highest food availability while *capital breeding* females lactate only after food peaks allow energy storage (fattening). This chapter has flaws. For one, ringtailed lemurs are featured as "strict" income breeders but, in fact, time midlactation more than 2 months before annual food peaks. As Brockman's research specialty is lemurs, it seems odd that research, my own included, dissecting ringtails' reproductive timing is ignored. The editors' creation of a "relaxed" income breeder category overlooks another possibility: that closely related organisms recombine life-history, metabolic, and behavioral tactics to arrive at *different* solutions to similar problems. Appreciating the significance of overarching explanatory schemes and applauding such efforts generally, I nevertheless found *Seasonality* to reveal complexity and diversity among primates more than uniformity of explanation.

Remaining chapters offer fine reviews, stimulating new analyses, and insights worth the time of biologists and others interested in the evolution of primates and their tropical communities. For example, van Schaik teams with Pffanes in a meta-analysis of correlational climate-phenology studies of extant tropical savannas and woodlands. Earlier explanations for primate assemblage variation are expanded to emphasize additional factors influencing community composition, especially historical precedence regarding niche breadth. In an important methodological contribution, Janson and Verdolin analyze primate birth peaks using robust "circular" statistical tests that augment the accuracy of hypothesis testing. They show that peak fruit best predicts mean birth date for all primates except insectivores, which instead match to peak leaf flush, and find that Madagascar, as long suspected, is more seasonal than tropical America, Asia, or Africa.

Our own status as capital breeders is documented by Ellison, Valeggia, and Sherry, who relate functional physiology to mechanisms underlying human's variable seasonal birthing. Facultative fattening and reproduction optimize fitness for females whose slow reproductive careers cannot fit neatly into annual cycles and who face strong interannual unpredictability. Reporting on nearly half a century of environmental change in Amboseli National Park, Kenya, Alberts and colleagues bring the baboon back as a model of hominid evolutionary response, pointing out that, besides *Homo*, only baboons have succeeded broadly on seasonal savannas with aseasonal reproduction. Study animals' large range shifts confirm that seasonality presents adapted primates relatively little challenge in comparison to longer-term environmental change. Later sections provide more reflections on human evolution, with Jablonski reviewing primate diversity and habitat seasonality over evolutionary time, and Reed and Fish examining influences of tropical and temperate seasonalities on our own evolution. Kingston's well organized treatment of environmental periodicities shows why work in evolutionary ecology requires understanding the astronomical and geological mechanisms of *variation* in seasonality over geological time. This explanation of the Milankovitch cycles underlying periodic environmental change would have been better placed earlier in the volume.

The volume's showpiece is van Schaik's exploration, with Madden and Ganzhorn, of phenological seasonality and primate community structure—a real synergy among behavioral ecologist, community ecologist, and paleobiologist. Combining their own data with others' from the literature, these authors provide many useful insights. While tree diversity and forest productivity determine primate species richness, highest rainfall can increase plant diversity so much that rarefaction of suitable food trees causes primate biomass fall-off. Seasonality does not affect primate species richness overall but increases the number of small to midsized species. Larger primates succeed equally well across seasonality levels. Deciduousness promotes folivore biomass by increasing leaf protein content but constrains frugivore biomass by pushing peak leaf flush closer to peak fruiting, diminishing fallback options. The authors conclude that many different responses to food variation, including varied food switching and metabolic adjustments, enable primates to deal successfully with seasonal environments.

In the end, *Seasonality* yields little to illuminate human evolution but much about primate behavioral biology. This makes it regrettable that only threadbare links to the rich literature on nonprimate seasonality are provided. The editors' chapters together hardly mention data on nonprimate seasonality in the tropics, and the report on torpor, in particular, should have referenced more of the past 60 years of research on seasonal responses in birds, mammals, and other vertebrates. Every contributor learned the trade by consulting this broader literature, and its citation would have helped *Seasonality* bridge the historical disjunction between anthropology and biology.

Surprisingly, few biologists yet recognize that seasonal organisms provide invaluable opportunities to study development itself. Advances of the past 50 years challenge workers in biology and allied disciplines to address the actual ontogenetic complexity of individual subjects, their populations and constituent groups, ecological relationships, and patterns of behavior. *Seasonality in Primates* points the way to important twenty-first century investigations that will document organismal performance

directly. To the emerging fields of physiological ethology and developmental phylogeny, primatology contributes large life-history and socioecological datasets, core behavioral concepts, and innovative methods in sampling and analysis. As primatologists and anthropologists share their methods, data, and ideas, they can only benefit by remembering that colleagues in mammalogy and ornithology can also help them with previously developed methods, models, and insights of their own.

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THE LABORATORY PRIMATE. Edited by Sonia Wolfe-Coote. London: Academic Press. 2005. 650 pp. 0-12-080261-9. \$200.00 (hardcover).

*The Laboratory Primate* is part of the Handbook of Experimental Animals series. The preface states that this book, along with the others in the series is meant to serve as a reference for anyone considering the animals in question as research models. The back cover further defines the expected audience as mainly biomedical researchers and those caring for primates in research units, breeding facilities, and zoological gardens. The book is intended to provide a "full and comprehensive range of information so as to preclude or reduce the need for further literature searches" (cover). Given these goals, *The Laboratory Primate* is a mixed bag, with chapters that live up to the standard of providing comprehensive coverage of areas important to those caring for and using nonhuman primates in research; others that fall short of this goal; and still others presenting research findings that, while interesting, do not clearly fit into a reference book.

The book is divided into four parts: 1) Definition of the Primate Model; 2) Primate Management; 3) Research Techniques and Procedures; and, 4) Current Uses in Biomedical Research. This organization of reference material seems very logical; unfortunately, the actual organization of the chapters does not always fit this logic. For example, "Modeling Parasitic Diseases in Nonhuman Primates: Malaria, Chagas' Disease, and Filariasis" is placed in Part 1 with broad overview chapters on anatomy, pathology, and infectious disease, while "Parasitic Diseases of Nonhuman Primates," a broad overview, is placed in Part 4. These peculiarities of organization sometimes make it difficult to locate information—not problem if you're reading cover to cover but awkward for a reference volume.

A number of chapters stand out as achieving the book's stated goal of comprehensive literature review. These include "Common Viral Infections of Laboratory Primates" by Lerche; "Nutrition and Nutritional Diseases" (Lewis et al.); "Development of Specific Pathogen Free Nonhuman Primate Colonies" (Mansfield); "Factors Affecting the Choice of Species" (Weber); "Practical Approaches to Pharmacological Studies in Nonhuman Primates" (Koegler and Cowley); "Primate Models of Neurological Disease" (Szabo); and most of the chapters in Part 3. The latter section includes chapters on anesthesia, rigid endoscopy, ultrasound imaging (with an emphasis on macaques and reproduction), functional magnetic resonance imaging (with an emphasis on marmosets), radiography, and PET. I was particularly impressed with the clever organization of "Anaesthesia" by Steve Unwin, in which a seamless primer on analgesia and anesthesia in a variety of non-

human primates is interlaced with text boxes providing some of the latest research findings on these same topics. The reader easily gains how-to information as well as an overview of the research behind that information.

The chapters on primate management are extremely uneven. There are only three (Chapters 10–12) that deal with husbandry and management of specific nonhuman primate species. Given the proposed audience for this reference volume, more descriptions of management of a wider variety of species would have been valuable. The chapters on management of marmosets and tamarins and of vervet monkeys are relatively complete sources of information. However, given that macaques are among the most commonly used nonhuman primates in research institutions, it was particularly disappointing to find that "Management of Old World Primates" provided only a brief description of a single facility housing cynomolgus macaques. That the one chapter in the book devoted to management of macaques presents a management system (small single housing and breeding management involving continued individual housing of pregnant females) counter to chapters emphasizing the importance of social factors in macaque management (Chapters 9 and 14) would be puzzling, I believe, to a reader who was truly unfamiliar with these species and required to make informed management and husbandry decisions regarding them.

There are chapters in Parts 1–2 dealing with male and female reproductive physiology. Of these, "Male Reproduction and Fertilization" by Richard Harrison and Michael Kubisch stands out as providing a true overview. In addition to providing a clear, well written overview of male reproductive physiology, the authors incorporate information on what's known across primate taxa rather than limiting their focus to only one primate group, the tactic taken in many of the other chapters.

There are a number of chapters in the volume that review one specific, narrow use of a primate in biomedical research. Sometimes these chapters are easily identifiable by title, for example, "The Baboon as an Appropriate Model for the Study of Multifocal Aspects of Human Endometriosis." At other times the titles and locations of these chapters suggests that the original intention for the chapter was an overview. "Modeling Parasitic Diseases in Nonhuman Primates: Malaria, Chagas' Disease, and Filariasis," for example, is devoted almost entirely to building a case for the use of macaques in the study of these diseases when, in fact, the owl monkey is recognized as the species of choice for malaria research. "Chronic Diseases" presents a detailed overview of research on nonhuman primate models of autoimmune disease that might be valuable for someone already working in immunological research on nonprimates but has insufficient explanation

of basic concepts surrounding autoimmunity to be of much value for a primatologist. It would have been easier to discern exactly what these chapters were supposed to provide for this reference volume if they had been grouped under one heading, as opposed to spread somewhat randomly throughout the book.

In general, the quality of the graphics and illustrations in the book are excellent, and the use of color in many chapters is a great aid. The only disappointment was the lack of color in Chapter 4, "Pathology of Noninfectious Disease of the Laboratory Primate," where color figures would have enhanced the readers' understanding of the gross and histological pathology being represented. In summary, *The Laboratory Primate* provides much valuable informa-

tion for its target audience but lives up to the goal of precluding or reducing the need for other references in only a few select areas.

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## BOOKS RECEIVED

Abel EK (2006) *Suffering in the Land of Sunshine: A Los Angeles Illness Narrative*. New Brunswick, NJ: Rutgers University Press. 176 pp. \$24.95 (paper).

Ahmed A (2006) *Sorrow and Joy among Muslim Women: The Pukhtuns of Northern Pakistan*. New York: Cambridge University Press. 199 pp. \$90.00 (paper).

Ayala FJ (2006) *Darwin and Intelligent Design*. Minneapolis, MN: Fortress Press. 116 pp. \$7.00 (paper).

Hicks D and Beaudry MC (eds.) (2006) *The Cambridge Companion to Historical Archaeology*. New York: Cambridge University Press. 404 pp. \$34.99 (paper).

Hohmann G, Robbins MM, and Boesch C (eds.) (2006) *Feeding Ecology in Apes and Other Primates: Ecological, Physiological and Behavioural Aspects*. New York: Cambridge University Press. 523 pp. \$130.00 (hardcover).

Lewis ME (2006) *The Bioarchaeology of Children: Perspectives from Biological and Forensic Anthropology*. New York: Cambridge University Press. 266 pp. \$130.00 (hardcover).

Matsuzawa T, Tomonaga M, and Tanaka M (eds.) (2006) *Cognitive Development in Chimpanzees*. New York: Springer. 522 pp. \$89.95 (hardcover).

Miller HM (2007) *Archaeological Approaches to Technology*. Burlington, MA: Elsevier. 298 pp. \$79.95 (hardcover).

Moser S (2006) *Wondrous Curiosities: Ancient Egypt at the British Museum*. Chicago: University of Chicago Press. 368 pp. \$35.00 (cloth).

Newton-Fisher NE, Notman H, Paterson JD, and Reynolds V (eds.) (2006) *Primates of Western Uganda*. New York: Springer. 516 pp. \$119.00 (hardcover).

Peterson D (2006) *Jane Goodall: The Woman Who Redefined Man*. Boston: Houghton Mifflin. 740 pp. \$35.00 (cloth).

Ravosa MJ and Dagosto M (eds.) (2007) *Primate Origins: Adaptations and Evolution*. New York: Springer. 829 pp. \$169.00 (hardcover).

Walter C (2006) *Thumbs, Toes, and Tears: And Other Traits That Make Us Human*. New York: Walker and Company. 256 pp. \$25.95 (hardcover).

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