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Zooarchaeology

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cally during the past 15 years and readers would benefit from a larger body of more current citations. Being the virtually the only American text on lithic analysis means that Bill Andrefsky has taken on the responsibility of representing American lithic analysis to a wide and diverse audience. *Lithics* succeeds at this task. I hope that it will be regularly revised and reprinted to reflect the dynamic nature of the field.

Zooarchaeology. ELIZABETH J. REITZ and ELIZABETH S. WING. 1999. Cambridge Manual in Archaeology, Cambridge University Press, England. xix + 455 pp., 7 figures, 34 tables, 4 appendices, bibliography, index. \$80.00, ISBN 0-521-48069-8; \$34.95 (paper), ISBN 0-521-48529-0.

Reviewed by Susan L. Scott, University of Southern Mississippi.

This comprehensive volume, is described as supplying "essential reference material on contemporary techniques and methodology in zooarchaeology." As such, it may prove indispensable to the beginning zooarchaeologist, especially those unfamiliar with general biological concepts. For the seasoned specialist, the volume will prove quite useful for the enormous amounts of zooarchaeological and biological literature that it consolidates. However, portions also might be perceived as promoting certain idiosyncratic goals and techniques drawn from biology, many of which are very time consuming and may be of more value to biological and paleontological research questions than to anthropological ones.

The volume is divided into eleven chapters, beginning with discussions of history and theory (chapter 2), general biological concepts (chapter 3), comparative anatomy, ecology (chapter 4), and sampling at the level of site, area, assemblage, and screen size (chapter 5). This background is followed by suggestions for recording primary data (chapter 6), discussions of the trials and potential pitfalls of secondary transformations (chapter 7), and biologically based models for extrapolating human subsistence strategies (chapter 8). Finally, paleoenvironmental reconstruction is discussed (chapter 10), as well as the process of animal domestication (chapter 9). Data selection strategies are either suggested for each of these anthropological issues or, more frequently, examples of studies dealing with specific issues are cited for readers to further explore on their own.

In addition, there are four useful appendices. The first demonstrates appropriate scientific presentation of animal taxa using the Linnaean taxonomic system. The second includes a number of well-labeled illustrations to aid in the identification of specific elements. The third is a

detailed account of how to start and maintain a comparative collection; and finally, the authors present the "hypothetical" database used throughout the text to compare different quantitative techniques.

Basic biology and biological models are discussed with enthusiasm, and the appendices offer practical nuts and bolts advice to provide a sound base for the first step of analysis, the identification of zooarchaeological remains. Despite these obvious and essential strengths, the text founders to varying degrees when addressing quantitative methods and anthropological constructs. Quantitative methods, the bane of zooarchaeology, are discussed exhaustively, and are drolly called a "growth industry" for the profession, a comment that is, unfortunately, not very far off the mark. The authors' discussions of primary data collection are very well done, and the methodology behind transforming primary data into Minimum Number of Individuals (MNI) and metric data into indices to differentiate age, sex, species, or wild versus domesticated forms, is well explained. When further converting these zooarchaeological "measures" into secondary and tertiary data, however, the authors, like the field itself, move onto shakier ground.

It is the manipulation of transformed data to characterize species mix and relative contributions that causes problems for zooarchaeologists generally, and in this book. Several unusual quantitative transformations are espoused—many derived from studies of living biological individuals and populations. Because archaeological assemblages have already been exposed to so many transformations before and after burial, some of the equations suggested seem tantamount to throwing a grenade at a field mouse. Use of some of these biologically based methods suggests confusion between precision versus accuracy of derived data. This problem surfaces notably in chapter 7, when the authors are unable to explain why grossly different results are obtained when calculating sample diversity and equitability based on MNI versus bone weight-derived allometric projections of biomass (p.237). Both measures already represent quite different (and arguably misleading) measures of the original observations made on the assemblage.

A much broader brush is applied to issues of strictly anthropological interest, with the presentation sometimes approaching a litany of anthropological concepts and references rather than a concerted demonstration of middle range techniques useful for assessing, for instance, economic efficiency, social distinction, or symbolic significance of animals. Selective bibliographic sources are supplied to fill this void, and some bias is apparent in references chosen. For example, Binford's seminal work with the Nunamiut is barely mentioned, and then only in passing.

The volume's greatest value will be as a classroom text or handy lab manual, and as such, fills a needed gap. It will

be a gold mine for those attempting to begin a career in zooarchaeology, a way carved out by Elizabeth Wing's firm grasp of biological principles and comparative anatomy. There are many gems in this volume, and these will be apparent to the experienced zooarchaeologist, as well as the novice. It paints a clear picture of where zooarchaeology has come from and where it stands today. It will be a somewhat less satisfying read for those seeking specific direction for the anthropological future of the specialty.

Anthropology Explored: The Best of Smithsonian Anthro Notes. RUTH OSTERWEIS SELIG and MARILYN R. LONDON, editors. 1998. xviii + 348 pp., index, references. \$35.00 (cloth), ISBN 1-56098-763-4; \$17.95 (paper), ISBN 1-56098-790-1.

Reviewed by Shereen Lerner, Mesa Community College.

Anthropology affords humans an opportunity to gain a perspective about ourselves unlike any other discipline. We can explore our own diversity through many routes, be it through the study of human biological evolution and diversity, the uncovering and reconstructing of ancient societies, or the diversity and complexity of contemporary human societies. There are few books, outside of introductory texts, that provide insight into all of these areas. There are even fewer opportunities for the non-professional to gain such insights, unless it is through the newspaper, teacher training workshops, or the small number of books published by professionals for the "lay" individual.

In this book, the editors and authors provide us with 29 clearly written essays that explore some of the fundamental questions humans ask about themselves as individuals, societies, and as a species. The articles, while written for the public-at-large, would be well received by professionals and very useful in college classroom settings for introductory anthropology courses. The essays were all previously published in "AnthroNotes," a Smithsonian Institution publication dedicated to bringing anthropology, its subject matter, concepts, and theory, to as broad an audience as possible.

The publication of this book could not arrive at a better time. When we, as anthropologists are seeking more avenues to reach the public, this book helps bridge the gap that often exists between professional publications and those that are oversimplified for the public. And, while many of the essays were originally published several years ago, in each case there is an update that provides insight into the 'latest' theories or discoveries that have occurred since the original essay was written. In this way, the book remains current.

The book is divided into three sections. The first focuses on human origins and contains a wide range of articles

including debates about primates and language, evidence for early humans as scavengers, early human art forms, and what we can learn in general from population studies. The information is presented in a manner that draws relevance to today's world; for example, the discussion of ancient diseases in contemporary populations by Kathleen Gordon (e.g., osteoarthritis) and the tracing of infectious diseases over time by George Armelagos, Kathleen Barnes, and James Lin.

The second section includes ten articles that focus on how and why archaeologists study the past and what can be learned through such study. The emphasis is again on relevance to the contemporary world, a question often asked by the general public. The section contains a wide range of information. Two essays examine the origins of agriculture—in the Near East (Melinda Zeder) and in eastern North America (Ruth Selig and Bruce Smith). Theresa Singleton uses archaeology to explore African-American life, and John Verano discusses the Moche culture of Peru. With the variety offered in this section, virtually any interest in archaeology will be satisfied.

The final section focuses on the study of modern cultures and again offers a wide range of content. Of particular interest are the articles on Andean women (Catherine Allen), a discussion of who owns the past (Loretta Fowler), and an examination of race and ethnicity in America (Alison Brooks, Fatimah Jackson, and Richard Grinker).

Some may argue that a book such as this that covers such a wide variety of topics and subdisciplines is too broad to be of use to the professional community; however, I would suggest otherwise. In fact, in today's world when we are seeking to reach out to the greater public, books such as these allow us, as professionals, to go beyond our own specialties and begin dialogues on a variety of topics that are of interest to others. This book does an excellent job in providing a set of well-written essays that explore some of the fundamental questions that humans ask about themselves. The chapters provide illuminating insight into our ancestry and diversity; they offer a comparative approach that helps us understand other cultures and other peoples within our own community, as well as ourselves.

Bison Hunting at Cooper Site: Where Lightning Bolts Drew Thundering Herds. LELAND C. BEMENT. Foreword by SOLVEIGA. TURPIN. 1999. University of Oklahoma Press, Norman. xxii + 227 pp., 54 figures, 45 tables, 1 appendix, glossary, bibliography, index. \$27.50 (cloth), ISBN 0-8061-3102-0; \$16.95 (paper), ISBN 0-8061-3053-9.

Reviewed by William B. Fawcett Jr., Utah State University.

This book is far more than another descriptive report.