

BOOK REVIEW

Madeleine J. Hinkes,¹ Ph.D.

A Review of Reconstruction of Life from the Skeleton

REFERENCE: İşcan, M. Y. and Kennedy, K. A. R., Eds., *Reconstruction of Life from the Skeleton*, Alan R. Liss, Inc., 41 East 11th St., New York, NY 10003, 1989. 315 pp., \$49.50, cloth.

The editors of this volume state that their purpose is "to present the state of the art of elucidating biological characteristics from skeletal remains" (p. xv) and "to offer to our colleagues . . . a clear profile of current research activities in skeletal anthropology" (p. 8). They do this by assembling 17 authors writing on 15 topics of interest to biological anthropologists and others. This book is an outgrowth of a 1986 seminar of the same title presented at the annual meeting of the American Anthropological Association. While some of the authors are not necessarily among "the most respected members of the profession" (p. xv), most of them have been publishing or presenting papers on their respective topics for some time, so their participation in this volume comes as no surprise.

Some clarifications could be added to the introductory chapter by editors İşcan and Kennedy. They state that "there has not been a study that assesses age-related variation between different bones in the same individual using different techniques" (p. 4). But isn't that just what Lovejoy et al. [1] have done? They also lament the lack of large, well-documented, recent skeletal collections, but neglect to mention the remedial efforts of the Anthropology Departments at the University of Tennessee, Knoxville, and University of New Mexico, Albuquerque.

Francis Johnston and Louis Zimmer wrote Chapter 2 on Assessment of Growth and Age in the Immature Skeleton. These authors compare skeletal samples with normal healthy "standards" and feel that the differences primarily reflect environmental factors. Chapter 3 is on Osteological Manifestations of Age in the Adult, by İşcan and Susan Loth. They feel that there has been nearly exclusive focus on age determination from the pubic symphysis and cranial sutures, whereas they emphasize a "many methods-many bones" technique, including the use of morphology, radiology, and histology. Sam Stout, writing on Histomorphologic Analysis of Human Skeletal Remains, demonstrates that it is much more than an aging technique; population-level histomorphometrics provides a useful measure of health as well.

Lucile St. Hoyme and İscan collaborate on Determinations of Sex and Race: Accuracy and Assumptions. This rather rambling chapter is almost a history of physical anthropology. At times, it is difficult to distinguish which traits are race related, as opposed to sex related, and the line is blurred between biological and cultural distinctions. At one point they refer to the "nasal processes of the malar bones" (p. 72), when they must

¹Forensic anthropologist, U.S. Army Central Identification Laboratory, Fort Shafter, HI 96858-5480.

mean “of the maxillae.” They promote what I feel is a misconception, that use of discriminant function techniques reduces the need for trained expertise (p. 81). Without adequately trained and experienced observers, how can we hope to maintain interobserver reliability and comparability?

Chapter 6 is on Nonmetric Skeletal Variation, by Shelley Saunders, and the topic receives good treatment with useful suggestions for further research. Spencer Turkel writes on Congenital Abnormalities in Skeletal Populations, also known as paleopathology. In discussing the clinical aspects of these conditions, he attempts to show when an abnormality becomes a pathology. Seven of the eight photographs are taken from a work by Ortner and Putschar [2], including one with an incorrect caption. [Figure 7 (p. 123 in Ref 2) is not a neonate but an adult female (Ref 2, p. 329).]

Kennedy offers a detailed discussion of Skeletal Markers of Occupational Stress, including a 16-page table demonstrating which bones are affected and by what means. More diagrams or photographs would be useful. He rightly emphasizes caution in the interpretation of stress markers. Chapter 9 is on Trauma, by Charles Merbs. He gives much useful information on fractures, along with other topics, but, again, the emphasis is on paleotrauma rather than what we might need to interpret trauma at autopsy. Marc Kelley writes, briefly, on Infectious Disease, emphasizing the complexity of diagnostic problems in bone. Nutritional Deficiency Diseases by P. L. Stuart-Macadam gives good coverage of scurvy, rickets, and iron-deficiency anemia—employing clinical data, radiographic pictures, historical data, and archaeological evidence. These diseases are ones of faulty nutrition and are affected by environmental and cultural factors associated with civilization.

William Keegan discusses Stable Isotope Analysis of Prehistoric Diet. This technique is a valuable means of independently testing hypotheses on past human diets, yet it is insufficient in itself to reconstruct past diets. A major obstacle is diagenesis, the interaction of the bone with the burial environment. Continuing on the theme of osteochemistry, Arthur Aufderheide (the only nonanthropologist author) writes on Chemical Analysis of Skeletal Remains. He elaborates on the archaeological applications of trace element analysis, namely, diet reconstruction, health effect predictions, and behavioral correlations, using strontium, zinc, and lead as examples. He wraps up his chapter with a brief mention of techniques of paleoserology and dating methods.

Chapter 14 shifts gears for a discussion of Dental Pathology: Methods for Reconstructing Dietary Patterns. True, there are more interesting applications of dental pathology, but John Lukacs makes some good points. Many osteology texts skim lightly over dental topics. Perhaps because of this, there is a need for comparability in studies and standardization in data collection, a situation Lukacs hopes to remedy with a Dental Pathology Profile. The final chapter is by Frank and Julie Saul on Osteobiography: A Maya Example. This chapter provides a specific example of reconstruction of lifeways from bones: who was in the population, where did they come from, what happened to them during their lives? The Sauls feel that the same sort of approach is useful in forensic science cases.

Perhaps. However, in current death cases, we are less concerned with lifeways and more concerned with assigning a specific, unique identity to the remains under analysis, and with elucidating the circumstances surrounding death, thought not necessarily in a cultural milieu. In that light, this volume will not be as helpful to forensic scientists as those of Rathbun and Buikstra [3] and Reichs [4], with their particular case studies and practical applications.

This book could be of value to anyone who wants more than “bare bones” osteology. Most of the chapters rightly emphasize the skeleton as part of a larger organism, and that organism as part of a population. The majority of authors are concerned with assessing the health and disease of archaeological skeletal populations, and they discuss

pathology and demography in the "paleo" sense. This volume should not, however, be mistaken for a *vade mecum*: no technique is discussed in enough detail to take and use, but there are thorough discussions of theoretical underpinnings and comprehensive reference lists.

Finally, I have what might seem an unimportant quibble. The book is dedicated to Muzaffer Suleyman Senyurek (1915–1961), who "can be credited with crafting many of the basic tools we now use to reconstruct life from the skeleton" (p. 8). For the unenlightened, Senyurek has published on skeletons from Anatolia and Shanidar. I realize the authors might have personal reasons for this selection, but I would have thought it more appropriate to dedicate the volume to the late Larry Angel, especially since he was a participant in the 1986 symposium.

References

- [1] Lovejoy, C. O., Meindl, R. S., Mensforth, R. P., and Barton, T. J., "Multifactorial Determination of Skeletal Age at Death: A Method and Blind Tests of Its Accuracy," *American Journal of Physical Anthropology*, Vol. 68, No. 1, 1985, pp. 1–14.
- [2] Ortner, D. J. and Putschar, W. G. J., "Identification of Pathological Conditions in Human Skeletal Remains." *Smithsonian Contributions to Anthropology*, No. 28, 1981.
- [3] Rathbun, T. A. and Buikstra, J. E., Eds., *Human Identification: Case Studies in Forensic Anthropology*, Charles C Thomas, Springfield, IL, 1984.
- [4] Reichs, K. J., Ed., *Forensic Osteology: Advances in the Identification of Human Remains*, Charles C Thomas, Springfield, IL, 1986.