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BOOK REVIEW

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Review of: *The Human Bone Manual*

REFERENCE: White TD, Folkens PA. The human bone manual. Burlington, MA: Elsevier-Academic Press; 2005, 464 pp.

Readers familiar with White and Fokens' *Human Osteology* (1991, 2000) will immediately recognize this volume, which is presented as a field manual, useful in bioarchaeological, forensic, and paleontological contexts. To achieve this goal, volume organization has been transformed, although content is largely unchanged with the exception of updating. A glossy cover, which includes foldouts of a scale (front) and a north arrow with scale (back), a smaller (9×6 in.) format, and a focus upon archaeological and forensic contexts, are designed to make this book a primary resource in the field setting.

As an example of volume restructuring, the reader will find that the former Chapter 14, entitled "Recovery, Preparation, and Curation of Skeletal Remains" has been largely divided between Chapter 2, "Field Procedures for Skeletal Remains," and Chapter 18, "Laboratory Procedures and Reporting," which also draws heavily upon the former Chapter 15, "Analysis and Reporting of Skeletal Remains," and Chapter 21, "Molecular Osteology." The closing chapter (19) focuses upon "The Skeletal Biology of Individuals & Populations" and thus incorporates large sections of prior Chapter 17, "Assessment of Age, Sex, Stature, Ancestry, and Identity," and Chapter 20, "The Biology of Skeletal Populations: Discrete Traits, Distance, Diet, Disease, and Demography." Somewhat surprising is the fact that Chapter 18, "Osteological and Dental Pathology," remains free-standing as the new Chapter 17 and precedes Chapter 20, which it should logically follow, as assessing health status requires consideration of population structural details relating to age-at-death and sex. Appropriately, Chapters 16, "Ethics in Osteology," and 19, "Postmortem Skeletal Modification," have been moved forward, appearing as Chapters 3 and 5, respectively. Other chapters on bone biology and anatomical structures, including the core systematic discussion of skeletal elements, have been moved but remain essentially unchanged. Web sources are now found in an appendix, joining the useful glossary and extensive bibliography at the end of the volume. The forensic and archaeological case studies have been eliminated. Gone, too, are certain chapter sections, such as suggested further readings and functional aspects. The volume is thus slimmed down from 563 pages to a svelte 464.

Especially useful for the forensic anthropologist is the expanded section on photography, which has been reworked to include information about archiving photographs and the manner in which digital photos can be rendered immutable rather than being subject to *post hoc* manipulation (Section 18.9.9). The authors note in Section 3.1.2 (The Expert Witness) that the 1993 U.S. Supreme Court Daubert decision requires a higher standard of evidence for methods and for expert testimony. Only later (Section 19.1, Accuracy and Precision of Estimate) are the statistical tools for evaluating methods discussed, which are directly relevant to the presentation of expert testimony. Neither "Frye" nor "Daubert" appear in the index. The discussion of accuracy and precision is somewhat less than satisfying, from a forensic perspective, in that the two terms are linked at times and there is no discussion of bias. A more extensive discussion of how one achieves probabilistic statements desirable in expert testimony would be a welcome addition to subsequent editions.

There are a few other startling statements, such as that it "is *often* useful to establish a datum point" (p. 11, emphasis mine). One wonders under what circumstances it would not be? The authors also note that "some" investigators use burial recording forms (p. 18). This discussion should be strengthened, for both bioarchaeological and forensic contexts. From a forensic perspective, the authors could add information about the degree to which anatomical collections made in the early 20th century are less suitable than contemporary databases, due to the effects of selection bias and secular trends (pp. 27 and 362). They could also expand their perspective on anatomical collections by including European examples ⟨http://publicus.culture.hu-berlin.de/collections/list.php?id=i&s=Pathology⟩. While they cite Hoppa and Vaupel's 2002 work on paleodemography, its content could be more extensively integrated, including information on museum collections and the manner in which probabilistic estimates of age-at-death might be achieved. Also missing are Fordisc 3.0 (Ousley and Jantz 2005 ⟨web.utk.edu/ ~ anthrop/FACpubs.html⟩), and the role of the American Board of Forensic Anthropology (www.csuchico.edu/anth/ABFA/) in maintaining standards in U.S. forensic anthropology. The contributions of the Central Identification Laboratory (www.jpac.pacom.mil/CIL/CIL_Home.htm) to research and casework in forensic anthropology are also underrepresented.

Turing to skeletal biology, there are a few minor omissions. While a comprehensive overview of paleopathology is not anticipated in a single chapter, it is somewhat surprising to see ankylosing spondylitis discussed, but not diffuse idiopathic skeletal hyperostosis (DISH). Jurmain's critique of behavioral interpretations could usefully be added, and one might wonder if it is *ever* advisable to glue teeth into their sockets (p. 338).

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The quibbles proffered in the preceding paragraphs aside, this IS a good and useful volume, whether one takes it into the field or uses it as a basis for classroom teaching. Further restructuring will be required to make it maximally useful for a forensic anthropologist, but the steps already taken portend well for future editions.