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Book Review

Nikita E. Osteoarcheology: A Guide to the Macroscopic Study of Human Skeletal Remains. 1st Edition. 2017

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The advent of this new hardback book portraying a disassembled human skeleton on the front cover greatly expands the arcane subjects of palaeo-archeology, palaeopathology, taphonomy and forensic anthropology. It adds to the growing interest in the recent discoveries of ancient grave sites and fossil remains of human evolution [1,2]. The very detailed description of human osteology, growth patterns, pathological conditions, sex and ancestry and statistical analyses provides a fundamental background to the expanded array of investigations of human skeletal remains.

The degree of postmortem permanence of different components of the skeleton is dependent upon the individual variation of composition of bone remnants, the duration of burial, the time interval since death and the surrounding environment of the remains. All these factors are included as pedagogical features of this pioneering treatise.

Of all the constituents of the enduring skeleton, the dentition is by far the most resistant component of the body to postmortem decay. This decay-resistant feature of teeth paradoxically contrasts so vividly to the destructive dental decay that occurs in the living, and accounts for the reason d'etre of the dental profession! Accordingly, the attention given to the dentition and its diseases is of incalculable significance in providing evidence of the life history of the deceased. Details of the anatomy of individual teeth, distinguishing primary from permanent dentitions are provided. However, it is disappointing to note that apart from age-related tooth formation data, the lack of functional masticatory age markers that can be elicited from dental wear is missing. However, the pathognomonic evidence of environmental and disease impacts on detailed dental micromorphology is provided. Indeed, teeth are "pearls of wisdom" in providing a kymographic record of lives lived by the protagonists being investigated [3].

The nine chapters of the book are devoted respectively to the human skeleton, taphonomy, sex and ancestry assessment, age estimation, metrics, growth patterns, activity patterns, pathological conditions and statistical methods. Details of bone fractures and skeletal diseases are extensively displayed. The statistical methodology provides extraordinarily wide analyses, and is a highlight of the book. The outstanding quality of profuse colour illustrations of bones of various ages from juveniles to geriatric conditions makes this an atlas of osteology. The maximum number of possible macroscopic components that can be extracted from postmortem human skeletal remains have been portrayed. However, fetal and infant osteology is regrettably omitted, limiting its age-related comprehensiveness.

Another limiting factor is the omission of microscopic, biomolecular and biochemical identifications despite their significance in current osteo-archeological research. The author's reasoning for these omissions was to provide guidance for osteological examination without the use of highly specialized investigative equipment. In this regard, the author's objectives have been met for exclusively adult material. Infant and juvenile remains have been excluded because "sex and ancestry assessment " in these categories is problematic.

The references appended to the chapters are remarkable for their comprehensiveness and currency. The Taphonomy Chapter 2 cites no less than 144 references; the Sex and Ancestry Assessment Chapter 3 cites 136 references; Age estimation Chapter 4 cites 113 references; Growth Pattern Chapter 6 identifies 155 references. A number of appendices describe didactic detailed steps to be followed in analyzing skeletal remains from collection of data to preprocessing and biodistance calculations. While the book has been written primarily for osteoarchaeologists, it provides guidance for forensic investigators and palaeo-anthropologists. To facilitate use of the methods described in the book, a companion website providing a series of macros is available on http:// textbooks.elsevier.com/web/Manuals.aspx?isbn=9780128040218

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