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Book Review

HUMAN DENTAL DEVELOPMENT, MORPHOLOGY AND PATHOLOGY: A TRIBUTE TO ALBERT A. DAHLBERG. Edited by John R. Lukacs. Eugene: University of Oregon Anthropological Papers 54. 447 pp. ISBN 0-87114-060-8 (paper) 1998

"For I would have thee to know, Sancho, that a mouth without grinders is like a mill without a millstone, and every tooth in a man's head is more valuable than a diamond." Thus said Don Quixote to his faithful squire while recovering from a fall off his mount, Rozinante, during his assault upon the innocent sheep which he mistook for an army of enchanted Moors (Miguel de Cervantes, 1605, *The History and Adventures of the Renowned Don Quixote* Part 1, Book 3, Chapter 4). Cervantes could not have imagined that four centuries after the publication of his satire of medieval chivalry a generation would arise which shared his hero's enthusiasm for the dentition, but because teeth are also important as sources of scientific data for documenting the biological diversity, evolution and phylogenetic affinities of ancient and modern human populations. In this august company of twentieth century dental anthropologists Albert A. Dahlberg (1908-1993) pioneered research for over seven decades, a career celebrated in a *Festschrift* published by the editors of *Ossa* in 1979 (25 contributors) and in the *Dental Anthropology Newsletter* in 1992 (31 contributors).

To these tributes John R. Lukacs, Professor of Anthropology at the University of Oregon, has edited a volume of 20 chapters by 35 authors of whom the majority presented papers at the Albert A. Dahlberg Memorial Symposium on Dental Anthropology and Evolution held at the annual meeting of the American Association of Physical Anthropologists in Oakland, California, in 1995, an event co-sponsored by the Dental Anthropology Association.

The volume is organized into five parts: 1. Dental Development and Genetics (3 chapters); 2. Morphological Variations (8 chapters); 3. Odontometric Variation and Dental Asymmetry (5 chapters); 4. Dental Pathology and Wear (3 chapters); and 5. History of Dental Anthropology (1 chapter). Preceding these chapters is a Dedication by G. Richard Scott. Reference citations appear at the end of each chapter. The volume concludes with an author - subject Index. It is amply illustrated with black and white photographs, line drawings and tables. The editor, a distinguished dental anthropologist with a quarter century of research in dental anthropology, has written a Preface. He is to be complimented for his careful attention to proofing and formatting this collection of papers, and for his organization of the 1995 Symposium while President of the Dental Anthropology Association. The name of Hennie T. Groeneveld as co-author with Julius A. Kieser of Chapter 14 is omitted from the Table of Contents where Kieser's first name is given not as "Julius" but as "Jules" at the heading of the chapter with Groeneveld.

The contributors discuss current issues of dental anthropology using samples from geographically widespread populations of Bronze Age Bactria (Chapter 5: Brian E. Hemphill, Alexander F. Christiansen, and S.I. Mustafakulov), Mesolithic Ukraine (Chapter 6: A.M. Haeussler), post-Paleolithic Nubia (Chapter 8: Joel Irish), Archaic Florida (Chapter 18: Andrea Cucina and M. Yasar Iscan), and prehistoric St. Thomas in the United States Virgin Islands (Chapter 19: Clark Spencer Larsen, Mark F. Teaford, and Mary K. Sandford). Among studies of historic populations are those from Maharashtra, India (Chapter 7: John R. Lukacs, Brian E. Hemphill, and S.R. Walimbe), native populations of the Northwest Coast (Chapter 11: Guy L. Tasa), South America (Chapter 17: Phillip

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L. Walker, Larry Sugiyama, and Richard Chacon), and southern Australia (Chapter 20: Tasman Brown). These and other chapters address specific issues in odontometrics (Chapter 2: Simon Hillson; Chapter 3: John T. Mayhall, Lassi Alvesalo, and Grant Townsend; Chapter 9: Tsunehiko Hanihara; Chapter 16: Donald H. Morris), tooth growth and development (Chapter 15: Edward F. Harris), discrete morphological traits (Chapter 4: Christy G. Turner II and Diane E. Hawkey), root variations of molar teeth (Chapter 10: Verner Alexandersen and Ole Carlsen; Chapter 11: Guy L. Tasa), asymmetry and co-variation of the deciduous dentition (Chapter 12: Grant Townsend and Victoria Farmer; Chapter 13: Yuji Mizoguchi; Chapter 14: Julius A. Kieser and Hennie T. Groeneveld), and the role played by odontology in primate systematics (Chapter 1: Robert S. Corruccini). Other issues including irregularities of dental enamel formation, cultural practices, pathology and trauma are discussed in several of the chapters.

Lukacs provides instructors of college-level courses on dental anthropology a number of "required reading" assignments in this state-of-the-art collection of papers by present-day leaders in this field. Particular attention in this review is directed to the contributions by Turner and Hawkey which discusses the unreliability of Carabelli's trait as a population marker since they have encountered it in 15 geocentric regions in their sample, not primarily among European and European-derived populations. In his study of primate taxonomy, Corruccini infers that relationships of true higher-level sister-group species may be correctly indicated by the morphology of the dentinoenamel junction in mandibular molars, as well as by variations of crown morphology. Evaluation of dental asymmetry as an indicator of environmental stress is discussed by Kieser and Groeneveld in the context of prenatal exposure to tobacco smoke of children between the ages of ten and 16 years. Older mothers who smoke have offspring with higher rates of dental asymmetry than do children of younger mothers who smoke. Brown's historical study of dental anthropology in South Australia contains photographs of anthropologists and physicians who contributed to the advancement of this area of investigation beginning with the appointment of Frederick Wood Jones to Adelaide University in 1919. This is a fitting final chapter to the volume in providing the reader with an awareness of the international scope of past and present-day research orientations in dental anthropology and the legacy left by Albert A. Dahlberg.

This reviewer enjoyed friendship and scholarly collaboration with Albert from the time of my graduate student years at the University of California at Berkeley. My mentor, Theodore D. McCown, summoned me to his office one April morning in 1960, introduced me to his distinguished visitor from the University of Chicago, and informed me that I should assist Dr. Dahlberg for the following three days in locating skeletal specimens housed in the Lowie Museum collections in the basement of the women's gymnasium. I was delighted with this assignment, spending many profitable hours with Albert who, on the final day of his visit, was my host for lunch at Berkeley's elite Black Sheep Restaurant, a heady experience for a graduate student! Albert's kindness, gentle manner, and erudition were among his many gifts to anthropology and to his friends and associates.

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DENTAL ANTHROPOLOGY AT THE HEBREW UNIVERSITY – JERUSALEM, ISRAEL

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Research in the biological anthropology and ancient DNA laboratory headed by Pat Smith at the Hebrew University, Jerusalem, is very active and diverse. The lab comprises specialists in anthropology, evolution, and molecular genetics who are unified by an interest in human evolution. The current research projects carried out by members of the lab fall under three major themes: 1) Human origins; 2) Dental evolution and patterns of growth; and 3) The interaction between genetic and environmental factors on the composition of past populations in the Southern Levant, South Africa, Australia, and recently in America.

In addition to traditional methods based on morphometric analyses these topics are now being investigated through exciting techniques such as ancient DNA analysis, Ct-scans and confocal laser scanning microscopy (CLSM). The