rooted colorless tabulations and introspective narratives that make up too much of anthropology.

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Speaking Remains

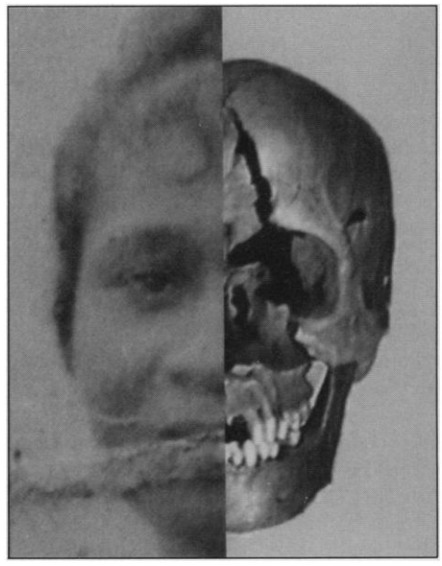
Bones. A Forensic Detective's Casebook. DOUGLAS UBELAKER and HENRY SCAMMELL. Burlingame (HarperCollins), New York, 1992. xvi, 317 pp., illus. $23.

What the Bones Tell Us. JEFFREY H. SCHWARTZ. Holt, New York, 1993. xii, 292 pp. $25. A John Macrae Book.

Douglas Ubelaker, a forensic anthropologist with over 20 years of field and laboratory experience, observes that the scientific examination of human remains evokes "an awareness that they represent the victim's last chance to be heard, to reveal a major insight into how a person lived and perhaps into how he or she died. . . . Sometimes their last words speak not just for the life of the victim but for society, and we ignore them at our peril." *Bones: A Forensic Detective's Casebook*, co-authored by the freelance journalist Henry Scammell, describes the analytical procedures used by anthropologists specializing in the identification of human skeletons or decomposed remains for medical-legal investigations. In less skillful hands, an account of procedures to determine sex, age at time of death, stature as evidenced by appendicular bones, racial ancestry, markers of individuation acquired through trauma and disease, and other components of the protocol of a forensic anthropological analysis might be arid and technically detailed reading. These authors provide an exciting approach as Ubelaker reviews his many and varied forensic cases, most of which have come to him at the Smithsonian Institution's National Museum of Natural History, where he is curator of anthropology and collaborates with the FBI. Each case illustrates the steps of forensic human identification procedures in a vivid way that allows the dead to reveal aspects of their life histories and the circumstances of their demise. Included in these accounts are Ubelaker's own significant contributions to his discipline, particularly his work on facial reproduction by computer techniques and photographic or radiographic superimpositions. Perhaps of greatest interest are the accounts of cases in which Ubelaker has been directly involved, as in his examination of the victims of Alfred Packer's cannibalistic practices in 19th-century gold-mining days in Colorado, his assessment of the fate met by the parents of Lizzie Borden, the autopsy of the remains of Carl Weiss, who was slain by Huey Long's bodyguards following his alleged attack on Louisiana's Kingfish, and the Karen Marsden case involving ritual torture and Satanism in Massachusetts in 1981 (the subject of *Mortal Remains: A True Case of Ritual Murder*, also authored by Ubelaker and Scammell).

Yes, this is gruesome reading, and along with the horrors inherent in violent crime is the requirement for the forensic anthropologist to tolerate the sights and smells of tissue decomposition, maggot infestations, and the sundering of body parts by murderers or animal predators in certain situations where human remains are encountered. Dry bones are also encountered, of course, and it is recognition of their lesions from trauma and disease, markers of occupational stress reflecting habitual activities in life, and related data signs that offer the possibility of a positive identification that enables a missing person's voice to be heard for the last time. These sobering aspects of forensic anthropology are tempered by Ubelaker's tactful and sensitive approach to his discipline combined with profound scholarship, a dry sense of humor where appropriate, and a sound balance of forensic cases with studies of skeletal remains in archeological sites in Ecuador, the Virgin Islands, and North America where he has conducted research.

Enhancing this readable text are 75 photographs and drawings, a glossary accompanying a sketch of a human skeleton with definitions of anatomical terms, a name-and-address listing of the 40 diplomates (including Ubelaker) of the American Board of Forensic Anthropologists as of 1992, and an index. There is no bibliography section, although Ubelaker is generous in acknowledging the contributions of his colleagues. Given the autobiographical nature of the book, it is understandable that Ubelaker emphasizes the role his mentor, William M. Bass III at the University of Tennessee, played in his own intellectual development as well as in the advancement of forensic anthropology in America over the past several decades. He also pays tribute to the late J. Lawrence Angel, his predecessor and colleague at the Smithsonian. Despite the broader perspective Ubelaker provides of the growth of the discipline from its roots in physical anthropology, medicine, and human anatomy, this personal approach obscures the role of other academic programs, notably those associated with the laboratories of W. M. Krogman and T. D. McCown (whose contributions otherwise are noted) in the training of forensic anthropologists. This is a minor oversight in a splendid "casebook," which includes the author's experiences in court as an expert witness.



"Computer-assisted photographic super-imposition. The skull of a black female found in Ohio matched a photograph of the suspected victim." Unsuccessful attempts were made to find another match in the Terry Collection at the Smithsonian Institution, a collection of more than 1700 skeletal remains in which "each skeleton . . . includes a full description of the living person, usually one or more photographs from life, and in some cases death masks." [From *Bones*]

Among this reviewer's favorite passages is one relating to courtroom behavior, a skill that most forensic anthropologists must learn without benefit of mentors: "Maybe in all of this there's a good rule of thumb for courtroom objectivity. Say everything you know that pertains, but not a bit more. The extent to which an expert witness allows himself to be drawn in at the start of a case can be exactly equal to the length of the limb he finds himself sitting on at the end."

Jeffrey H. Schwartz, author of *What the Bones Tell Us*, is a professor of anthropology at the University of Pittsburgh. Like Ubelaker, he intended as an undergraduate to enter medicine but became diverted to physical anthropology as a consequence of taking a course under a dynamic teacher. Other parallels are their careers in forensic anthropology, their study of skeletal remains from archeological sites, and research collaboration with Angel at the Smithsonian. However, their books are quite different, Schwartz focusing upon the hominid fossil record and the historical development of paleoanthropology. Although he gives an account of some of his forensic cases, Schwartz has much more to say about his field research at the site of ancient Carthage, where he investigated the evidence for child sacrifice, his search for the vestiges of Swanscombe Man along the banks of the Thames, and the biblical archeology at Tell Hesi in Israel. Therefore *What the Bones Tell Us* is complementary to *Bones* in that it demonstrates how the skills of the forensic

"Working at the Ayalán site," coastal Ecuador. "Almost all large farms in that part of the world contain archaeological remains, but Ayalán proved to be particularly fertile. . . . In 1973 . . . we unearthed a number of large burial jars, each containing up to twenty-five skeletons." [From *Bones*]

anthropologist carry over to the study of ancient populations when these are represented by a preserved skeletal series in a mortuary deposit. Individual identification is seldom the issue in archeological contexts, but a demographic profile of an extinct group of people may emerge from the anthropologist's estimation of sex ratios, age distributions, rates of mortality and morbidity, nutritional and health status, and markers of traumatic and occupational stress. Schwartz ably demonstrates how through such investigations new data can become available on matters about which historical records and other archeological materials are silent.

The second half of Schwartz's book is less successful. It shifts to the history of the search for hominid fossils and how scientists have used them to interpret the course of human evolution. This historical effort is sketchy and contains some errors. The Heidelberg mandible was discovered in 1908, not 1915. *Dryopithecus* means "oak-ape," not "wood-ape." The Mousterian lithic tradition is characterized by retouched flakes, the prepared-core technique being a Levalloisian tradition, although Neandertals were familiar with both manufacturing methods at some localities. The theory that humans originated in Asia was not proposed for the first time by John Mitchell in 1744 but was a common thesis among Renaissance and Reformation scholars following biblical scholars who sought to locate the cradle of humanity, Eden, in Asia.

What the Bones Tell Us contains an index and a reference section, but the latter is not keyed to the text, and sources are precisely identified only for a few quotations from the writings of Charles Darwin and Thomas Huxley. Schwartz notes in the preface that he has "left clear-cut clues to the appropriate sources in the bibliography," but the reader will be frustrated by the absence of meticulous citation, particularly in cases where some of Schwartz's data are of uncertain origin. There are no illustrations in the book, the author prefacing the chapters with an explanation that "This book contains no artists' reconstructions of what the owner of a particular fossil tooth may have looked like, or how members of an extinct species or ancient civilization may have performed one ritual or another. Nor are there any photographs of Neandertal skulls, or those who study them, or any other items typically found in books of popular anthropology. Such illustrations rarely contribute anything fresh or original. In their stead I have done my best with verbal images." Thus, rather than provide a clearly labeled drawing of a human skull to designate the mastoid process, Schwartz tells the reader, "If you poke around your skull with your fingers, you will feel a substantial, downwardly tapering, bony projection that is partially hidden by your fleshy ear. You also can feel this projection if you place your fingers at the back edge of the vertical part of your lower jaw. If you still can't find it, turn your head to one side . . . and follow the thick, cordlike muscle bulging along your neck that goes from the top of the breastbone to just below your right ear. The large bump below your ear, to which this muscle attaches, is the bony projection I'm talking about. In anatomists' terminology it is called the mastoid process." Most readers will agree that one picture is worth more than 100 words in this case.

Given Schwartz's many years of laboratory and field research in both forensic anthropology and paleodemography (enterprises he designates "forensic osteology" and "osteoarcheology"), his book merits serious attention for the theoretical positions he takes on the relatedness of Neandertals to anatomically modern *Homo sapiens* and the phylogenetic affinity of humans to orangutans as inferred from both fossil evidence and molecular data and for his analysis of Huxley's understanding of the relatedness of humans and apes and reaction to Darwin's views on the origin of species and natural selection. Here are exciting and provocative issues that will stimulate discussion among both anthropologists and students who have taken courses in human evolution. *What the Bones Tell Us* and *Bones* may be regarded as valuable companion sources that will equip any reader with up-to-date descriptions of how science can be applied to police work and the legal aspects of human identification as well as how science continues to create new theories about human origins and evolution.

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The Wages of Contact

The Native Population of the Americas in 1492. WILLIAM M. DENEVAN, Ed. Second edition. University of Wisconsin Press, Madison, 1992. xliv, 353 pp., illus. $45; paper, $14.95.

Disease and Demography in the Americas. JOHN W. VERANO and DOUGLAS H. UBELAKER, Eds. Smithsonian Institution Press, Washington, DC, 1992. x, 294 pp., illus. $62. From a symposium, Washington, DC, Nov. 1989.

Disease, Depopulation, and Culture Change in Northwestern New Spain, 1518–1764. DANIEL T. REFF. University of Utah Press, Salt Lake City, 1991. ix, 330 pp., illus. $30.

The Columbian quincentenary observance has inspired a number of research efforts to determine the effects of the encounter between the Old and the New Worlds. Some of the most important questions that have guided researchers on this issue for much of the 20th century are: How many Native Americans were inhabiting the New World in 1492? How did the coming of Old World peoples with their new diseases alter New World populations? and Were the Americas a disease-free paradise prior to contact? The three volumes considered in this review provide some of the most current thinking on these problems.

As William Denevan noted in the preface to the first edition (1976) of *The Native*