

## Book Review

A DIGITAL RADIOGRAPHIC ATLAS OF GREAT APES SKULL AND DENTITION. By Christopher Dean Bernard Wood. Digital Archives of Human Paleobiology, Volume 3.L. Bondioli and R. Macchiarelli, series editors. Milan, Italy: ADS Solutions. 2003. ISBN 88-87563-02-0. \$0.00 (CD-ROM).

Between 1981–1984, Christopher Dean and Bernard Wood published a series of studies of the cranial base of fossil and extant hominids. These studies utilized linear measurements taken from radiographs. The work under review presents an archive of these original data, thus presenting researchers with a valuable resource for future work and, indeed, teaching.

While the original studies included data on fossil hominins, this CD-ROM presents original data and standardized radiographic images of 255 juvenile and adult skulls of three extant hominoid taxa: orangutan (42 juveniles, 17 adult males, and 13 adult females), chimpanzee (67 juveniles, 17 adult males, and 13 adult females), and gorilla (56 juveniles, 15 adult males, and 15 adult females). The radiographs are presented as high-resolution JPEG files (over  $2,000 \times 2,000$  pixels), and full background data, along with the original measurements used in the studies, are provided as an Excel<sup>™</sup> spreadsheet. Also included are over 14 pages of background, landmark definitions, and further information in the form of HTML files—in short, everything one would need to use the radiographs for future study or teaching.

In recent years, the development of landmark-based morphometric techniques has led to a “revolution” in how physical anthropologists quantify size and shape differences between groups. Techniques such as “thin-plate spline analysis,” “relative

warp analysis,” and “Euclidian distance matrix analysis” (EDMA) have become regular features of research articles within the pages of this Journal, as they allow exhaustive archiving of shape, rigorous testing of shape differences, and visually appealing depictions of form and form change (though there remains some controversy within the community as to the relative utility of various techniques). In a very short space of time, I was able to conduct a brief analysis of sexual dimorphism in *Gorilla* by capturing landmark data from the radiographs and analyzing them, using the free software available at the SUNY Stony Brook morphometrics site (<http://life.bio.sunysb.edu/morph/>). Individuals teaching courses on morphometrics (geometric or otherwise) could very easily have their students engage in pedagogically useful analyses using these data. Indeed, freely available datasets (such as this one) offer realistic “real-world” frameworks under which to test and compare geometric morphometric methods (such as the famous Fisher *Iris* data for many multivariate morphometric techniques).

It would be difficult to criticize this publication, given that it offers important data at zero cost. Addition of modern human data would have made a valuable resource even better, but this is a minor quibble. Dean and Wood are to be congratulated for making their data available, and the anthropological community can only hope that others follow their lead; either by publishing a CD-ROM (as here) or making original radiographic images available online.

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DOI 10.1002/ajpa.20201

Published online in Wiley InterScience (www.interscience.wiley.com).