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BOOK REVIEW

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Review of: *Human and Nonhuman Bone Identification: A Color Atlas*

REFERENCE: France DL. Human and nonhuman bone identification: a color atlas. Boca Raton, FL: CRC Press, 2009, 734 pp.

Distinguishing human from nonhuman bone is a fundamental part of establishing the medicolegal significance of a set of skeletal remains and forensic anthropologists are commonly requested to make such a determination. *Human and Nonhuman Bone Identification: A Color Atlas*, by Diane L. France, provides a much-needed reference with many excellent color images for comparative skeletal anatomy focused on human bones and nonhuman bones that are most likely to be encountered in a medicolegal investigation. As stated in the preface, "This book is intended to give law enforcement, medicolegal investigators, forensic anthropologists, and even the general public an atlas with photographs and other information necessary for bone identification."

The aim of the book is to provide comparisons of gross skeletal anatomy only and does not extend to microscopic differences. The book is divided into three major sections, including an introduction to osteology, a comparative atlas organized by bone, and a comparative atlas organized by species. The introduction to osteology includes basic background information on bone composition, bone morphology, anatomical terminology, basic anatomical comparisons between human and nonhuman skeletons, and characteristics related to growth and development. Most of the images throughout the book are from adults, making this last section particularly important for a basic understanding of subadult morphology. The introduction is geared toward anyone without extensive osteological training and is important for understanding the terminology used throughout the rest of the book.

The bulk of the 734 pages are dedicated to a comparative atlas organized by bone, including sections dedicated to the cranium, mandible, dentition, scapula, humerus, radius, ulna, metacarpals and forelimbs, vertebrae, pelvic girdle, femur, tibia, fibula, metatarsals, and hindlimbs. The major mammalian Orders include: Artiodactyla, Perissodactyla, Carnivora, Rodentia (rabbits are included here, but should be in Order Lagomorpha), Xenarthra, Chiroptera, Marsupialia, and marine mammals (although the seal, as the only representative, could have been included in Carnivora), usually with multiple species representing each of these groups. Each section begins with a brief description of the important distinguishing features for a particular bone or group of bones between human and nonhuman skeletons. This is followed by numerous views of the bone(s) for each species, with important features labeled, indications about expected variability in that element, and cautionary notes about possible sources of confusion between human and nonhuman bones. In addition to comparing human and nonhuman bone, this section also provides useful information for comparing closely related species, with brief labels that point out important differences between them. Best of all, the edges of the pages include a visual index with small images of the bones, so it is extremely easy to find the right section without having to flip back to the Table of Contents.

The third section of the book includes images of the major skeletal elements organized by species (again with handy index information along the edge of the pages). Fewer views and elements are presented here than in the second section, and although many are repeat images, it is useful to be able to quickly look at the major bones for a given species in one place.

In general, the amount of text is just right. The most important information is conveyed in a concise way that is useful for the novice and expert alike. The images of the bones are excellent, although in some cases the scales are almost out of the field of view. The labeling of views is a bit inconsistent, with some pages identifying the view of every bone, and other pages with little or no labeling. These are very minor issues and do not detract from the overall quality of the book.

This book is an essential resource for professionals involved in medicolegal investigation who routinely deal with distinguishing human and nonhuman bone. It also has applications beyond forensic anthropology, including archaeology and comparative skeletal anatomy and should be a welcome addition to many classroom libraries.

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