H28 Introducing FOROST: An International Free-Access Visual Forensic Osteology and Osteopathology Metabase

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After attending this presentation, attendees will learn about a ***For***ensic ***Ost***eological (FOROST) (www.forost.org), image database of osseous trauma and pathologies.

This presentation will impact the forensic science community by presenting an educational tool that will assist forensic anthropologists with interpretations of trauma and pathologies.

DNA has revolutionized the way forensic scientists determine sex and identity, but detecting method, manner, and cause of death from bones remains a largely observational endeavor. Interpretation of bone modification and pathology is a visual and experiential skill, relying heavily on the background of the forensic osteologist. Each case is different, and more examples from which to draw comparisons mean better-equipped osteologists. Traditionally, such background is built first through books and "hands on" experience in a single collection, then gradually augmented through contact with multiple collections and cases. The FOROST initiative adds to this set of background material a large-scale comparative database of skeletal lesions that can be accessed from anywhere in the world.

The practice of electronically serving visual osteological information is nearly as old as the public Internet itself. Phil Walker and Ed Hagen developed the first professionally viable osteology web interface, a human dentition visualizer, at the University of California, Santa Barbara, in 1991 and 1992.[1] As digital cameras became viable in the late 1990s, the capacity for the Internet to open remote osteology collections to distant researchers was recognized, and a publication outlining the basic framework for a public visual osteology database was one of the outcomes of a 2001 collaboration between the Human Evolution Research Center, University of California, Berkeley (HERC-UCB) and Universidad Nacional Autonoma de México (UNAM).[2] HERC-UCB continued development of data systems for public databases of fossils and hominid casts.[3-7] Reinitiated collaboration between HERC-UCB, UNAM, and California State University, East Bay (CSUEB) in 2006 saw the application of the HERC-UCB-developed data architecture models to modern human collections housed in UNAM Faculty of Medicine. Each of the institutions (UCB & UNAM) house more than the one skeletal collection, and the idea for building a meta-database (metabase) to query multiple skeletal collections quickly emerged. The FOROST initiative is the realization of this idea, and a partnership quickly grew from the founding institutions to include 15 museums and universities from 6 countries. The FOROST metabase now serves multiple high-resolution images from 260 specimens with distinctive bony traumas and pathologies.

FOROST already has more images of skeletal trauma and pathology than any printed volume, in significantly higher resolution, and all images can be accessed freely. This has far-reaching implications, because along with making access to forensic osteology images easier for professionals and students in the developed world, FOROST provides access to many that would otherwise have no connection to reference imagery. Many images of specimens on FOROST are of research quality and many are accompanied by known medical histories or the known mechanism of trauma. FOROST-linked specimens and their images thus have the potential to be utilized as the basis for illustration, description, or other published work. This means that specimens served on FOROST can be cited, and the partner institutions and individuals who curate, describe, and photograph the material served in the metabase retain citable credit and copyright for the information and images provided.

The FOROST initiative goal is to develop a globally accessible metabase serving records and images of forensic osteology specimens that can be used as a reference for forensics workers worldwide. This introduction will provide guidance in both use and individual or institutional participation in FOROST.

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