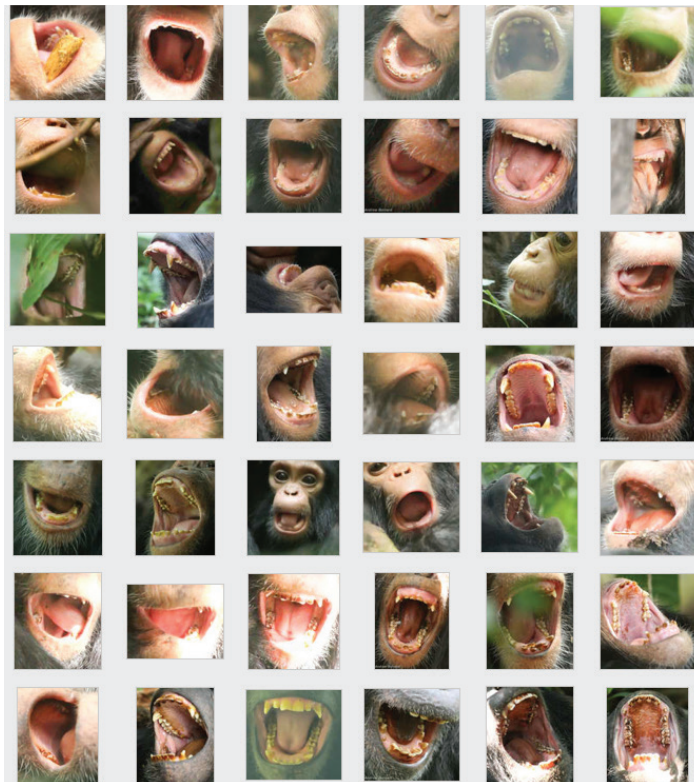


Department of Human Evolutionary Biology

Colloquium Series



How Teeth Shed Light On Our Evolutionary Past



Dr. Tanya M. Smith, Associate Professor
Dept. of Human Evolutionary Biology, Harvard University

Teeth are the most abundant elements in primate fossil assemblages, are under a strong degree of genetic control, and contain the most precise developmental records of any physiological system in the body. Tooth microstructure, a primary focus of my research, is critically important for understanding development and evolution as incremental lines permanently record each day of enamel and dentine formation, remaining unchanged for millions of years. These tiny growth lines can be used to accurately determine age at death in juvenile dentitions, as well as the precise timing of childhood diet transitions, physiological stress (including birth), and environmental variation. Furthermore, dental development is correlated with primate life history, or the overall pace of growth and reproduction. This talk will illustrate how paleoanthropology, oral biology, and elemental chemistry have helped to revise our understanding of dental development in our closest living relative, the chimpanzee, demonstrate that living and fossil *Homo sapiens* have a prolonged period of dental development relative to Neanderthals and earlier hominins, and document the timing of diet transitions during infancy in living and fossil primates.

Thursday, October 23rd
12:00 p.m. - 1:00 p.m.

Bio Labs Lecture Hall (Rm 1080)
16 Divinity Avenue
Cambridge, MA 02138