

## Center for Evolution & Medicine Thursday Seminar

Co-Sponsored by the ASU Institute of Human Origins >>

Thursday, February 5, 2015

SHESC 254 // 3:30pm-5:00pm // Free and open to the public



### **B Holly Smith**

Associate Research Scientist  
Museum of Anthropological  
Archaeology  
University of Michigan.

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### **What can teeth tell us about the evolution of life histories?**

All organisms face the challenge of allocating resources to growth, maintenance and reproduction. Human life history is constructed in some unusual ways that become evident when we compare ourselves to primates and other mammals, combining moderate size with large brains, slow growth and extended juvenile dependence, but a brief duration of nursing infants and the cessation of reproduction before senescence. If we could know the evolutionary history of our life cycle, we might test theories or scenarios by, at minimum, observing the order in which particular elements arose. But how much can we pull out of fossil teeth and bones about dynamic elements of the life cycle and energy use? Fortunately, humans, and mammals in general, develop in recognizable stages with patterned events in maturation of teeth and bone and tooth development is tightly integrated into the fabric of growth and development. This talk will explore, using examples across primates and other mammals, how tooth development can give us insight into the human fossil record, with a detailed look at weaning, tooth eruption and raising an offspring to independence—one of the principal ways humans differ from our closest relatives.

## The ASU Center for Evolution & Medicine

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