

results. These errors and omissions seem self-indulgent at best, but at worst they provide an inaccurate understanding of this important behavior.

The book concludes with a discussion of how chimpanzee studies inform our understanding of human evolution. I found this chapter to be unnecessary not because Stanford makes uninteresting points but because the value of this book lies in the depth and breadth of our current knowledge of chimpanzees presented and not in a comparison between chimpanzees and humans. Despite these issues, this is a valuable addition to the library of any biological anthropologist. It is well suited for a general audience but could easily be used in an undergraduate course on primate behavior. Personally, I can envision using this book as a quick reference to access recent studies on chimpanzee behavior and am excited to have it in my collection.

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The Tales Teeth Tell: Development, Evolution, Behavior. Tanya M. Smith.
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\$29.95, cloth. ISBN 9780262038713.

Teeth are an amazing source of information regarding our evolution, development, health, and behavior. In her eloquently written and brilliantly illustrated *The Tales Teeth Tell*, Tanya Smith tells a story about teeth that is appealing to scientists and laypeople alike. Combining personal narrative and an inclusive discussion of scientific method and theory makes the book an excellent source of information regarding how our teeth reflect our biology. The central argument for the book is that teeth provide information about our development, evolution, and behavior as a species. *The Tales Teeth Tell* effectively presents specialized scientific data and theory to a broad audience by combining personal stories, current and past research, and competing hypotheses and theories.

The author begins with a brief introduction, focusing on the importance of teeth in reconstructing the story of human evolution from a unique perspective. The following section focuses on dental development, primarily through microscopy, and highlights the importance of newly developed methods in three-dimensional imaging. Chapters 1 and 2 effectively convey the importance of dental microstructure and biological rhythms to improve our understanding of developmental processes, and an inclusive discussion of tooth growth and eruption that appeals to scientists, dentists, and the general public. Using dental microstructure to elucidate important life events, such as birth and parturition, is of particular interest to those interested in human reproduction. The section concludes with a discussion of dental pathology, stress,

occlusion, and crowding. This includes several studies regarding the effects of disease and stress on dental development, the complexity of dental caries and tooth loss, and evolutionary perspectives on malocclusion and crowding. This first section provides a good baseline of knowledge for the reader to navigate the sections to follow involving evolution and behavior.

The next section discusses dental evolution from the earliest vertebrates to modern humans and nonhuman primates. The discussions of our deep evolutionary history, and the multiple theories for early tooth evolution, are presented well. The first chapter of the section tells the story of dental innovations in our evolution as vertebrates, mammals, and primates. The section also includes a summary of human evolution from our earliest hominin ancestors to *Homo sapiens*. A critical analysis of current debates and imitations regarding the fossil record is a strength of the book as a whole. The emphasis on using teeth to assess important topics such as diet and tool use is of particular interest. The final chapter of the evolution section focuses on human life history and the evolution of growth and development. This chapter effectively connects dental development with other aspects of life history, such as weaning, first reproduction, brain development, and lifespan. This section is an excellent overview of past and current dental research in human evolution.

The final section of the book focuses on what can be inferred about behavior from teeth. It begins with a discussion of dietary patterns in the past, as well as modern trends such as the “Paleo Diet,” and it is both timely and informative. The section also includes an in-depth discussion of the use of chemical analysis to reconstruct dietary patterns and health in the past and present. The use of barium to better understand nursing practices is particularly interesting. The author highlights the use of measuring barium levels in tooth enamel to examine an important anthropological and public health issue: when does weaning occur, and how does this affect the child’s health? Associating the weaning period, indicated by a drop in barium levels, with developmental disruptions is an innovative and interesting approach. The section also discusses theories regarding the use of teeth as tools, tooth reduction, and reconstructing ancient migrations. The use of stable isotope analysis and aDNA in teeth to reconstruct migrations in the past is succinct and inclusive. A limitation is the modest discussion of dental metric and nonmetric data in this area of research. The use of dental data to examine population structures could benefit from more discussion. The section ends with a discussion of intentional behaviors, ranging from ancient dentistry and hygiene practices to using dental modification as a symbol of status. The increasing popularity of body modification makes this section a broadly appealing perspective on human biology and behavior.

The author concludes with a discussion of the continual evolution of our species, and the use of data from teeth to mark biological and cultural processes. The concluding chapter reflects on development, evolution, and behavior, and it provides a glimpse into future clinical and scientific directions. This work is an excellent source of information on how teeth inform us about our biology and culture as humans, as

well as looking at these phenomena in our evolutionary past and among our living primate relatives. I applaud Smith for presenting such specialized material in a manner that is of broader interest to scientists, medical practitioners, or anyone interested in the tales teeth tell.

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