

PREFACE

In the final scene of *Annie Hall* (1977) Woody Allen explains love with an old joke: "This guy goes to a psychiatrist and says, 'Doc, my brother's crazy. He thinks he's a chicken.' And the doctor says, 'Well, why don't you turn him in?' The guy says, 'I would, but I need the eggs.'" That is how I see this book. There are many excellent works in the literature on dental functional morphology, mammalian evolution, and mammalian tooth form today, but few have brought all of these things together. And more than one of my colleagues has told me that it would be crazy to try to write a book so broad in scope. Nevertheless, an integrated understanding of odontology is necessary if we are to fully appreciate the adaptive radiation of mammalian tooth form. In this world of increasingly specialized, focused study it can be difficult to see the forest for the trees. The principal goal of this book is to offer a broad perspective on mammal teeth.

Of necessity I take a jack-of-all-trades approach. Many works in the literature offer more detail on the facts and concepts presented here, and for those interested in delving further, there are citations throughout the book to get one started. No one can be a specialist on all of the topics covered, and I have spent the better part of the last two decades focusing on one order of mammals, Primates. That said, however, I hope that specialists on other taxa will understand and forgive any naiveté or inadvertent imbalances in coverage.

Lewis Black (2006) suggested that writing a book is like having homework all the time. That certainly was the case with this book, and I hope my family, friends, and students will forgive the hours lost. Ahab had his whale, and I had

this book. To Maya, Rachel, and Diane, thanks for putting up with me.

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I also thank Vincent Burke, at the Johns Hopkins University Press, for his advice and encouragement as I wrote this book, Edwina Rodgers and Jennifer Malat for their help during the submission process, Joanne Allen for her outstanding copyediting, and Deborah Bors for her efforts during production.

Finally, to my colleagues in anthropology who might ask why I would write a book on mammal teeth, I quote Thomas Wingate Todd (1918:23), who wrote, "That which fires the imagination, which encourages us to follow all the devious paths of mammalian tooth development in the study we are undertaking, is the evolution of ourselves."

COMMENTS ABOUT ILLUSTRATIONS

The illustrations in this book were inspired by a number of sources, often drawn on in combination. These include pho-

tographs of casts or original specimens on display or in collections at the American Museum of Natural History, New York; the Florida Museum of Natural History, Gainesville; the IZIKO National Museum of South Africa, Cape Town; the Letaba Elephant Hall Museum, Kruger National Park, South Africa; the North American Museum of Ancient Life, Lehi, UT; the Oklahoma Museum of Natural History, Norman; the Royal Tyrrell Museum, Drumheller, AB; the University of Arkansas Museum Collections, Fayetteville; the University of the Witwatersrand Bernard Price Institute and Institute for Human Evolution, Johannesburg; and the U.S. National Museum of Natural History, Washington, DC).

Other sources of photographs used to generate sketches include the Web sites of the University of Michigan's Museum of Zoology (Animal Diversity Web) and the Siberian Zoological Museum of the Russian Academy of Sciences, as well as the following references: S. Anderson et al. 1983; M. Archer 1984; Bonis et al. 1994; Colbert 1942; D. G. Elliot 1904; Fox and Scott 2005; Gingerich et al. 1994; Goin et al. 2009; Hart et al. 2004; Hooker et al. 2008; Iack-Ximenes, Vivo, and Percequillo 2005; P. D. Jenkins et al. 2004; Kwiecinski and Griffiths 1999; Lancaster and Kalko 1996; Megirian et al. 2004; Pascual et al. 1992; Raven and Gregory 1946; Rensberger 2000b; Rogers and Rogers 1992; Ross 1995; G. G. Simpson 1967; Thenius 1989; Uno and Kimura 2004; Watabe, Tsubamoto, and Tsogtbaatar 2007; and Wible et al. 2005.

Many of the sketches of dentitions in this book are drawn in a style inspired by Thenius (1989). Cusp tips are indicated by dots, crests by solid lines, and fissures or steep edges by dashed lines. These stylized drawings are meant to illustrate general dental morphology for the taxa described in the text. Some are idealized composites based on more than one individual.