search for loved ones in an airport. In chapter 14 on taste, there is an equally engaging discussion of the genetic basis of how taste sensitivity varies in the population, with some of us being “supertasters,” and therefore highly sensitive to certain trace chemicals in food, while the rest of us are “nontasters” and thus never quite certain what all the fuss is about.

The single greatest strength of this textbook lies in its accessibility to a wide audience of readers interested in an introduction to the study of human sensory systems. This had been accomplished by (in addition to the superbly crafted color figures already mentioned) largely stripping the text of all scholarly references. When experimental results are described in order to establish a point, only very generic tones and descriptions are given. This means that in order to use this textbook for an upper-level course or a small-enrollment course in which research is the focus, an instructor will want to supplement it with a more rigorous book or with readings from primary sources.

The book is also surprisingly short for a treatment of all five senses, coming in at just over 400 pages. Whether this represents strength or weakness will depend on your perspective. Students and many professors will welcome the brevity because it contributes to the overall accessibility of the material, but there will also be research-oriented teachers who are disappointed that their favorite topics are not covered. Speaking personally, I was surprised to find that visual object recognition, visual imagery, and the scientific study of consciousness were almost entirely absent in the treatment. But I can also imagine the hard choices that had to be made to keep the book within its page limits. When it comes to the so-called minor senses of touch, smell, and taste, I think it is safe to say that this is the most up-to-date introduction currently available. No competing textbook comes close to being as current or as well structured in its presentation of these sensory systems and their function.

I expect that students will enjoy the companion Web site to this text (www.sinauer.com/wolfe/) and that instructors will welcome the accompanying Instructor’s Resource CD (ISBN 0-87893-939-3), which includes an Instructor’s Manual to help in course development and a Test Bank to aid in student assessment.

James T. Enns
Department of Psychology
University of British Columbia
Vancouver Canada V6T 1Z4

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Vertebrate Paleontology, the study of the fossil record of vertebrates, is the most informative means of establishing the patterns and processes of evolution over time spans encompassing more than 500 million years. Because of their readily preserved skeletons, whose general homology can be traced throughout their history from jawless fish to humans, it is possible to reconstruct not only the general body form, but also many aspects of their ways of life, modes of reproduction and aspects of their physiology. Amniote Paleobiology illustrates a wide range of approaches to the study of vertebrate fossils, concentrating on amniotes—the large assemblage including modern reptiles, birds, and mammals, as well as dinosaurs and the antecedents of mammals.

The articles included in this book were assembled to honor James Hopson on his retirement, after 35 years of highly productive teaching and research in the Department of Organismal Biology and Anatomy at the University of Chicago. This volume, including contributions from 23 authors—consisting of former students and colleagues—was edited by three of Jim’s graduate students and a post-doctoral fellow who now hold senior teaching and research positions in major universities and museums.

The editors have provided a very informative introduction that outlines major aspects of paleontological research that are grouped as four sections of the text. ‘New Fossils and Phylogenies’ emphasizes the underlying sources of data for paleontological research—the discovery, preparation, and description of fossils (based on a doubling of known species over the past 20 years), as well as analyses of how
they are related to one another. The coverage is very broad, including descriptions of the jaw of an enigmatic early amphibian, partial skeletons of dinosaurs, the skull of an ancestral mammal-like reptile, the postcranial skeleton of a tritylodontid cynodont, and the phylogeny of armadillos. ‘Large-Scale Evolutionary Patterns,’ for which vertebrates provide the most dramatic records, are exemplified by the general phenomenon of size increase achieved by most dinosaur lineages, the elongation of the neck in sauropods, and changes in the basicranium and ear region of early mammals. ‘Functional Morphology’ consists of studies of the shoulder girdle and forelimb in multituberculates and tooth orientation and condylar translation in primates and ungulate mammals. The chapters in ‘Ontogeny and Evolution’ deal with neotenic aspects of the basicranium of plesiosaurs, the possibility of correlating the ontogeny of limb ossification of cynodonts with the evolution of mammalian endothermy, and differentiating ontogenetic changes from phylogenetically significant characters in *Lystrosaurus*.

Of particular interest are those chapters most closely related to Jim’s own research on individual episodes in the transition between primitive synapsids and the appearance of therian mammals. These include description of a new biarmosuchian from South Africa, analysis of the taxonomic position of *Kayentatherium* based on its postcranial skeleton, evolution of parasagittal posture among Mesozoic mammals, and changes in the braincase and hearing of early mammals.

Part five consists of a short biography of Dr Hopson that documents his long and continually expanding research career in diverse areas of vertebrate paleontology, concentrating on various aspects of the relationships and functional anatomy of mammal-like reptiles (nonmammalian synapsids), the ancestry of mammals, and Mesozoic mammals. Also cited are numerous studies of dinosaurs, several focusing on the question of their mode of thermoregulation, but also one each on pseudo-toothed birds and an ostracoderm.

Overall, the contributions to this book underline the great significance of Dr Hopson’s professional career, not only in terms of his own research, but especially the great number of undergraduates, graduate students, and postdoctoral fellows he has trained, and the significance of their continuing research and training of future generations of paleontologists and evolutionary biologists.

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**Zoolexicon. Compiled by Warren Garst.**


This book purports to be “a comprehensive reference of animal terms and words across the English speaking world.” Such an all-inclusive claim immediately presented the challenge of finding a term the compiler had overlooked. I took the challenge and searched for the Australian word “bunyip.” It wasn’t in the main glossary but my gloat was short-lived when I found an entry for bunyips in Section B of the appendix “Cryptozootic Animals.” (No, I’m not going to tell you what a bunyip is, you have to buy the book to find that out!) Although after arduous search, I did succeed eventually in finding minor faults, omissions were conspicuous by their rarity. The book is, indeed, both comprehensive and inclusive. In fact, it goes beyond its claim and includes terms and common names from languages other than English. The volume was obviously carefully checked and proofed as my editorial eye discovered only one error, and that in the preface where reference was made to “taxonomy systems” rather than to “taxonomic systems.”

One usually considers compilations as reference material, and it is seldom that either telephone guides or dictionaries are used for pleasure reading. The *Zoolexicon* is an exception, and I found myself engrossed in reading page after page, particularly those of the topical appendices at the end of the book.

The main body of the book is an alphabetically arranged glossary of terms relating to animals (there were rare lapses of words in incorrect alphabetical order). This glossary is exhaustive and its entries from *aardvark* to *zyzzva* (I’m not going to tell you what a zyzzyva is either) encompasses 351 pages.