Carolina Comparative Mammalian Organ Dissection Guide

This text focuses on the principles and methods of using growth layers formed in teeth and bones of mammals to make a judgement on essential traits of the animal's life history. In nearly all mammalian species, including man, the age of individuals can be determined from the number of growth layers and, at least in some of them, it is possible to estimate the season of an animal's birth and death, age of sexual maturation, periodicity of reproduction, certain feeding habits and other aspects of the individual's biology. It is also possible, from tooth-enamel analysis, to assess doses of radiation accumulated by animals and human beings during their lifetime.;This book is intended for zoologists, wild-game biologists and zoo archaeologists, but some of the sections could also be of interest for anthropologists, radioecologists and conservation biologists.

This work provides an illustrated visualization of canine dissection. It introduces basic mammalian anatomy, and the specific anatomy of the dog, as well as presenting up-to-date anatomical terms from Nomina Anatomica Veterinaria - aimed at fostering use of the latest approved nomenclature.

Indexes the world's zoological and animal science literature, covering all research from biochemistry to veterinary medicine. The database provides a collection of references from over 4,500 international serial publications, plus books, meetings, reviews and other no- serial literature from over 100 countries. It is the oldest continuing database of animal biology, indexing literature published from 1864 to the present. Zoological Record has long been recognized as the "unofficial register" for taxonomy and systematics, but other topics in animal biology are also covered.

Since the appearance of the second edition of Sydney A. Asdell's widely used Patterns of Mammalian Reproduction in 1964, the field of reproductive physiology has expanded dramatically. Accordingly, this revision adopts a different structure from previous editions, substituting empirical delineations for physiological interpretations. With the emphases now on a presentation of the published facts of mammalian reproduction, it provides a thorough compilation of what is known about the basic reproductive biology of each of the 4300 mammalian species.To gather information, the authors examined more than 20,000 publications, dating up to 1992. They used primary sources as much as possible, supplementing them with English translations of Russian, Finnish, Chinese, and Japanese journals. The data are presented in taxonomic order. Each familial account summarizes the pattern of reproduction for the family and provides lists of citations arranged by topic of the literature on the endocrinology, reproductive anatomy, and reproductive physiology of the family. Following each account is a tabular listing of species-specific data for neonatal mass and size, weaning mass and size, litter size, age at sexual maturity, estrous cycle length, gestation length, lactation length, number of litters per year, and seasonality of reproduction. For each of these reproductive variables, the range of data gleaned from the literature is given, together with the source of each value listed.Virginia Hayssen is Assistant Professor of Biology at Smith College. Ari Van Tienhoven is Professor of Animal Physiology, Emeritus, at Cornell University. Ans Van Tienhoven assisted in the compilation of data for the book.

Comparative Cardiovascular Dynamics of Mammals offers never-before-published data on the structure and function of the circulatory systems of the different mammalian species. This text explores classic allometry, dimensional analysis, and modern hemodynamics to establish similarity principles that provide a necessary and important step in understanding the natural common design and functional features of the cardiovascular systems of different mammals. Fluid and blood vessel mechanics, pulse transmission characteristics, cardiac energetics and mechanics, as well as heart-arterial system interaction are included in this essential reference. The sensitivity of parameters and similarity of principles in the diagnosis of cardiovascular diseases are also addressed. This book also describes the natural processes involved in the functional development of the mammalian cardiovascular system. By using modern methods to present recent findings on the similarities and differences of the mammalian cardiovascular system, the author provides an easily understood approach to this dynamic field of study.

Zoologist provides a quantitative baseline for comparative zoology and demonstrates the value of allometric correlations as an analytical tool. New Introduction. References.

Dermal and Ocular Toxicology: Fundamentals and Methods is a procedurally-oriented volume of detailed methods and practical examples discussing the dermal and ocular aspects of toxicology. The book is divided into a dermal section and an ocular section. Each section begins with a chapter on the anatomy and physiology of each organ system and then progresses to more specialized chapters discussing such topics as the toxicological pathology of each system, state-of-the-art in vitro and in vivo evaluatory procedures, statistical considerations for test design and data interpretation, and the utilization of test findings. Test methods are provided for acute dermal exposure effects, dermal hypersensitivity and photoallergy assessment, dermal and ocular 0.pharmacokinetics, skin flap and skin grafting techniques, and in vitro alternative methods. This book can be used as an instructional text or as a sourcebook for practicing toxicologists, pharmacologists, industrial hygienists, occupational health professionals, and graduate students.

Marine mammals are among the most fascinating and most watched of Earth's many animal species, particularly for their many adaptations for life in and around the water and their unique methods of communication. This comprehensive guide to the order is for experts and enthusiasts alike.

This guide contains listings for the most popular professions, covering over 13,000 programs in advertising, allied health, business, dentistry, education, health administration, human resources development, law, medicine, nursing, optometry, pharmacy, podiatry, public health, social work, veterinary medicine, and more.

This is a volume of collected papers published to honor the career of Clayton E. Ray, now Curator Emeritus in the Department of Paleobiology, National Museum of Natural History, Smithsonian Institution, and Curator of Late Cenozoic

Mammals and of Fossil Marine Mammals in the same department for more than 30 years before his retirement in 1994. The volume includes a preface, a biography and bibliography of Clayton E. Ray, and 19 papers devoted principally to Pleistocene mammals and to fossil marine mammals. Gary Morgan describes late Pleistocene mammalian faunas from several sites in southernmost Florida and discusses the Neotropical influence in Florida's Pleistocene faunas. Richard H. Tedford describes the basicranium of the Pleistocene giant wombat Phascolonus gigas Owen and discusses its significance in marsupial phylogenetic reconstruction. Gerardo De Iuliis and A. Gordon Edmund describe Vassallia maxima Castellanos, the only pre-Pleistocene pampathere known in which a skull and mandible are associated with osteoderms; the range of osteoderm variation in one associated individual allows them to synonymize other taxa that had been based on osteoderm differences. Paul W. Parmalee and Russell Wm. Graham report additional records of the giant beaver, Castoroides, from the mid-South. Frederick Grady, Joaquin Arroyo-Cabrales, and E. Ray Garton report the northernmost known occurrence of vampire bats in the Pleistocene of eastern North America. H. Gregory McDonald reports the second known occurrence of the badger Taxidea taxus in the Pleistocene of Kentucky and discusses the paleoecological implications of the occurrence. Jerry N. McDonald and George E. Lammers describe Bison antiquus from Ontario and discuss the evolution of bison in the Holocene of North America. Daryl P. Domning presents a new analysis and interpretation of the terrestrial posture in desmostylians. Thomas A. Demere and Annalisa Berta describe new material and present a phylogenetic analysis of the Miocene pinniped Desmatophoca oregonensis from Oregon. Irina A. Koretsky and Dan Grigorescu describe and evaluate the systematic position of the fossil monk seal Pontophoca sarmatica from the Miocene of eastern Europe. Irina A. Koretsky and Peter Holec describe a new, primitive, phocid pinniped from the early middle Miocene of Slovakia and discuss its bearing on the phylogeny and classification of pinnipeds. Irina A. Koretsky and Albert E. Sanders report remains of the oldest known phocid pinniped from the late Oligocene of South Carolina. R. Ewan Fordyce describes and discusses a bizarre archaic Oligocene dolphin from the eastern North Pacific, on which he bases a new species, genus, and subfamily. Christian de Muizon, Daryl P. Domning, and Darlene R. Ketten describe and discuss the paleobiology and behavior of an unusual walrus-convergent delphinoid cetacean from the early Pliocene of Peru. Susan D. Dawson and Michael D. Gottfried report paleopathologic conditions in a Miocene odontocete cetacean. Albert E. Sanders and Lawrence G. Barnes contribute two papers, both describing and analyzing new, primitive, cetotheriid mysticete cetaceans from the late Oligocene of South Carolina. James W. Westgate and Frank C. Whitmore, Jr., describe a new species of bowhead whale from the Pliocene Yorktown Formation in Virginia. James G. Mead and Rosemary G. Dagit present an account of the search for the 1880s manuscript of J.A. Allen's unpublished monograph on the mammalian orders Cete and Sirenia; the manuscript was not found but the 12

plates that were prepared for it are published herein.

Olfaction is involved intimately in two of the most basic functions of animals: food intake and reproduction. There are also many other involvements of olfaction in animal behavior, not the least being communication. The authors of this volume have collected and evaluated the comparative anatomy, electron microscopy, electrophysiology, genetics, psychology, chemistry, and biophysics of the olfactory system and then indicated their roles in animal behavior. The importance of olfaction in the everyday life of an animal is just being realized fully and recent years have brought forth a great surge of research in this area. The diverse dis ciplines that contribute to our understanding of olfaction make the development of this volume rewarding for those working in this field. The olfactory system's very high sensitivity and its great power of molecular discrimination interests many chemists and physicists. Data from the study of both vertebrates and insects show that only one molecule of certain odors is necessary to stimulate a single olfactory receptor! The underlying physicochemical events are not yet understood. Also, many mammals can discriminate quickly the difference between two odors of similar structure. Thus the olfactory epithelium and the more centrally located neural components present the ultimate in chemical detection and analysis by a biological system. The principles involved are probably common to those of many other organs.

It is unlikely that the established genomes of present day organisms remain stable forever. It is conceivable that foreign DNA can gain entry into individual cells of an organism. Foreign DNA is defined as genetic material that derives from another organism of the same or a different species. The natural environment is heavily "contaminated" with such foreign DNA, and mammals, like other organisms, are frequently exposed to foreign DNA in their environment, notably by ingesting their daily food supply. By necessity, the gastrointestinal tract also of all mammalian organisms is constantly in contact with foreign DNA. So far, next to nothing is known about defense mechanisms in mammals against the intrusion of foreign DNA. At least in cells growing in culture, the uptake and genomic fixation by integration of foreign DNA can readily be demonstrated. For a number of reasons, the author has considered it important to investigate the phenomena and mechanisms involved in the interaction of foreign DNA with mammalian cells and organisms in detail.

Archosaurs, an important reptile group that includes today's crocodiles and birds, arose during the Triassic in the aftermath of the greatest mass extinction of all time. In the last 20 years, our understanding of the early evolution of the group has improved substantially with the discovery of new fossils and species of early archosaurs and their closest relatives, a better understanding of the relationships of these animals, and new insights into their palaeobiology. In order to synthesize these new data, researchers of early archosaurs from around the world met at the first symposium of early archosaur evolution at the IV Congreso Latinoamericano de Paleontología de Vertebrados (September 2011) in San Juan, Argentina. This symposium facilitated collaboration and strove to paint a better understanding of these extraordinary animals. The resultant body of work is a state-of-the-art examination of early archosaur groups and their close relatives

including historical, anatomical, biogeographical, evolutionary and palaeobiological data. This contribution furthers our knowledge of the anatomy, relationships, and palaeobiology of species-level taxa as well as more global patterns of archosaur evolution during the Triassic -- P. 4 of cover.

The careful explanation of each step of the dissection, helpful diagrams and illustrations, and detailed discussion of the structure and function of each system in Anatomy and Dissection of the Rat, Third Edition, optimize the educational value of the dissection process. These laboratory exercises are available as a bound set for the first time ever; They’re still offered separately, as well. This popular series, which includes Anatomy and Dissection of the Frog and Anatomy and Dissection of the Fetal Pig, is geared toward introductory courses in biology, comparative anatomy, and zoology.

Table of contents

Mammalogists, paleontologists, and marine scientists will find Berta’s insights absorbing, while developmental and molecular biologists, geneticists, and ecologists exploring integrative research approaches will benefit from her fresh perspective.

The long-awaited third edition of this popular textbook, which has been unavailable for several years, is completely revised and updated. It retains the successful format of previous editions, dealing with the nature, actions and roles of hormones among vertebrate animals. Special emphasis is placed on the evolution and origins of hormones and their receptors; the role of hormones in the physiological coordination of vertebrates; and each endocrine process in the context of the organism's physiology, ecology, and evolution. Comparative Vertebrate Endocrinology discusses the intimate physiology of the endocrine system and the pivotal role of hormones in coordinating basic body processes such as nutrition, reproduction, calcium metabolism, and osmoregulation, as well as their contributions to animal coloration, molting, and development. The species included range from lower chordates to mammals, including marsupials.

Copyright: d373b2206e4cee5541621491ff1bbff9