Reproductive Physiology Of Mammals And Birds Comparative Physiology Of Domestic And Laboratory Animals And Man A Series Of Books In Agricultural Science

Encyclopedia of Reproduction, Second Edition comprehensively reviews biology and abnormalities, also covering the most common diseases in humans, such as prostate and breast cancer, as well as normal developmental biology, including embryogenesis, gestation, birth and puberty. Each article provides a comprehensive overview of the selected topic to inform a broad spectrum of readers, from advanced undergraduate students, to research professionals. Chapters also explore the latest advances in cloning, stem cells, endocrinology, clinical reproductive medicine and genomics. As reproductive health is a fundamental component of an individual’s overall health status and a central determinant of quality of life, this book provides the most extensive and authoritative reference within the field. Provides a one-stop shop for information on reproduction that is not available elsewhere Includes extensive coverage of the full range of topics, from basic, to clinical considerations, including evolutionary advances in molecular, cellular, developmental and clinical sciences Includes multimedia and interactive teaching tools, such as downloadable PowerPoint slides, video content and

interactive elements, such as the Virtual Microscope

The biology of sex; The structure of the male and female reproductive systems; The endocrinology of reproduction; Reproduction in females; Ovarian follicles, ovulation, and corporea lutea; Hormone of reproduction; Reproduction in males; The germam cells; The young embryo; Efficiency of reproduction; Pregnancy, parturition, and lactation; Fertility and sterility.

When you’re looking for a comprehensive and reliable text on large animal reproduction, look no further! the seventh edition of this classic text is geared for the undergraduate student in Agricultural Sciences and Veterinary Medicine. In response to reader feedback, Dr. Hafez has streamlined and edited the entire text to remove all repetitious and nonessential material. That means you'll learn more in fewer pages. Plus the seventh editing is filled with features that help you grasp the concepts of reproduction in farm animals so you'll perform better on exams and in practice: condensed and simplified tables, so they're easier to consult an easy-to-scan glossary at the end of the book an expanded appendix, which includes graphic illustrations of assisted reproduction technology Plus, you'll find valuable NEW COVERAGE on all these topics: Equine Reproduction: expanded information reflecting today's knowledge Llamas (NEW CHAPTER) Micromanipulation of Gametes and In Vitro Fertilization (NEW CHAPTER!) Reach for the text that's revised with the undergraduate in mind: the seventh edition of Hafez's Reproduction in Farm Animals.

"Newborn mammals can weigh as little as a dime or as much as a motorcycle. Some receive milk for only a few days, whereas others nurse for years. Humans typically have only one baby at a time following nine months of pregnancy, but other mammals have 20 or more young after only a few weeks in utero. What causes this incredible reproductive diversity? Reproduction in Mammals is a fascinating examination of the diverse reproductive strategies of a broad spectrum of mammals and the ways in which natural selection has influenced that diversity. While accounts of reproduction in individual taxa abound, this unique book's comprehensive coverage gathers stories from many taxa into a single, cohesive perspective that centers on the reproductive lives of females. The authors shed light on intriguing questions such as: Do bigger moms have bigger babies? Do primates have longer pregnancies than other groups? Do aquatic animals have particular patterns? Do carnivores like lions often produce larger litters than prey species? The book opens with the authors' definition of what constitutes a female perspective and an examination of the evolution of reproduction in mammals. It then outlines the individual female: her genetics, anatomy, and physiology. From this nuanced basis, the text progresses to mirror the female reproductive cycle and includes her interactions with males and offspring. The final section contextualizes the reproductive cycle within the rest of the world--both abiotic and biotic environments. To close, the authors include dedicated chapters on human concerns: conservation and women as mammals. Readers will come away from this thought-provoking book with an

understanding not only of how reproduction fits into the lives of female mammals but also of how biology has affected the enormously diverse reproductive patterns of the phenotypes we observe today."-- Provided by publisher.

There are more than 6000 species belonging to twenty-seven orders in the Class Mammalia. Comparative studies of this diverse and magnificent array of extant species provide valuable opportunities to formulate and test hypotheses concerning the evolution of reproduction. This is the first book to explore, in depth and breadth, the complex interrelationships that exist between patterns of mating behaviour and the evolution of mammalian reproductive anatomy and physiology. It focuses upon the role that copulatory and post-copulatory sexual selection have played during the evolution of the monotremes, marsupials and placental mammals, and examines the effects of sperm competition and cryptic female choice upon coevolution of the genitalia in the two sexes. In addition, due weight is also given to discussions of the modes of life of mammals, and to the roles played by natural selection and phylogeny in determining their reproductive traits.

This acclaimed text has been fully revised and updated, now incorporating issues including aging of the reproductive system, and updates on the chapters on conception and Gamete Transport and Fertilization, and Pregnancy. Human Reproductive Biology, Third Edition emphasizes the biological and biomedical aspects of human reproduction, explains advances in reproductive science and discusses the choices and concerns of

today. Generously illustrated in full color, the text provides current information about human reproductive anatomy and physiology. The ideal book for courses on human reproductive biology - includes chapter introductions, sidebars on related topics of interest, chapter summaries and suggestions for further reading. All material competely updated with the latest research results, methods, and topics now organized to facilitate logical presentation of topics New chapters on Reproductive Senescence, Conception: Gamete Transport, Fertilization, Pregnancy: Maternal Aspects and Pregnancy: Fetal Development Full color illustrations

Marsupials differ from most other mammals in their method of reproduction, in that they have chosen, in an evolutionary sense, to develop lactation rather than placentation for the nurture of their young. The neonate is therefore born with a mixture of advanced and embryonic characters, and yet is readily accessible within the pouch, providing a unique system for the study of the ontogeny of various physiological and endocrinological parameters. Marsupials are therefore ideal animals for research into mammalian reproductive physiology. The results of this exciting new research are summarized in this book by two of the foremost workers in the field. Individual chapters analyse the genetic and hormonal control of sexual differentiation, male and female reproductive structures and their functions, the role of the corpus luteum in the oestrous cycle and pregnancy, the hormonal control of embryonic diapause and the role of the marsupial placenta in the development of the embryo. This book is more than just a

straightforward review of marsupial reproduction for its detailed analyses and broad comparative coverage will attract mammalogists and reproductive physiologists with a wide range of research interests.

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. Explores the costs and benefits of the various ways mammals allocate energy and time to reproduction, as part of investigating the relationship between physiological and evolutionary processes. Some of the ten chapters are revised from presentations at the 1988 meeting of the American Society of Mam

A unique interdisciplinary overview of the way mammals reproduce, this volume synthesizes research done by laboratory physiologists, behaviorists, population ecologists, and animal breeders. F. H. Bronson has drawn together the disparate literature in these areas to provide students and researchers with a comprehensive and biologically integrated approach to the study of mammalian reproduction. Each chapter presents a wealth of issues and questions, summarizing the current consensus on interpretations as well as viable alternatives under debate. The book is principally concerned with how environmental factors regulate reproduction. Bronson proposes that a mammal's reproductive performance routinely reflects simultaneous regulation by several environmental factors that interact in fascinatingly complex ways. Environment is defined broadly, and the chapters give equal weight to ecological and physiological factors when considering how variables such as food availability, ambient temperature, photoperiod, and social cues interact to regulate a mammal's reproduction. Particular

attention is given to seasonal breeding, and a taxonomically arranged chapter underscores the importance of comparative and evolutionary biology to an understanding of mammalian reproduction. Mammalian Reproductive Biology is a powerful argument for the value and importance of interdisciplinary approaches to research. Its almost 1,500 references constitute the most comprehensive bibliography to date on this topic. Bronson also gives detailed consideration to promising areas for future research. Well organized, carefully planned, and clearly written, this book will become standard reading for scientists concerned with any aspect of mammalian biology.

The Fourth Edition of Knobil & Neill continues to serve as a reference aid for research, to provide the historical context to current research, and most importantly as an aid for graduate teaching on a broad range of topics in human and comparative reproduction. In the decade since the publication of the last edition, the study of reproductive physiology has undergone monumental changes. Chief among these advances are in the areas of stem cell development, signaling pathways, the role of inflammation in the regulatory processes in the various tissues, and the integration of new animal models which have led to a greater understanding of human disease. The new edition synthesizes all of this new information at the molecular, cellular, and organismal levels of organization and present modern physiology a more understandable and comparative context. The Fourth Edition has been extensively revised, reflecting new

fundamental advancements in this rapidly advancing field. Provides a common language for researchers across the fields of physiology, endocrinology, and biology to discuss their understanding of reproduction. Saves academic researchers time in quickly accessing the very latest details on reproductive physiology, as opposed to searching through thousands of journal articles.

The Reproductive Biology of Bats presents the first comprehensive, in-depth review of the current knowledge and supporting literature concerning the behavior, anatomy, physiology and reproductive strategies of bats. These mammals, which occur world-wide and comprise a vast assemblage of species, have evolved unique and successful reproductive strategies through varied anatomical and physiological specialization. These are accompanied by individual and/or group behavioral interactions, usually in response to environmental mechanisms essential to their reproductive success. Is the first book devoted to the reproductive biology of bats Contains in-depth reviews of the literature concerned with bat reproduction Contributors are widely recognized specialists Provides a powerful database for future research

The revised, updated Second Edition of this classic work is a masterful distillation of breakthrough research on mammalian reproductive physiology. Among its nearly 100 contributors are many of the investigators directly responsible for the field's spectacular progress in recent years. Topics throughout the Second Edition have been added, condensed, expanded, or completely revamped to reflect new findings on reproductive

physiology, endocrinology, and reproductive behavior.The Second Edition provides extensive coverage of new research techniques; recent studies of interactions between hormones and genes; new findings on the structure of receptors; and newly identified endocrine and paracrine substances such as endothelins, interleukins, activins, inhibins, and prorenin. Included are accounts of the latest attempts to elucidate the neural mechanism underlying pulsatile secretion and identify the elusive pulse generator in the central nervous system.

The Reproductive Physiology of MammalsFrom Farm to Field and BeyondDelmar Pub

The results of this compilation of new research on the reproductive physiology of marsupials reveal much about their patterns of reproduction and evolution in comparison to monotremes and eutherians.

The Biology of the Guinea Pig focuses on the use of the guinea pig as a substrate in research. This book provides a comprehensive coverage of material related to applied care and management of guinea pigs and their diseases. Topics on guinea pig behavior, genetics, specific pathogen-free technique, biomethodology, and colony husbandry are also covered. This text likewise deals with the noninduced diseases of guinea pigs and use of the guinea pig in nutrition research, otologic research, toxicology, and teratology. This publication is beneficial to the general scientific community that includes investigators using or

considering the use of guinea pigs in research, veterinarians, students of veterinary medicine, professionals concerned with the care and management of guinea pigs, commercial producers of guinea pigs, and cavy fanciers.

This book is dedicated to present different aspects of reproductive physiology and molecular endocrinology of commercially important as well as potential aquaculture fish species. The existing aquaculture generation is looking for species diversification for efficient utilization of available diverse water resources. The knowledge of reproductive physiology of fish will help in development of breeding strategy for use in commercial aquaculture. Reproductive system is highly coordinated and governed by means of complex network of nervous, endocrine system and environmental factor as well. This book emphasize on different key aspects of reproductive endocrine system such as basic gonadal biology in the events of climate vulnerability, sex determination, sex reversal, stimulatory hormones, inhibitory hormones and receptors, environmental and chemical factor guiding reproduction, puberty, neuroendocrine regulation of reproduction etc. This book further describes how reproduction is not just indispensable for the existence or survival of an individual, but it is important for the survival of species. Chapters also address the concerns of anthropogenic activities on fish and the aquatic environment lead main trouble on physiological

and reproductive processes of aquatic animals. This book offers an attractive compilation of highly relevant aspects of current and future of aquaculture, especially in view of the growing awareness of aquaculture, to food scientists working on commercial fish, animal biologists, fish geneticists etc. This book is very timely, and relevant to the sustainable development goals. The contents would be relevant to policy makers, working towards blue revolution and blue economy.

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Any events that challenge the survival of living organisms may be classified as stressors. These stressors could include, for example, lack of food, increased population pressure, predatory pressure, climatic events or in the case of humans, loss of a loved one, lack of financial security or uncertainty in the future. Although most physiological systems are affected by stress, those systems that regulate reproductive physiology and behaviour are the most sensitive. All multicellular organisms show a stress related effect on reproduction, although the

more complex organisms, such as mammals, have the most complex effects. The objective of this book is to provide a comparative analysis of the mechanisms by which stress regulates reproduction exploring the evolution of stress perceiving systems from the simplest organisms to humans. Taking an integrated approach, utilising a genes-to-environment overview, the book examines the stressors that occur at all levels of organisation. These theories are used to examine and explain human and animal reproductive behaviour and physiology under stressful conditions providing a well-written, concise introduction to this important subject.

The 3rd edition, the first new one in ten years, includes coverage of molecular levels of detail arising from the last decade's explosion of information at this level of organismic organization. There are 5 new Associate Editors and about 2/3 of the chapters have new authors. Chapters prepared by return authors are extensively revised. Several new chapters have been added on the topic of pregnancy, reflecting the vigorous investigation of this topic during the last decade.The information covered includes both human and experimental animals; basic principels are sought, and information at the organismic and molecular levels are presented. *The leading comprehensive work on the physiology of reproduction*Edited and authored by the world's leading scientists in the field*Is

a synthesis of the molecular, cellular, and organismic levels of organization*Bibliogrpahics of chapters are extensive and cover all the relevant literature

When I first proposed a series entitled Current Mammalogy to the pub lishers, they were reluctant to undertake such a project because they viewed the field of mammology as overly fragmented. At first I found this idea to be difficult to accept; however, upon reflection, I came near to agreeing with it. Although many of us work on mammals, we gen erally feel more allegiance to our specialties, such as systematics, ge netics, cytogenetics, ecology, behavior, pest control, paleontology, wildlife management, primatology, and marine mammalogy, than we do to the general field of mammalogy. However, rather than becoming discour aged from pursuing this project, I became more certain than ever that a series such as Current Mammalogy was needed. We hope to make this series a place where specialists can present their ideas not only to other members of their specialty, but to those outside the area as well. Hopefully, this exchange of ideas will be a mutually beneficial exercise. The Editorial Board of Current Mammalogy has decided to keep the range of subjects in each volume as broad as possible rather than concentrating on one or two topics, in the hope that this will keep the series as useful as possible to the broadest range of readers.

This series of volumes represents a comprehensive and integrated treatment of reproduction in vertebrates from fishes of all sorts through mammals. It is designed to provide a readable, coordinated description of reproductive basics in each group of vertebrates as well as an introduction to the latest trends in reproductive research and our understanding of reproductive events. Whereas each chapter and each volume is intended to stand alone as a review of that topic or vertebrate group, respectively, the volumes are prepared so as to provide a thorough topical treatment across the vertebrates. Terminology has been standardized across the volumes to reduce confusion where multiple names exist in the literature, and a comprehensive glossary of these terms and their alternative names is provided. A complete, essential and up to date reference for research scientists working on vertebrate hormones and reproduction - and on animlals as models in human reproductive research Covers the endocrinology, neuroendocrinology, physiology, behaviour and anatomy of vertebrate reproduction Structured coverage of the major themes for all five vertebrate groups allows a consistent treatment for all Special chapters elaborate on features specific to individual vertebrate groups and to comparative aspects, similarities and differences between them

Pheromones and Reproduction in Mammals reviews current research findings on

the role of pheromones in mammalian reproduction. Drawing on both quantitative laboratory studies and selected observational field studies, the book explores how animals actively deploy scent to facilitate sexual interactions and the functions of those scent signals during these interactions. Organized into two sections encompassing nine chapters, this volume begins with an overview of chemical signals and how they influence reproductive behavior in a variety of mammalian species. It then discusses the nature of chemical signals and olfactory perception; the role of chemical communication in mother-young interactions and in the reproduction of primates; how pheromones regulate puberty and the ovarian cycle; and pregnancy blocking by pheromones. The reader is also introduced to hormonal responses to primer pheromones; sensory physiology of pheromone communication; and the role of pheromones in the reproduction of domestic animals such as cattle, swine, sheep, and goats. Biologists and students of biology will find this book extremely informative.

The revised, updated Second Edition of this classic work is a masterful distillation of breakthrough research on mammalian reproductive physiology. Among its nearly 100 contributors are many of the investigators directly responsible for the field's spectacular progress in recent years. Topics throughout the Second Edition have been added, condensed, expanded, or completely revamped to

reflect new findings on reproductive physiology, endocrinology, and reproductive behavior. The Second Edition provides extensive coverage of new research techniques; recent studies of interactions between hormones and genes; new findings on the structure of receptors; and newly identified endocrine and paracrine substances such as endothelins, interleukins, activins, inhibins, and prorenin. Included are accounts of the latest attempts to elucidate the neural mechanism underlying pulsatile secretion and identify the elusive pulse generator in the central nervous system.

This book contains the proceedings of the International Symposium on the Mechanisms of Sexual Reproduction in Animals and Plants, where many plant and animal reproductive biologists gathered to discuss their recent progress in investigating the shared mechanisms and factors involved in sexual reproduction. This now is the first book that reviews recent progress in almost all fields of plant and animal fertilization. It was recently reported that the self-sterile mechanism of a hermaphroditic marine invertebrate (ascidian) is very similar to the self-incompatibility system in flowering plants. It was also found that a male factor expressed in the sperm cells of flowering plants is involved in gamete fusion not only of plants but also of animals and parasites. These discoveries have led to the consideration that the core mechanisms or factors involved in sexual

reproduction may be shared by animals, plants and unicellular organisms. This valuable book is highly useful for reproductive biologists as well as for biological scientists outside this field in understanding the current progress of reproductive biology.

The success of Assisted Reproductive Technology is critically dependent upon the use of well optimized protocols, based upon sound scientific reasoning, empirical observations and evidence of clinical efficacy. Recently, the treatment of infertility has experienced a revolution, with the routine adoption of increasingly specialized molecular biological techniques and advanced methods for the manipulation of gametes and embryos. This textbook – inspired by the postgraduate degree program at the University of Oxford – guides students through the multidisciplinary syllabus essential to ART laboratory practice, from basic culture techniques and micromanipulation to laboratory management and quality assurance, and from endocrinology to molecular biology and research methods. Written for all levels of IVF practitioners, reproductive biologists and technologists involved in human reproductive science, it can be used as a reference manual for all IVF labs and as a textbook by undergraduates, advanced students, scientists and professionals involved in gamete, embryo or stem cell biology.

Never HIGHLIGHT a Book Again! Virtually all of the testable terms, concepts, persons, places, and events from the textbook are included. Cram101 Just the FACTS101 studyguides give all of the outlines, highlights, notes, and quizzes for your textbook with optional online comprehensive practice tests. Only Cram101 is Textbook Specific. Accompanys: 9781418030131 .

Reproductive Physiology of Mammals: From Farm to Field and Beyond explores the fundamental principles of mammalian reproductive biology in the context of a society that values the management of the reproductive activity of human and nonhuman animals. The format of the book is compatible with traditional approaches to teaching courses in reproductive physiology, but emphasizes basic biological principles and comparative analyses of reproductive physiology. This departure from tradition is intended to accommodate studentsa growing interests in companion and wild animals and provide expertise that allows students to pursue careers that require literacy in basic science.

The most comprehensive review available today, Marshall's Physiology of Reproduction is the classic reference source for teachers and researchers of animal reproduction. Internationally recognised leaders in their respective fields provide an analytical synopsis of the area, review current research and outline their philosophical approach to the subject. Volume 3 of the fourth edition reviews

the processes of pregnancy and lactation in mammals, incorporating marsupials, non-primate eutherians and primates including man. Book one covers pregnancy from ovulation to pre-parturition, book two reviews fetal physiology, parturition and lactation. The extensive coverage of the physiology of human reproduction and lactation makes this volume a particularly important reference source for researchers in human fertility control, while the review of large animal reproduction is relevant to veterinary and para-veterinary workers.

This book is a completely revised and updated second edition of a highly praised volume that was first published in 1968. Taking into account recent conceptual and technical advances, the new edition examines and compares the reproductive mechanisms of different classes of vertebrates, from cyclostomes to humans, in a thorough and analytic manner. Ari van Tienhoven is a uniquely qualified scientist with many years of research and teaching experience. His fourteen chaptesr cover sex determination, sexual development, intersexes, puberty, anatomy of the reproductive system, the testes, the ovary, reproductive cycles, insemination and fertilization, care of the embryo and fetus, expulsion of the oocyte, embryo, or fetus, reproduction and immunology, reproductive behavior, and environment and reproduction. The author emphasizes the role of the H-Y antigen in determining the sex of animals and gives particular attention to

the evolutionary aspects of intersexes in fish. He discusses the endocrinology of reproduction, and he also deals with the role of light in controlling the timing of reproductive activity. Many illustrations, tables, and references are included. An important contribution to the fields of comparative endocrinology and reproduction, this book will be a valuable text for advanced undergraduate and gradate students and an irreplaceable reference for zoologists in general and for specialists in reproductive physiology.

Reproduction in Mammals is intended to meet the needs of undergraduates reading zoology, biology, biochemistry, physiology, medicine, veterinary science and agriculture, and to be a source of information for advanced students and research workers. It is published as a series of small textbooks dealing with all major aspects of mammalian reproduction. Each of the component books is designed to cover independently fairly distinct subdivisions of the subject, so that readers can select texts relevant to their particular interests and needs. This volume consists of a series of thought-provoking essays by people with a number of very different backgrounds, including biology, comparative anatomy, psychology, psychiatry and moral philosophy. They discuss the physiology mechanisms, adaptive significance, clinical picture and social impact of a variety of patterns of human sexual behaviour, thereby providing a balanced and

informative account of a highly sensitive and emotive subject.
Reproduction in Domestic Animals, Second Edition discusses the chemistry of gonadotropins and biochemistry of the gonadal hormones. The book presents the immunological characterization of the gonadotropins and the regulation of the secretion of pituitary gonadotropins by the nervous system. The text describes the physiology of reproduction and then discusses the effects of hormones on the development and differentiation of the brain. Another topic of interest is the formation of preovulatory follicles. The section that follows describes the necessity of quantitative female gametes production. The book will provide valuable insights for biologists, zoologists, students, and researchers in the field of animal reproduction.