

Read Online Generation And Degeneration Tropes Of Reproduction In Literature And History From Antiquity Through Early Modern Europe Pdf For Free

The Biology of
Reproduction
Sexual
Reproduction in
Animals and Plants
Concepts of Biology
Evolution of Sexual
Reproduction in
Marine
Invertebrates
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Encyclopedia of
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Cow The Biology of
Reproduction in
Phyllaplysia Taylori
Dall, 1900

(Gastropoda:
Opisthobranchia:
Anaspeida)
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Biology Stress and
Resilience
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Tree Crops Micheli
and the discovery of
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Echinodermata and
Prochordata
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21st Century
Reproduction in
Domestic Animals

Concepts of Biology
is designed for the
single-semester
introduction to
biology course for
non-science majors,
which for many
students is their
only college-level
science course. As
such, this course
represents an
important
opportunity for
students to develop
the necessary
knowledge, tools,
and skills to make
informed decisions
as they continue
with their lives.
Rather than being
mired down with

facts and
vocabulary, the
typical non-science
major student
needs information
presented in a way
that is easy to read
and understand.
Even more
importantly, the
content should be
meaningful.
Students do much
better when they
understand why
biology is relevant
to their everyday
lives. For these
reasons, Concepts
of Biology is
grounded on an
evolutionary basis
and includes
exciting features
that highlight
careers in the
biological sciences
and everyday
applications of the
concepts at
hand. We also strive
to show the
interconnectedness
of topics within this

extremely broad discipline. In order to meet the needs of today's instructors and students, we maintain the overall organization and coverage found in most syllabi for this course. A strength of Concepts of Biology is that instructors can customize the book, adapting it to the approach that works best in their classroom. Concepts of Biology also includes an innovative art program that incorporates critical thinking and clicker questions to help students understand--and apply--key concepts. Three major aspects that distinguish this book are that (1) it contains the most

detailed analysis of the sexual reproduction (oogenesis, fertilization and embryonic incubation) in a particular phylum of the aquatic invertebrates (Bryozoa) ever made; this analysis is based on an exhaustive review of the literature on that topic published over the last 260 years, as well as extensive original histological, anatomical and morphological data obtained during studies of both extant and extinct species; (2) this broad analysis has made it possible to reconstruct the major patterns, stages and trends in the evolution of sexual reproduction in various bryozoan

clades, showing numerous examples of parallelisms during transitions from broadcasting to embryonic incubation, from planktotrophic to non-feeding larvae and from lecithotrophy to placentation; corresponding shifts in oogenesis, fertilization and embryonic development are discussed in detail; and (3) the key evolutionary novelties acquired by Bryozoa are compared with similar innovations that have evolved in other groups of marine invertebrates, showing the general trends in the evolution of their sexual reproduction. Ecological

background of these innovations is considered too. Altogether these aspects make the monograph an "Encyclopedia of bryozoan sexual reproduction," offering an integral picture of the evolution of this complex phenomenon. Asexual reproduction is found in many taxonomic groups and considerable effort has been directed by biologists towards understanding its mechanisms, evolution and ecological significance. This title offers a thought-provoking and novel contribution to this debate. 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. From contraception to cloning and pregnancy to populations, reproduction presents urgent challenges today. This field-defining history synthesizes a vast amount of scholarship to take the long view. Spanning from antiquity to the present day, the book focuses on the Mediterranean,

western Europe, North America and their empires. It combines history of science, technology and medicine with social, cultural and demographic accounts. Ranging from the most intimate experiences to planetary policy, it tells new stories and revises received ideas. An international team of scholars asks how modern 'reproduction' - an abstract process of perpetuating living organisms - replaced the old 'generation' - the active making of humans and beasts, plants and even minerals. Striking illustrations invite readers to explore artefacts, from an ancient Egyptian fertility figurine to

the announcement of the first test-tube baby. Authoritative and accessible, *Reproduction* offers students and non-specialists an essential starting point and sets fresh agendas for research. 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 principles 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*Bibliographic chapters are extensive and cover all the relevant literature 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 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 animals 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 Marine fishes represent astonishing diversity with respect to practically every aspect of their biology. Reproductive modes and sexual patterns are

especially fascinating and provide deep insight into general evolutionary problems. In this volume, chapters focus on reproduction and sexuality among groups of fishes defined by habitat, taxon, and the reproductive processes that are critical for reproductive success. The book illustrates how knowledge of reproductive biology among marine fishes can help identify vulnerable and potentially vulnerable species in the face of changing environmental conditions and increasing human-based pressures. Extensive social

science research, particularly by anthropologists, has explored womens reproductive lives, their use of reproductive technologies, and their experiences as mothers and nurturers of children. Meanwhile, few if any volumes have explored mens reproductive concerns or contributions to womens reproductive health: Men are clearly viewed as the second sex in reproduction. This volume argues that the marginalization of men is an oversight of considerable proportions, and thereby seeks to break the silence surrounding mens thoughts,

experiences, and feelings about their reproductive lives. It sheds new light on male reproduction from a cross-cultural, global perspective, focusing not only upon men in Europe and America but also those in the Middle East, Asia, and Latin America. Both heterosexual and homosexual, married and unmarried men are featured in this volume, which assesses concerns ranging from masculinity and sexuality to childbirth and fatherhood. Thus, men are brought back into the equation, as reproductive partners, progenitors, fathers, nurturers,

and decision-makers. 49 about six months ... to well over a year. If there is only one part of the year that is favourable, such as spring and early summer in the temperate climates, then each species must make an evolutionary choice, so to speak, as to which parts of the reproductive cycle - conception, gestation, lactation or weaning - must be protected and which can come in less favourable times of the year. The rhesus and langur monkeys of northern India give birth during the time of year when temperatures are hottest and wells and tanks are often dry. However, gestation and the later months

of lactation come during the monsoon season when food and water are abundant. In contrast the east African baboons give birth at the beginning of the small rains, and gestation and the late part of lactation occur during the six months dry season. Whether any pattern of relationship will be found to hold true for other species of primates is still not clear. It may be that a wide variety of patterns have evolved depending on the lengths of gestation and lactation and the particular ecological complex in which each species or even subspecies lives' (pages 503, 504).

Mechanisms of Hormone Action: A NATO Advanced Study Institute focuses on the action mechanisms of hormones, including regulation of proteins, hormone actions, and biosynthesis. The selection first offers information on hormone action at the cell membrane and a new approach to the structure of polypeptides and proteins in biological systems, such as the membranes of cells. Discussions focus on the cell membrane as a possible locus for the hormone receptor; gaps in understanding of the molecular organization of the cell membrane; and a possible model of

hormone action at the membrane level. The text also ponders on insulin and regulation of protein biosynthesis, including insulin and protein biosynthesis, insulin and nucleic acid metabolism, and proposal as to the mode of action of insulin in stimulating protein synthesis. The publication elaborates on the action of a neurohypophysial hormone in an elasmobranch fish; the effect of ecdysone on gene activity patterns in giant chromosomes; and action of ecdysone on RNA and protein metabolism in the blowfly, *Calliphora erythrocephala*. Topics include

nature of the enzyme induction, ecdysone and RNA metabolism, and nature of the epidermis nuclear RNA fractions isolated by the Georgiev method. The selection is a valuable reference for readers interested in the mechanisms of hormone action. 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. Research into the reproductive biology of crop plants has expanded greatly in recent years and has led to an increasing awareness of the importance of flowering, pollination, and fruit set in crop productivity. This book focuses specifically on tree cultivation. It deals with the basic biology of sexual reproduction and relates this to the practical aspects of

tree crop breeding and orchard management for fruit and seed production, in both temperate and tropical species. It is aimed at both students and research scientists in horticulture, forestry, and pollination ecology as well as those working in tree breeding, tree cultivation, and orchard management. The conservation problems of rainforest regeneration in the tropics and subtropics and of changing land use priorities in Europe and North America also make this book of value to those concerned with tree species preservation and survival. The

Principles of Biology sequence (BI 211, 212 and 213) introduces biology as a scientific discipline for students planning to major in biology and other science disciplines. Laboratories and classroom activities introduce techniques used to study biological processes and provide opportunities for students to develop their ability to conduct research. This book describes human development including sexual reproduction and stem cell research with the development of model organisms that are accessible to genetic and experimental analysis in readily

understandable texts and 315 multi-colored graphics. The introductory account of model organisms selected from the entire animal kingdom presents general principles, which are then outlined in subsequent chapters devoted to, for example, sexual development; genes controlling development and their contemporary molecular-analysis methods; production of clones and transgenic animals; development of the nervous and circulatory systems; regenerative medicine and ageing. Finally the evolution of developmental toolkits and novelties is

discussed including the genetic basis of the enlargement of the human forebrain. Separate boxes are devoted to controversial questions such as the benefits and problems of prenatal diagnostics or the construction of ancient body plans. This publication contains the proceedings of a Seminar held in Galway, Ireland on September 27 - 30, 1977 under the auspices of the Commission of the European Communities, as part of the EEC programme of co-ordination of research on beef production. The programme was drawn up by a scientific working group on

PHYSIOLOGY OF REPRODUCTION on behalf of the beef production committee. The working group comprised: Or. J.M. Sreenan (Chairman), Ireland; Mr. L.E.A. Rowson, United Kingdom; Professor C. Thibault, France; Or. B. Hoffman, Germany (Fed. Rep.); Professor L. Henriet, Belgium; Or. F. du Mesnil du Buisson, France; Or. J. Riemensberger, Germany (Fed. Rep.); Dr. P. Mauleon, France; and, in the planning of the seminar, they were joined by Mr. P. L'Hermite, CEC and Or. J.C. Tayler (temporarily seconded to the CEC, 1975). The subject chosen for this seminar was

drawn from the list of priorities in research objectives drawn up in 1973 by members of a committee (now the Standing Committee on Agricultural Research, CPRA) given in Appendix 1. One of the functions of this series of seminars was to summarise and update the information available on the selected subjects and to discuss future needs for research, so as to assist the Commission in evaluating the probable impact of research on agricultural production within the community. This book explores how conditions for childbearing are changing in the

21st century under the impact of new biomedical technologies. Selective reproductive technologies (SRTs) - technologies that aim to prevent or promote the birth of particular kinds of children - are increasingly widespread across the globe. Wahlberg and Gammeltoft bring together a collection of essays providing unique ethnographic insights on how SRTs are made available within different cultural, socio-economic and regulatory settings and how people perceive and make use of these new possibilities as they envision and try to form their future lives. Topics

covered include sex-selective abortions, termination of pregnancies following detection of fetal anomalies during prenatal screening, the development of preimplantation genetic diagnosis techniques as well as the screening of potential gamete donors by egg agencies and sperm banks. This is invaluable reading for scholars of medical anthropology, medical sociology and science and technology studies, as well as for the fields of gender studies, reproductive health and genetic disease research. Documenting the daily efforts of African Americans

to protect their community against highly oppressive conditions, this ground-breaking volume chronicles the unique experiences of black women that place them at higher risk for morbidity and mortality - especially during pregnancy. *Stress and Resilience: The Social Context of Reproduction in Central Harlem* examines the processes through which economic circumstances, environmental issues, and social conditions create situations that expose African American women to stress and chronic strain. Detailing the individual and community assets and strategies used

to address these conditions, this volume provides a model methodology for translating research into public health and social action. Based on interactive community partnered research, *Stress and Resilience: The Social Context of Reproduction in Central Harlem* facilitates more exact hypotheses about the relationship between risk factors, protective factors and reproductive health; Furnishes a better understanding of chronic disease patterns and suggests more effective interventions to reduce rates of infant mortality;

Incorporates the voices of the community and of women themselves through their own words and actions; Sheds light on epidemiologic research and intervention protocols; Examines the social context in which reproductive behaviors are practiced; Provides a holistic framework in which to understand infant mortality; And more. Filling a large gap in the literature on the social context of reproduction this important monograph offers indispensable information for public health researchers, program planners, anthropologists, sociologists, urban planners, medical

providers, policy makers, and private funders. "With subtlety and wit, [a] prizewinning debut" novel set in 1970s Toronto "explores a liaison across race and class divisions in Canada" (The Guardian, UK). Felicia and Edgar come from different worlds. She's a nineteen-year-old student and Caribbean immigrant while he is the impetuous heir to his German family's fortune. When their ailing mothers are assigned the same Toronto hospital room, their chance encounter leads to an unlikely relationship full of miscommunications, misunderstandings, and very surprising

results. Years later, Felicia's son Armistice—"Army" for short—is a teenager fixated on get-rich-quick schemes, each one more absurd than the next. The. Edgar finally re-enters Felicia's life, at yet another inopportune moment, putting this "witty, playful and disarmingly offbeat" saga on the path to its heartfelt conclusion (The Toronto Star, CA). Winner of the Scotiabank Giller Prize Sexual Biology and Reproduction in Crustaceans covers crustacean reproduction as it deals with the structural morphology of the gamete-producing primary sex organs, such as the testis

and ovary, the formation and maturation of gametes, their fusion during fertilization, and embryonic development that lead to the release of larvae. Constituting a diverse assemblage of animals, crustaceans are best known by their common representatives, such as shrimps, lobsters, and crabs, but also include many more less familiar, but biologically important forms. This work covers the variety of ways in which both male and female gametes are produced by evolving different sexual systems in crustaceans, the range of reproductive

systems, and the accordingly, and highly diverse, mechanistic modes of sex determination. In addition, the book features such topics as genetic and environmental determinants in sex determination pattern, variability of mechanisms of fertilization among different species, the origin of different mating systems, the associated mating and brooding behaviors, and the adaptive ability to different environmental conditions with discussion on the evolutionary ecology of social and sexual systems in certain species, which have shown eusocial tendencies, similar to social

insects. Marine species occupying diversified ecological niches in tropical and temperate zones reproduce under definitive environmental conditions. Therefore, reproductive ecology of different crustaceans inhabiting different ecological niches also constitutes another important aspect of the work, along with yolk utilization and embryogenesis leading to release of different larval forms, which reflect on their aquatic adaptability. Forms a valuable source of recent references on the current research in crustacean reproductive physiology Covers

various mating and breeding systems, providing illustrative examples for sexual selection, parental care of developing eggs and embryos, and the evolution of other reproductive behaviors Features contributions written in the form of review articles, enabling readers to not only gain information in the respective subject, but also help them stimulate ideas in their chosen field of research Includes a glossary created by the author to define technical terms Demonstrates the ability of crustacean species to serve as useful model systems for other organisms, to investigate issues related to sexual conflict, mate

choice, and sperm competition
Discusses techniques in endocrine research to help researchers in aquaculture develop protocols in the control of reproduction A primatologist explores the mystery of the origins of human reproduction, explaining that understanding the evolutionary past can provide insight into what worked, what didn't, and what it all means for the future of mankind. Within twenty, maybe forty, years most people in developed countries will stop having sex for the purpose of reproduction. Instead, prospective parents will be told as much

as they wish to know about the genetic makeup of dozens of embryos, and they will pick one or two for implantation, gestation, and birth. And it will be safe, lawful, and free. In this work of prophetic scholarship, Henry T. Greely explains the revolutionary biological technologies that make this future a seeming inevitability and sets out the deep ethical and legal challenges humanity faces as a result. "Readers looking for a more in-depth analysis of human genome modifications and reproductive technologies and their legal and ethical implications should strongly

consider picking up Greely's *The End of Sex and the Future of Human Reproduction*...[It has] the potential to empower readers to make informed decisions about the implementation of advancements in genetics technologies."
—Dov Greenbaum, *Science* "[Greely] provides an extraordinarily sophisticated analysis of the practical, political, legal, and ethical implications of the new world of human reproduction. His book is a model of highly informed, rigorous, thought-provoking speculation about an immensely important topic."
—Glenn C. Altschuler,

Psychology Today Echinoderms and prochordates occupy a key position in vertebrate evolution. The genomes of sea urchin share 70% homology with humans. Researches on cell cycle in sea urchin and phagocytosis in asteroids have fetched Nobel Prizes. In this context, this book assumes immense importance. Echinoderms are unique, as their symmetry is bilateral in larvae but pentamerous radial in adults. The latter has eliminated the development of an anterior head and bilateral appendages. Further, the obligate need to

face the substratum for locomotion and acquisition of food has eliminated their planktonic and nektonic existence. Egg size, a decisive factor in recruitment, increases with decreasing depths up to 2,000-5,000 m in lecithotrophic asteroids and ophiuroids but remains constant in their planktotrophics. Smaller (110 mm) asteroids generate planktotrophic eggs only. Publications on sex ratio of echinoderms indicate the genetic determination of sex at fertilization but those on hybridization, karyotype and ploidy induction do not provide evidence for heterogametism.

But the herbivorous echinoids and larvacea with their gonads harboring both germ cells and nutritive phagocytes (NPs) have economized the transportation and hormonal costs on gonadal function. Despite the amazing potential just 2 and 3% of echinoderms undergo clonal reproduction and regeneration, respectively. Fission is triggered, when adequate reserve nutrients are accumulated. It is the most prevalent mode of clonal reproduction in holothuroids, asteroids and ophiuroids. However, budding is a more prevalent mode of clonal reproduction in colonial

hemichordates and urochordates. In echinoderms, fission and budding eliminate each other. Similarly, autoregulation of early development eliminates clonal reproduction in echinoids and solitary urochordates. In pterobranchs, thaliaceans and ascidians, the repeated and rapid budding leads to colonial formation. Coloniality imposes reductions in species number and body size, generation time and life span, gonad number and fecundity as well as switching from gonochorism to simultaneous hermaphroditism and oviparity to ovoviviparity/viviparity. Bovine

Reproduction is a comprehensive, current reference providing information on all aspects of reproduction in the bull and cow. Offering fundamental knowledge on evaluating and restoring fertility in the bovine patient, the book also places information in the context of herd health where appropriate for a truly global view of bovine theriogenology. Printed in full color throughout, the book includes 83 chapters and more than 550 images, making it the most exhaustive reference available on this topic. Each section covers anatomy and physiology,

breeding management, and reproductive surgery, as well as obstetrics and pregnancy wastage in the cow. Bovine Reproduction is a welcome resource for bovine practitioners, theriogenologists, and animal scientists, as well as veterinary students and residents with an interest in the cow. Cattle play a fundamental role in animal agriculture throughout the world. They not only provide us with a vital food source, but they also provide us with fertilizer and fuel. Keeping reproduction levels at an optimum level is therefore essential, but this is often a complicated

process, especially with modern, high yielding cows. Written in a practical and user-friendly style, this book aims to help the reader understand cattle reproduction by explaining the underlying physiology of the reproductive process and the role and importance of pharmacology and technology, and showing how management techniques can improve reproductive efficiency. This edition includes: Recent research findings on the physiology of the oestrous cycle and its control; New techniques for monitoring and manipulating reproduction,

including pregnancy diagnosis and embryo transfer; Advice on identifying common infertility problems and how to prevent and treat them. *Reproduction Cattle 3e* is essential reading for veterinary and agricultural students, as well as veterinarians and farmers involved in cattle reproduction. A look into the phenomena of sex and reproduction in all organisms, taking an innovative, unified and comprehensive approach. Reproductive skew is the study of how reproduction is partitioned in animal societies. In many social animals reproduction is shared unequally

and leads to a reproductive skew among group members. Skew theory investigates the genetic and ecological factors causal to the partitioning of reproduction in animal groups and may yield fundamental insights into the evolution of animal sociality. This book brings together new theory and empirical work, mostly in vertebrates, to test assumptions and predictions of skew models. It also gives an updated critical review of skew theory. The team of leading contributors cover a wide range of species, from insects to humans, and discuss both ultimate

(evolutionary) and proximate (immediate) factors influencing reproductive skew. Academic researchers and graduate students alike with an interest in evolution and sociality will find this material stimulating and exciting. Historically, reproductive science has focused on reproductive behaviors divorced from the contexts in which they occur. Taking a more integrated view, this book explores the neuroendocrine bases of reproduction in relation to their environmental and social contexts. The contributors provide compelling accounts of reproductive

behaviors in animals ranging from turtles and lizards to humans and nonhuman primates. They examine these behaviors from the perspectives of ethology, endocrinology, behavioral genetics, and evolutionary ecology. Together, they illuminate the dynamic interplay between the ecological and social contexts of a species and the biological mechanisms regulating reproductive behavior. The book shows how an appreciation of the full complexity of the context of reproduction actually simplifies and clarifies our understanding of reproductive

behavior.
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knowledge of

reproductive biology has increased enormously in recent years on cellular, molecular, and genetic levels, leading to significant breakthroughs that have directly benefitted in vitro fertilization (IVF) and other assisted reproductive technologies (ART) in humans and animal systems. *Animal Models and Human Reproduction* presents a comprehensive reference that reflects the latest scientific research being done in human reproductive biology utilizing domestic animal models. Chapters on canine, equine, cow, pig, frog, and mouse models of

reproduction reflect frontier research in placental biology, ovarian function and fertility, non-coding RNAs in gametogenesis, oocyte and embryo metabolism, fertilization, cryopreservation, signal transduction pathways, chromatin dynamics, epigenetics, reproductive aging, and inflammation. Chapters on non-human primate models also highlight recent advancements into such issues as human in vitro fertilization (IVF) and assisted reproductive technologies (ART). This book offers animal scientists, reproductive biology scientists, clinicians and

practitioners, invaluable insights into a wide range of issues at the forefront of human reproductive health. A unique feature of this book is the focus on large, domestic animals. Previous editions were considered the "Bible" of reproductive physiology. It covers basic, large animal reproductive physiology, provides species-specific information and is suitable as a textbook for upper-division courses. Some investigators have hypothesized that estrogens and other hormonally active agents found in the environment might be involved in breast cancer increases and sperm count

declines in humans as well as deformities and reproductive problems seen in wildlife. This book looks in detail at the science behind the ominous prospect of "estrogen mimics" threatening health and well-being, from the level of ecosystems and populations to individual people and animals. The committee identifies research needs and offers specific recommendations to decision-makers. This authoritative volume: Critically evaluates the literature on hormonally active agents in the environment and identifies known and suspected toxicologic

mechanisms and effects of fish, wildlife, and humans. Examines whether and how exposure to hormonally active agents occurs—in diet, in pharmaceuticals, from industrial releases into the environment—and why the debate centers on estrogens. Identifies significant uncertainties, limitations of knowledge, and weaknesses in the scientific literature. The book presents a wealth of information and investigates a wide range of examples across the spectrum of life that might be related to these agents. 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. First published in 1984, this volume comprised a broad synthesis of contemporary research on sheep reproduction conducted in Australia. Australia is internationally recognized for the excellence of its research in this field, and heads the world in areas of the neuro-endocrine control of reproduction, reproductive behaviour, artificial insemination and manipulation of reproductive performance, to name just a few. The book comprises some 23 review papers and short communications, all refereed by experts in the field, covering such

topics as neuro-endocrinology, sexual behaviour, testicular and ovular function, pregnancy and foetal growth, parturition, lamb survival, nutrition and genetics. Advanced methods, developed in the seventies and early eighties to control reproductive function, gene manipulation and intra-uterine insemination are also considered, together with the managerial and economic values of such developments. The Developmental Biology of Reproduction documents the proceedings of the 33rd symposium of the Society for Developmental Biology. Reproductive

Biology was selected as the main theme of the symposium. The symposium aimed to draw center attention on basic aspects of reproduction in both plants and animals in the hope of stimulating research that might provide the necessary foundation for effective, practical control of human reproduction. Five areas were selected for emphasis: the formation of eggs and sperm; the activation of the egg to develop into an embryo; the genetic and biochemical events underlying the early development of the embryo; the hormonal controls operating in the reproductive

process; and the general control of implantation and growth of the mammalian embryo in the uterus. Thirteen reports were given by distinguished researchers in each of these areas. All biologists interested in a broad understanding of problems of reproduction will find this symposium interesting and important for their own work.

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