

Principles Of Animal Physiology 2nd Edition

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Introduction to Animal and Veterinary Anatomy and Physiology, 4th Edition - Victoria Aspinall 2019-12-11

A sound knowledge of anatomy and physiology is an essential basis for the effective clinical treatment of companion animals and farm animals alike. The fourth edition of this bestselling book continues to provide a comprehensive description of the anatomy and physiology of dogs and cats. The book builds on these foundations with detailed descriptions of exotic small species including birds, and domestic farm animals, including cows, sheep and pigs, as well as the horse.

Tracking Animal Migration with Stable Isotopes - 2008-04-09

Tracking Animal Migration with Stable Isotopes provides a consolidated overview of the current knowledge of stable isotopes in terrestrial migration research questions. It offers ecologists and conservation biologists provide a practical handbook for those considering using stable isotopes in their migration research. Presents information for readers to understand how to apply isotopic methods for tracking Critical information on areas for future research Practical guidelines and discussions of sample collection, sample preparation, and data analysis Enhanced understanding of data and statistical analysis in isotope-based studies of migratory animals

Introduction to Animal Physiology - Dr Ian Kay 2020-12-17

Introduction to Animal Physiology provides students with a thorough, easy-to-understand introduction to the principles of animal physiology. It uses a comparative approach, with a broad spectrum of examples chosen to illustrate physiological processes from across the animal kingdom. The book covers a wide range of topics, including neurons and nervous systems, endocrine function, ventilation and gas exchange, thermoregulation, gastrointestinal function and reproduction. It also present topics that students typically struggle with, including neuronal membrane function, in a logical, structured format, highlighting to core concepts. Simple analogies are used to clarify important facts.

Principles of Animal Behavior, 4th Edition - Lee Alan Dugatkin 2020-01-01

Since the last edition of this definitive textbook was published in 2013, much has happened in the field of animal behavior. In this fourth edition, Lee Alan Dugatkin draws on cutting-edge new work not only to update and expand on the studies presented, but also to reinforce the previous editions' focus on ultimate and proximate causation, as well as the book's unique emphasis on natural selection, learning, and cultural transmission. The result is a state-of-the-art textbook on animal behavior that explains underlying concepts in a way that is both scientifically rigorous and accessible to students. Each chapter in the book provides a sound

theoretical and conceptual basis upon which the empirical studies rest. A completely new feature in this edition are the Cognitive Connection boxes in Chapters 2-17, designed to dig deep into the importance of the cognitive underpinnings to many types of behaviors. Each box focuses on a specific issue related to cognition and the particular topic covered in that chapter. As *Principles of Animal Behavior* makes clear, the tapestry of animal behavior is created from weaving all of these components into a beautiful whole. With Dugatkin's exquisitely illustrated, comprehensive, and up-to-date fourth edition, we are able to admire that beauty anew.

Introduction to Animal Physiology and Physiological Genetics - E. M. Pantelouris 2013-10-22

Introduction to Animal Physiology and Physiological Genetics, deals with topics on physiological measurement, comparisons, and analysis of the role of genotypes. This book emphasizes two aspects — the changes of physiological patterns in the course of development and the wide variation that can be found within a species. The text discusses the response mechanisms of living organisms from nerve impulses, chemical sense, muscle reaction, and includes some studies made on brain function. The effects of nutrition and energy such as the intake of food, water, oxygen, and the calculation of basic metabolic rates are explained. The book then discusses the role of the internal environment and that of the interstitial body fluid in the higher animals. The discussion covers blood circulation, cardiac cycle, and a special section on the function of the heartbeat in the spider *Limulus* showing that stimulation of the abdominal ganglia increases the heartbeats. The text also considers significant concepts of physiological genetics, and then explains asexual and sexual reproduction, the sex hormones of invertebrates, and the use of stimulants for animal production. The physiological differences between species are examined, but more particularly on the reservoir of genetic diversity, where differences abound between families and offspring. One research made in molecular biology concludes that genes are responsible for regulating the amino acid sequence of proteins. Molecular biologists, general biologists, zoologists, and microbiologists will find the articles in this collection invaluable.

Introduction to Veterinary Anatomy and Physiology E-Book - Victoria Aspinall 2009-04-24

A sound knowledge of anatomy and physiology is an essential basis for the effective clinical treatment of companion animals. The new *Introduction to Veterinary Anatomy and Physiology Textbook* builds on the success of the first edition in its thorough coverage of the common companion animal species. Updated throughout, the new edition features online learning resources, providing students with the opportunity to test their knowledge with questions and visual exercises, while instructors can download questions, figures and exercises to use as teaching aids. An essential first purchase for all those embarking upon a veterinary career. Now with on-line resources including self-assessment tools and teaching aids. Comprehensive coverage of all major companion animal species. New equine chapter 'Applied Anatomy' tips relate theory to clinical practice, showing the relationship between anatomy and physiology and the disease process.

Wild Mammals in Captivity - Devra G. Kleiman 2010-08-15

Zoos, aquaria, and wildlife parks are vital centers of animal conservation and management. For nearly fifteen years, these institutions have relied on *Wild Mammals in Captivity* as the essential reference for their work. Now the book reemerges in a completely updated second edition. *Wild Mammals in Captivity* presents the most current thinking and practice in the care and management of wild mammals in zoos and other institutions. In one comprehensive volume, the editors have gathered the most current information from studies of animal behavior; advances in captive breeding; research in physiology, genetics, and nutrition; and new thinking in animal management and welfare. In this edition, more than three-quarters of the text is new, and information from more than seventy-five contributors is thoroughly updated. The standard text for all courses in zoo biology, *Wild Mammals in Captivity* will, in its new incarnation, continue to be used by zoo managers, animal caretakers, researchers, and anyone with an interest in how to manage animals in captive conditions.

Principles of Animal Physiology - Christopher D. Moyes 2013-08-29

Principles of Animal Physiology, Second Edition continues to set a new standard for animal physiology textbooks with its focus on animal diversity, its modern approach and clear foundation in molecular and cell biology, its concrete examples throughout, and its fully integrated coverage of the endocrine system. Carefully designed, full-color artwork guides students through complex systems and processes while in-text pedagogical tools help them learn and remember the material. The book includes the most up-to-date research on animal genetics and genomics, methods and models, and offers a diverse range of vertebrate and invertebrate examples, with a student-friendly writing style that is consistently clear and engaging. Christopher Moyes and Patricia Schulte present animal physiology in a current, balanced, and accessible way that emphasizes the integration of physiological systems, an overarching evolutionary theme, and thorough coverage of the cellular and molecular basis of animal physiology. Principles of Animal Physiology comes with a comprehensive supplements package for students and instructors that includes a new Media Manager CD-ROM, a new Print and Computerized Test Bank, and a powerful Companion Website. The InterActive Physiology® 10-System Suite CD-ROM and PhysioEx® V7.0 laboratory simulations can be packaged with the text at a discounted price.

Principles of Animal Behavior - Lee Alan Dugatkin 2013-03-28

Principles of Animal Behavior has long been considered the most current and engaging introduction to animal behavior. The Third Edition is now also the most comprehensive and balanced in its approach to the theoretical framework behind how biologists study behavior.

Plant Physiology - A. Malcolm Campbell 2016-04-21

This book examines three ways plants respond to their changing environment. The first example can be found in all plants. Despite the extreme changes in weather, plants have to stay where they are and respond to whatever nature produces. Plants have the capacity to respond quickly and yet they can evolve in a single generation. The second example addresses how an individual leaf has to respond rapidly and repeatedly to maintain the proper balance of carbon dioxide (CO₂) and water so that it can photosynthesize but not dry out. This delicate

balance is governed by a pair of cells that regulate the size of openings on leaves. The final chapter examines a unique example of a leaf that can move fast enough to trap insects and digest them. This book presents data that led to our understanding of how plants function on different time scales.

Principles of Animal Physiology - Christopher D. Moyes 2013-07-26

Principles of Animal Physiology, Second Edition continues to set a new standard for animal physiology textbooks with its focus on animal diversity, its modern approach and clear foundation in molecular and cell biology, its concrete examples throughout, and its fully integrated coverage of the endocrine system. Carefully designed, full-color artwork guides students through complex systems and processes while in-text pedagogical tools help them learn and remember the material. The book includes the most up-to-date research on animal genetics and genomics, methods and models, and offers a diverse range of vertebrate and invertebrate examples, with a student-friendly writing style that is consistently clear and engaging.

Conservation of Wildlife Populations - L. Scott Mills 2012-12-17

Population ecology has matured to a sophisticated science with astonishing potential for contributing solutions to wildlife conservation and management challenges. And yet, much of the applied power of wildlife population ecology remains untapped because its broad sweep across disparate subfields has been isolated in specialized texts. In this book, L. Scott Mills covers the full spectrum of applied wildlife population ecology, including genomic tools for non-invasive genetic sampling, predation, population projections, climate change and invasive species, harvest modeling, viability analysis, focal species concepts, and analyses of connectivity in fragmented landscapes. With a readable style, analytical rigor, and hundreds of examples drawn from around the world, Conservation of Wildlife Populations (2nd ed) provides the conceptual basis for applying population ecology to wildlife conservation decision-making. Although targeting primarily undergraduates and beginning graduate students with some basic training in basic ecology and statistics (in majors that could include wildlife biology, conservation biology,

ecology, environmental studies, and biology), the book will also be useful for practitioners in the field who want to find - in one place and with plenty of applied examples - the latest advances in the genetic and demographic aspects of population ecology. Additional resources for this book can be found at: www.wiley.com/go/mills/wildlifepopulations.

Functional Anatomy and Physiology of Domestic Animals - William O. Reece 2017-06-16

Now in its Fifth Edition, *Functional Anatomy and Physiology of Domestic Animals* provides a basic understanding of domestic animal anatomy and physiology, taking an interconnected approach to structure and function of the horse, dog, cat, cow, sheep, goat, pig, and chicken. Offers a readable introduction to basic knowledge in domestic animal anatomy and physiology Covers equine, canine, feline, bovine, ovine, ruminant, swine, and poultry anatomy and physiology Considers structure and function in relation to each other for a full understanding of the relationship between the two Provides pedagogical tools to promote learning, including chapter outlines, study questions, self-evaluation exercises, clinical correlates, key terms, suggested readings, and a robust art program Includes access to a companion website with video clips, review questions, and the figures from the book in PowerPoint

Eckert Animal Physiology - David J. Randall 2002

This classic animal physiology text focuses on comparative examples that illustrate the general principles of physiology at all levels of organisation—from molecular mechanisms to regulated physiological systems to whole organisms in their environment. This textbook is an authoritative and complete guide to the field of animal physiology which uses a threefold approach to teaching. The Comparative Approach emphasises basic mechanisms but allows patterns of physiological function in different species to demonstrate how evolution creates diversity. This approach encourages students to appreciate the underlying principles that govern physiological systems. The Experimental Emphasis helps students to understand the process of scientific discovery and shows how our knowledge of physiology continually increases and finally the Integrative Approach presents information about specific physiological

systems at all levels of organisation, from molecular interactions to interactions between an organism and its environment.n included.

Principles of Animal Physiology - Christopher D. Moyes 2016

Principles of Animal Physiology, by Chris Moyes and Trish Schulte, is designed to provide second- and third-year, undergraduate university students enrolled in animal physiology courses with an approach that balances its presentation of comparative physiology with mechanistic topics. The book delivers the fundamentals of animal physiology, while providing an integrative learning experience, drawing on ideas from chemistry, physics, mathematics, molecular biology and cell biology for its conceptual underpinnings.

Principles of Animal Physiology, Loose Leaf Version - Christopher D. Moyes 2015-01-15

Animal Physiology - Richard W. (Michigan State University) Hill 2017-10-05

Published by Sinauer Associates, an imprint of Oxford University Press.

The Laboratory Mouse - Hans Hedrich 2012-06-14

The Laboratory Mouse, Second Edition is a comprehensive book written by international experts. With inclusions of the newly revised European standards on laboratory animals, this will be the most current, global authority on the care of mice in laboratory research. This well-illustrated edition offers new and updated chapters including immunology, viruses and parasites, behavior, enrichment and care standards of laboratory mice across the life sciences, medical and veterinary fields. Features four-color illustrations with complete instruction on mouse surgery, anatomy, behavior and care of the mouse in laboratory research Offers additional chapters on new mouse strains, phenotyping of strains, bacteria and parasites, and immunology Includes the newly revised EU standards on care, as well as, comparisons to standards and regulations in the US and other countries

Principles of Animal Behavior (Third Edition) - Lee Alan Dugatkin 2013-03-25

Current, balanced, and comprehensive. *Principles of Animal Behavior* has

long been considered the most current and engaging introduction to animal behavior. The Third Edition is now also the most comprehensive and balanced in its approach to the theoretical framework behind how biologists study behavior.

Animal Models for the Study of Human Disease - P. Michael Conn
2013-05-29

Animal Models for the Study of Human Disease identifies important animal models and assesses the advantages and disadvantages of each model for the study of human disease. The first section addresses how to locate resources, animal alternatives, animal ethics and related issues, much needed information for researchers across the biological sciences and biomedicine. The next sections of the work offers models for disease-oriented topics, including cardiac and pulmonary diseases, aging, infectious diseases, obesity, diabetes, neurological diseases, joint diseases, visual disorders, cancer, hypertension, genetic diseases, and diseases of abuse. Organized by disease orientation for ease of searchability Provides information on locating resources, animal alternatives and animal ethics Covers a broad range of animal models used in research for human disease

Clinical and Translational Science - David Robertson 2016-11-25
Clinical and Translational Science: Principles of Human Research, Second Edition, is the most authoritative and timely resource for the broad range of investigators taking on the challenge of clinical and translational science, a field that is devoted to investigating human health and disease, interventions, and outcomes for the purposes of developing new treatment approaches, devices, and modalities to improve health. This updated second edition has been prepared with an international perspective, beginning with fundamental principles, experimental design, epidemiology, traditional and new biostatistical approaches, and investigative tools. It presents complete instruction and guidance from fundamental principles, approaches, and infrastructure, especially for human genetics and genomics, human pharmacology, research in special populations, the societal context of human research, and the future of human research. The book moves on to discuss legal, social, and ethical

issues, and concludes with a discussion of future prospects, providing readers with a comprehensive view of this rapidly developing area of science. Introduces novel physiological and therapeutic strategies for engaging the fastest growing scientific field in both the private sector and academic medicine Brings insights from international leaders into the discipline of clinical and translational science Addresses drug discovery, drug repurposing and development, innovative and improved approaches to go/no-go decisions in drug development, and traditional and innovative clinical trial designs

Principles of Cloning - Jose Cibelli 2013-09-24

Principles of Cloning, Second Edition is the fully revised edition of the authoritative book on the science of cloning. The book presents the basic biological mechanisms of how cloning works and progresses to discuss current and potential applications in basic biology, agriculture, biotechnology, and medicine. Beginning with the history and theory behind cloning, the book goes on to examine methods of micromanipulation, nuclear transfer, genetic modification, and pregnancy and neonatal care of cloned animals. The cloning of various species—including mice, sheep, cattle, and non-mammals—is considered as well. The Editors have been involved in a number of breakthroughs using cloning technique, including the first demonstration that cloning works in differentiated cells done by the Recipient of the 2012 Nobel Prize for Physiology or Medicine - Dr John Gurdon; the cloning of the first mammal from a somatic cell - Drs Keith Campbell and Ian Wilmut; the demonstration that cloning can reset the biological clock - Drs Michael West and Robert Lanza; the demonstration that a terminally differentiated cell can give rise to a whole new individual - Dr Rudolf Jaenisch and the cloning of the first transgenic bovine from a differentiated cell - Dr Jose Cibelli. The majority of the contributing authors are the principal investigators on each of the animal species cloned to date and are expertly qualified to present the state-of-the-art information in their respective areas. First and most comprehensive book on animal cloning, 100% revised Describes an in-depth analysis of current limitations of the technology and research areas to explore Offers cloning applications on

basic biology, agriculture, biotechnology, and medicine
Standard animal physiology - Andrew Wilson 1878

Genetics of Bone Biology and Skeletal Disease - Rajesh V. Thakker
2017-10-31

Genetics of Bone Biology and Skeletal Disease, Second Edition, is aimed at students of bone biology and genetics and includes general introductory chapters on bone biology and genetics. More specific disease orientated chapters comprehensively summarize the clinical, genetic, molecular, animal model, molecular pathology, diagnostic, counseling, and treatment aspects of each disorder. The book is organized into five sections that each emphasize a particular theme, general background to bone biology, general background to genetics and epigenetics, disorders of bone and joint, parathyroid and related disorders, and vitamin D and renal disorders. The first section is specifically devoted to providing an overview of bone biology and structure, joint and cartilage biology, principles of endocrine regulation of bone, and the role of neuronal regulation and energy homeostasis. The second section reviews the principles and progress of medical genetics and epigenetics related to bone disease, including genome-wide association studies (GWAS), genomic profiling, copy number variation, prospects of gene therapy, pharmacogenomics, genetic testing and counseling, as well as the generation and utilizing of mouse models. The third section details advances in the genetics and molecular biology of bone and joint diseases, both monogenic and polygenic, as well as skeletal dysplasias, and rarer bone disorders. The fourth section highlights the central role of the parathyroids in calcium and skeletal homeostasis by reviewing the molecular genetics of: hyperparathyroidism, hypoparathyroidism, endocrine neoplasias, and disorders of the PTH and calcium-sensing receptors. The fifth section details molecular and cellular advances across associated renal disorders such as vitamin D and rickets. Identifies and analyzes the genetic basis of bone disorders in humans and demonstrates the utility of mouse models in furthering the knowledge of mechanisms and evaluation of treatments Demonstrates how the interactions between

bone and joint biology, physiology, and genetics have greatly enhanced the understanding of normal bone function as well as the molecular pathogenesis of metabolic bone disorders Summarizes the clinical, genetic, molecular, animal model, molecular pathology, diagnostic, counseling, and treatment aspects of each disorder

Animal Physiology - Richard W. Hill 2004-01-01

Animal Physiology presents all the branches of modern animal physiology with a strong emphasis on integration among physiological disciplines, ecology, and evolutionary biology. The book takes an entirely fresh approach to each topic. Its full-colour illustration program includes many novel, visually effective features to help students learn. Each of the 28 chapters starts with a brief animal example to engage student interest and demonstrate the value of the material that will be learned. The book includes five entire chapters that apply students' newfound physiological knowledge to curiosity-provoking and important topics, including diving by marine mammals, the mechanisms of navigation, and disuse effects in muscle. The book is committed to a comparative approach throughout. While mammalian physiology is consistently treated in depth, emphasis is also given to the other vertebrate groups, arthropods, molluscs, and - as appropriate - additional invertebrates. Concepts and integrative themes are emphasized while giving students the specifics they need. The whole animal is the principal focus of this book. The pages are filled with information on everything from knockout mice and enzyme chemistry to traditional organ physiology, phylogenetic analysis, and applications to human affairs. Always, the central organizing principle for the array of topics presented is to understand whole animals in the environments where they live.

Animal Physiology - Knut Schmidt-Nielsen 1976-04-22

Principles of Life - David M. Hillis 2014-08-22

With its first edition, *Principles of Life* provided a textbook well aligned with the recommendations proposed in BIO 2010: Transforming Undergraduate Education for Future Research Biologists and Vision and Change in Undergraduate Biology Education. Now *Principles of Life*

returns in a thoroughly updated new edition that exemplifies the reform that is remaking the modern biology classroom.

Small Animal Clinical Pharmacology - Jill E. Maddison 2008

Small Animal Clinical Pharmacology is a practical, clinically-oriented pharmacology text designed to provide the veterinary student and practitioner with all the relevant information needed when designing drug treatment regimens for pets in small animal veterinary practice.

Comprehensively updated and revised, the second edition of this core text covers essential new information on drugs used in the management of a range of presenting conditions including heart disease and cardiac arrhythmias. For the second edition new authors, superb new illustrations and a second colour have all been introduced. With its unique approach combining a thorough understanding of the pharmacological action of drugs with a basic understanding of the relevant physiology and pathophysiology of systems and tissues affected, *Small Animal Clinical Pharmacology* continues to be an indispensable book for all veterinary students and practitioners. Organised by drug class in a uniform and detailed structure which means it is easy to locate key information on dose rates, routes of administration, drug interactions and special considerations at a glance. Key chapters based around treatment of disorders of particular body systems, eg cardiovascular and thyroid disorders. Essential introductory chapters covering pharmacokinetics, general pharmacological principles and adverse reactions for a thorough basic grounding in the subject. All authors are experienced clinicians and recognised experts in their field who bring a down to earth and practical approach to the text.

Stress and Animal Welfare - Donald M. Broom 2019-11-25

This is the Second Edition of a well-received book that reflects a fresh, integrated coverage of the concepts and scientific measurement of stress and welfare of animals including humans. This book explains the basic biological principles of coping with many forms of adversity. The major part of this work is devoted to explaining scientifically usable concepts in stress and welfare. A wide range of welfare indicators are highlighted in detail with examples being drawn from man and other species. The

necessity for combining information from disciplines is emphasized with a one-health, one-welfare approach. This information forms the basis for a synthesis of new ideas. Among the issues covered are: - How brain and body systems regulate using feelings, physiological responses, behaviour and responses to pathology - Limits to adaptation - Assessing positive and negative welfare during both short-term and long-term situations - Ethical problems and suggested solutions. A proper assessment of animal welfare is essential to take informed decisions about what is morally acceptable in terms of practice and in the development of a more effective legislation. This work encapsulates a very wide body of literature on scientific aspects of animal welfare and will thus prove a valuable asset for animal welfare scientists, psychologists, students and teachers of all forms of biology, behaviour, medicine, veterinary medicine and animal usage.

Veterinary Immunology - Michael J. Day 2014-06-23

Veterinary Immunology: Principles and Practice has become the adopted text in numerous veterinary schools throughout the world. Widely updated with advances in knowledge since 2011, this second edition reflects the rapid development in the field. The new edition presents expanded information on commonly used diagnostic test procedures and discusses

Principles of Animal Nutrition - Guoyao Wu 2017-11-22

Animals are biological transformers of dietary matter and energy to produce high-quality foods and wools for human consumption and use. Mammals, birds, fish, and shrimp require nutrients to survive, grow, develop, and reproduce. As an interesting, dynamic, and challenging discipline in biological sciences, animal nutrition spans an immense range from chemistry, biochemistry, anatomy and physiology to reproduction, immunology, pathology, and cell biology. Thus, nutrition is a foundational subject in livestock, poultry and fish production, as well as the rearing and health of companion animals. This book entitled *Principles of Animal Nutrition* consists of 13 chapters. Recent advances in biochemistry, physiology and anatomy provide the foundation to understand how nutrients are utilized by ruminants and non-ruminants. The text begins with an overview of the physiological and biochemical bases of animal

nutrition, followed by a detailed description of chemical properties of carbohydrates, lipids, protein, and amino acids. It advances to the coverage of the digestion, absorption, transport, and metabolism of macronutrients, energy, vitamins, and minerals in animals. To integrate the basic knowledge of nutrition with practical animal feeding, the book continues with discussion on nutritional requirements of animals for maintenance and production, as well as the regulation of food intake by animals. Finally, the book closes with feed additives, including those used to enhance animal growth and survival, improve feed efficiency for protein production, and replace feed antibiotics. While the classical and modern concepts of animal nutrition are emphasized throughout the book, every effort has been made to include the most recent progress in this ever-expanding field, so that readers in various biological disciplines can integrate biochemistry and physiology with nutrition, health, and disease in mammals, birds, and other animal species (e.g., fish and shrimp). All chapters clearly provide the essential literature related to the principles of animal nutrition, which should be useful for academic researchers, practitioners, beginners, and government policy makers. This book is an excellent reference for professionals and a comprehensive textbook for senior undergraduate and graduate students in animal science, biochemistry, biomedicine, biology, food science, nutrition, veterinary medicine, and related fields.

Animal Physiology - Richard W. Hill 2012

This full-colour and pedagogy-rich textbook presents all the branches of modern animal physiology, with a strong emphasis on integration among physiological disciplines, ecology, and evolutionary biology. Updated throughout, the third edition also includes a new chapter on physiological development and epigenetics.

Principles of Animal Physiology Plus Companion Website with Pearson Etext -- Access Card Package - Christopher D. Moyes 2015-07-03

Principles of Animal Physiology, by Chris Moyes and Trish Schulte, is designed to provide second- and third-year, undergraduate university students enrolled in animal physiology courses with an approach that

balances its presentation of comparative physiology with mechanistic topics. The book delivers the fundamentals of animal physiology, while providing an integrative learning experience, drawing on ideas from chemistry, physics, mathematics, molecular biology and cell biology for its conceptual underpinnings.

Animal Physiology - Roger Eckert 1988-01-01

Anatomy and Physiology of Domestic Animals - R. Michael Akers 2013-09-05

Anatomy and Physiology of Domestic Animals, Second Edition offers a detailed introduction to the foundations of anatomy and physiology in a wide range of domestic species. Well illustrated throughout, the book provides in-depth information on the guiding principles of this key area of study for animal science students, fostering a thorough understanding of the complex make-up of domestic animals. This Second Edition includes access to supplementary material online, including images and tables available for download in PowerPoint, a test bank of questions for instructors, and self-study questions for students at www.wiley.com/go/akers/anatomy. Taking a logical systems-based approach, this new edition is fully updated and now provides more practical information, with descriptions of anatomic or physiological events in pets or domestic animals to demonstrate everyday applications. Offering greater depth of information than other books in this area, *Anatomy and Physiology of Domestic Animals* is an invaluable textbook for animal science students and professionals in this area.

Principles and Practice of Clinical Electrophysiology of Vision, second edition - John R. Heckenlively 2006-04-07

The long-awaited second edition of an authoritative reference on electrophysiologic vision testing, including detailed information on techniques and problems, basic physiology and anatomy, theoretical concepts, and clinical findings; with extensive new material. This authoritative text is the only comprehensive reference available on electrophysiologic vision testing, offering both practical information on techniques and problems as well as basic physiology and anatomy,

theoretical concepts, and clinical correlations. The second edition, of the widely used text, offers extensive new material and updated information: 65 of the 84 chapters are completely new, with the changes reflecting recent advances in the field. The book will continue to be an essential resource for practitioners and scholars from a range of disciplines within vision science. The contributions not only cover new information—important material that is likely to become more important in the next decade—but also offer a long-range perspective on the field and its remarkable development in the last century. After discussing the history and background of clinical electrophysiology, the book introduces the anatomy of the retina and principles of cell biology in the visual pathways at the molecular, physiological, and biochemical levels. It relates these new findings to the techniques and interpretations of clinical tests, including the electro-oculogram (EOG), electroretinogram (ERG), and visual evoked potentials (VEP), which are discussed in detail, as are equipment, data acquisition and analysis, principles and protocols for clinical testing, diseases and dysfunction, and animal testing. Notable additions for this edition include chapters on the origin of electroretinogram waveforms, multifocal techniques, testing in standard laboratory animals, recent advances in analysis of abnormalities in disease, and the applications of these techniques to the study of genetic abnormalities.

Principles of Animal Physiology - James Albert Wilson 1972

Environmental Physiology of Animals - Pat Willmer 2009-03-12

The new and updated edition of this accessible text provides a comprehensive overview of the comparative physiology of animals within an environmental context. Includes two brand new chapters on Nerves and Muscles and the Endocrine System. Discusses both comparative systems physiology and environmental physiology. Analyses and

integrates problems and adaptations for each kind of environment: marine, seashore and estuary, freshwater, terrestrial and parasitic. Examines mechanisms and responses beyond physiology. Applies an evolutionary perspective to the analysis of environmental adaptation. Provides modern molecular biology insights into the mechanistic basis of adaptation, and takes the level of analysis beyond the cell to the membrane, enzyme and gene. Incorporates more varied material from a wide range of animal types, with less of a focus purely on terrestrial reptiles, birds and mammals and rather more about the spectacularly successful strategies of invertebrates. A companion site for this book with artwork for downloading is available at:

www.blackwellpublishing.com/willmer/

Principles of Animal Physiology - Moyes 2007-09

Animal Physiology: From Genes to Organisms - Lauralee Sherwood
2012-01-01

Promoting a conceptual understanding and taking an integrative systems approach, ANIMAL PHYSIOLOGY 2E illustrates the individual organization as well as the collective interdependence of each complete physiological system. The text begins with chapters on integrative principles and on the genomic, molecular, and cellular basis of physiology, then proceeds to chapters on individual organ systems. For each organ system, evolutionary forces as well as current cellular and molecular research are discussed. To clearly illustrate system interdependence, each systems chapter contains a summary, titled Making Connections. To make the text even more accessible to students, the authors also incorporate a comparative approach to animal physiology, examining the basic physiology of many vertebrate and nonvertebrate animals as well as their primary diseases and ability to respond to environmental changes. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.