

A Primer Of Conservation Biology Fifth Edition

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[A Primer of Ecological Genetics](#) - Jeffrey K. Conner 2004-01

This book covers basic concepts in population and quantitative genetics, including measuring selection on phenotypic traits. The emphasis is on material

applicable to field studies of evolution focusing on ecologically important traits. Topics addressed are critical for training students in ecology, evolution, conservation biology, agriculture, forestry, and wildlife

management. Many texts in this field are too complex and mathematical to allow the average beginning student to readily grasp the key concepts. *A Primer of Ecological Genetics*, in contrast, employs mathematics and statistics-fully explained, but at a less advanced level-as tools to improve understanding of biological principles. The main goal is to enable students to understand the concepts well enough that they can gain entry into the primary literature. Integration of the different chapters of the book shows students how diverse concepts relate to each other.

A Primer of Conservation Biology - Richard B. Primack
2004-01-01

A Primer of Conservation Biology, Third Edition incorporates background, theory, and examples in a lively and readable text that will appeal to a wide audience and stimulate interest in conservation biology.

The book provides the most up-to-date perspective on many high-profile issues in the field, such as sustainable development, the effectiveness of conservation laws and treaties, the design of conservation areas, classification of conservation threats, and strategies to save species on the verge of extinction. The *Primer* is divided into five chapters, focusing successively on biological diversity and its value, the threats to biological diversity, conservation at the population and species levels, protecting and managing habitats and ecosystems, and human societies and sustainable development. Case studies are included to demonstrate the controversies in the field, and to stimulate thought and discussion. The book provides many examples of successful conservation approaches and ends with suggestions for a future agenda. Throughout, the choice of examples is well balanced to

show the full range of species, habitats, and geographic areas of the world. The links between conservation biology and environmental law, environmental economics, philosophy, social sciences and anthropology, park management, and government policy are clearly presented. The book is very well illustrated, includes an extensive bibliography (covering literature through 2004) and a glossary, and has an annotated list of suggested readings and discussion questions at the end of each chapter. Sources of further information are given in an Appendix. A Primer of Conservation Biology is ideally suited for use in short undergraduate courses, either as a stand-alone text or supplemented by outside readings. It can also be used effectively as a supplemental resource for courses in introductory biology, general ecology, population biology, environmental science, and w

Essentials of Conservation

Biology - Richard B. Primack

2014-06-26

Essentials of Conservation

Biology has established itself as an engrossing book from which to learn or teach. Combining theory and research and with examples from current literature, the book explain the links between conservation biology and other fields such as ecology, climate change, environmental economics, sustainable development and more.

Lyster's International Wildlife

Law - Michael Bowman

2010-12-23

The development of international wildlife law has been one of the most significant exercises in international law-making during the last fifty years. This second edition of Lyster's International Wildlife Law coincides with both the UN Year of Biological Diversity and the twenty-fifth anniversary of Simon Lyster's first edition. The risk of wildlife

depletion and species extinction has become even greater since the 1980s. This new edition provides a clear and authoritative analysis of the key treaties which regulate the conservation of wildlife and habitat protection, and of the mechanisms available to make them work. The original text has also been significantly expanded to include analysis of the philosophical and welfare considerations underpinning wildlife protection, the cross-cutting themes of wildlife and trade, and the impact of climate change and other anthropogenic interferences with species and habitat. Lyster's International Wildlife Law is an indispensable reference work for scholars, practitioners and policy-makers alike.

Non-native Species and Their Role in the Environment - Radu Cornel Guiuşu 2016-08-01

The role of non-native species in their new environments is one of the central issues in conservation

biology and ecology today. This book presents a comprehensive evolutionary exploration of the complex and dynamic interactions between introduced species and native ones, and shows that non-native species can bring useful and important contributions to novel ecosystems. Based on a wide variety of examples and case studies, a strong case is made for a more positive and objective approach to non-native species and a greater appreciation of the valuable ecosystem services they provide.

Predator Ecology - John P. DeLong 2021-09-15

Predator-prey interactions are ubiquitous, govern the flow of energy up trophic levels, and strongly influence the structure of ecological systems. They are typically quantified using the functional response - the relationship between a predator's foraging rate and the availability of food. As such, the functional

response is central to how all ecological communities function - since all communities contain foragers - and a principal driver of the abundance, diversity, and dynamics of ecological communities. The functional response also reflects all the behaviors, traits, and strategies that predators use to hunt prey and that prey use to evade predation. It is thus both a clear reflection of past evolution, including predator-prey arms races, and a major force driving the future evolution of both predator and prey. Despite their importance, there have been remarkably few attempts to synthesize or even briefly review functional responses. This novel and accessible book fills this gap, clearly demonstrating their crucial role as the link between individuals, evolution, and community properties, representing a highly-integrated and measurable aspect of ecological function. It provides a

clear entry point for students, a refresher for more advanced researchers, and a motivator for future research. *Predator Ecology* is an advanced textbook suitable for graduate students and researchers in ecology and evolutionary biology seeking a broad, up-to-date, and authoritative coverage of the field. It will also be of relevance and use to mathematical ecologists, wildlife biologists, and anyone interested in predator-prey interactions.

Size, Function, and Life History -

William A. Calder 1996-01-01

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

Ecosystem-Based Fisheries

Management - Jason S. Link

2021-11-15

Ecosystem-based fishery management (EBFM) is rapidly becoming the default approach in

global fisheries management. The clarity of what EBFM means is sharpening each year and there is now a real need to evaluate progress and assess the effectiveness and impacts. By examining a suite of over 90 indicators (including socioeconomic, governance, environmental forcing, major pressures, systems ecology, and fisheries criteria) for 9 major US fishery ecosystem jurisdictions, the authors systematically track the progress the country has made towards advancing EBFM and making it an operational reality. The assessment covers a wide range of data in both time (multiple decades) and space (from the tropics to the poles, representing over 10% of the world's ocean surface area). The authors view progress towards the implementation of EBFM as synonymous with improved management of living marine resources in general, and highlight the findings from a

national perspective. Although US-centric, the lessons learned are directly applicable for all parts of the global ocean. Much work remains, but significant progress has already been made to better address many of the challenges facing the sustainable management of our living marine resources. This is an essential and accessible reference for all fisheries professionals who are currently practicing, or progressing towards, ecosystem-based fisheries management. It will also be of relevance and use to researchers, teachers, managers, and graduate students in marine ecology, fisheries biology, biological oceanography, global change biology, conservation biology, and marine resource management.

CliffsNotes AP Biology 2021

Exam - Phillip E. Pack

2020-08-04

CliffsNotes AP Biology 2021

Exam gives you exactly what you need to score a 5 on the

exam: concise chapter reviews on every AP Biology subject, in-depth laboratory investigations, and full-length model practice exams to prepare you for the May 2021 exam. Revised to even better reflect the new AP Biology exam, this test-prep guide includes updated content tailored to the May 2021 exam. Features of the guide focus on what AP Biology test-takers need to score high on the exam: Reviews of all subject areas In-depth coverage of the all-important laboratory investigations Two full-length model practice AP Biology exams Every review chapter includes review questions and answers to pinpoint problem areas.

The Journeys of Trees: A Story about Forests, People, and the

Future - Zach St. George

2020-07-14

An urgent and illuminating portrait of forest migration, and of the people studying the forests of the past, protecting the forests of

the present, and planting the forests of the future. Forests are restless. Any time a tree dies or a new one sprouts, the forest that includes it has shifted. When new trees sprout in the same direction, the whole forest begins to migrate, sometimes at astonishing rates. Today, however, an array of obstacles—humans felling trees by the billions, invasive pests transported through global trade—threaten to overwhelm these vital movements. Worst of all, the climate is changing faster than ever before, and forests are struggling to keep up. A deft blend of science reporting and travel writing, *The Journeys of Trees* explores the evolving movements of forests by focusing on five trees: giant sequoia, ash, black spruce, Florida torreya, and Monterey pine. Journalist Zach St. George visits these trees in forests across continents, finding sequoias losing their needles in California, fossil records showing

the paths of ancient forests in Alaska, domesticated pines in New Zealand, and tender new sprouts of blight-resistant American chestnuts in New Hampshire. Everywhere he goes, St. George meets lively people on conservation's front lines, from an ecologist studying droughts to an evolutionary evangelist with plans to save a dying species. He treks through the woods with activists, biologists, and foresters, each with their own role to play in the fight for the uncertain future of our environment. An eye-opening investigation into forest migration past and present, *The Journeys of Trees* examines how we can all help our trees, and our planet, survive and thrive.

Fundamentals of Conservation Biology - Malcolm L. Hunter, Jr.
2009-03-12

In the new edition of this highly successful book, Malcolm Hunter and new co-author James Gibbs offer a thorough introduction to

the fascinating and important field of conservation biology, focusing on what can be done to maintain biodiversity through management of ecosystems and populations. Starting with a succinct look at conservation and biodiversity, this book progresses to contend with some of the subject's most complex topics, such as mass extinctions, ecosystem degradation, and over exploitation. Discusses social, political, and economic aspects of conservation biology. Thoroughly revised with over six hundred new references and web links to many of the organizations involved in conservation biology, striking photographs and maps. Artwork from the book is available to instructors online at www.blackwellpublishing.com/hunter and by request on CD-ROM.

Teaching Biology in Schools - Kostas Kampourakis 2018-05-23

An indispensable tool for biology teacher educators, researchers,

graduate students, and practising teachers, this book presents up-to-date research, addresses common misconceptions, and discusses the pedagogical content knowledge necessary for effective teaching of key topics in biology. Chapters cover core subjects such as molecular biology, genetics, ecology, and biotechnology, and tackle broader issues that cut across topics, such as learning environments, worldviews, and the nature of scientific inquiry and explanation. Written by leading experts on their respective topics from a range of countries across the world, this international book transcends national curricula and highlights global issues, problems, and trends in biology literacy.

Infectious Disease Ecology and

Conservation - Johannes

Foufopoulos 2022-02-10

Emerging infectious diseases pose an increasingly serious threat to a number of endangered or sensitive species and are

increasingly recognized as one of the major factors driving species extinction. Despite the significant impact of pathogens on conservation, no single book has yet integrated the theoretical principles underlying disease transmission with the practical health considerations for helping wildlife professionals and conservation biologists to manage disease outbreaks and conserve biodiversity. This novel and accessible book starts with a foundational section focusing on the role of pathogens in natural ecosystems, the dynamics of transmission in different environments, and the factors driving wildlife disease outbreaks. It then moves on to more applied issues concerned with the acquisition of field data including sampling, experimental design and analysis, as well as diagnostic analyses in both the laboratory and field. Guidelines for effective modelling and data analysis follow, before a final

section is devoted to disease prevention and control including the prevention of novel outbreaks, the use of diseases as biocontrol agents, and the associated issues of ethics, public communication, and outreach. *Infectious Disease Ecology and Conservation* is primarily aimed at advanced undergraduates, graduate students, and established researchers in the fields of conservation biology, disease ecology, population ecology, and veterinary science. It will also be a valuable reference for conservation practitioners, land managers, and wildlife professionals who are required to deal with disease outbreak problems.

Ecology - Michael Lee Cain 2011
Offering a balance of subject matter emphasis, clearly presented concepts and engaging examples, this book aims to help students gain a better understanding of ecology. Emphasis is placed on connections

in nature, the importance of ecology to environmental health and services, and links to evolution.

No Species Is an Island - Theodore H. Fleming 2017-09-05
"The book describes for a general natural history audience the unexpected scientific discoveries Fleming's research team made during an intensive 11-year study of four species of Sonoran Desert columnar cacti and their pollinators"--Provided by publisher.

Conservation Biology - Kamaljit S. Bawa 2011

Birds: A Smithsonian Coloring Book - Smithsonian Institution 2021-05-25

A lush world of birds and the environments they inhabit -- ready for you to color!
Smithsonian's National Zoo & Conservation Biology Institute presents a fascinating new coloring book that provides an up close and personal tour through a

vibrant range of birds. With this meticulously illustrated coloring book, avian fans of all ages can explore the wonder of these feathered animals, the terrain in which they make their homes, and the many unique aspects of each species that makes it a vivid addition to the National Zoo and Conservation Biology Institute collections. Guided by experts from The Smithsonian and brought to life by Rachel Curtis (*Dinosaurs: A Smithsonian Coloring Book*). These rich pen and ink illustrations invite you to step into captivating scenes featuring the blue crane, red knot, brown kiwi, Guam kingfisher, and many more. Fans of birds, coloring books, and aviary migration will find an enchanting realm to unlock with their own creativity. Each page of *Birds: A Smithsonian Coloring Book* not only stands alone as a work of art, but is also accompanied by brief and fascinating insights from the

museum's avian experts about each bird and its world, ensuring that time spent coloring is also time spent learning. This book's deluxe ivory paper allows for a variety of artistic media like pen, pencil, or even watercolor, to ensure your creative vision comes to life just the way you want--and lasts for years to come. *Conservation Biology* - Fred Van Dyke 2008-02-28

Fred Van Dyke's new textbook, *Conservation Biology: Foundations, Concepts, Applications*, 2nd Edition, represents a major new text for anyone interested in conservation. Drawing on his vast experience, Van Dyke's organizational clarity and readable style make this book an invaluable resource for students in conservation around the globe. Presenting key information and well-selected examples, this student-friendly volume carefully integrates the science of conservation biology with its

implications for ethics, law, policy and economics.

Herpetology - Laurie J. Vitt
2013-03-25

The fourth edition of the textbook Herpetology covers the basic biology of amphibians and reptiles, with updates in nearly every conceptual area. Not only does it serve as a solid foundation for modern herpetology courses, but it is also relevant to courses in ecology, behavior, evolution, systematics, and morphology.

Examples taken from amphibians and reptiles throughout the world make this book a useful herpetology textbook in several countries. Naturalists, amateur herpetologists, herpetoculturists, zoo professionals, and many others will find this book readable and full of relevant natural history and distributional information. Amphibians and reptiles have assumed a central role in research because of the diversity of ecological, physiological, morphological,

behavioral, and evolutionary patterns they exhibit. This fully revised edition brings the latest research to the reader, ranging over topics in evolution, reproduction, behavior and more, allowing students and professionals to keep current with a quickly moving field.

Heavily revised and updated with discussion of squamate (lizard and snake) taxonomy and new content reflected in current literature Includes increased focus on conservation biology in herpetology while retaining solid content on organismal biology of reptiles and amphibians Presents new photos included from authors' extensive library

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.

Ecology - Charles J. Krebs 2001

This best-selling majors ecology book continues to present ecology as a series of problems for readers to critically analyze. No other text presents analytical, quantitative, and statistical ecological information in an equally accessible style.

Reflecting the way ecologists actually practice, the book emphasizes the role of experiments in testing ecological ideas and discusses many contemporary and controversial

problems related to distribution and abundance. Throughout the book, Krebs thoroughly explains the application of mathematical concepts in ecology while reinforcing these concepts with research references, examples, and interesting end-of-chapter review questions. Thoroughly updated with new examples and references, the book now features a new full-color design and is accompanied by an art CD-ROM for instructors. The field package also includes The Ecology Action Guide, a guide that encourages readers to be environmentally responsible citizens, and a subscription to The Ecology Place (www.ecologyplace.com), a web site and CD-ROM that enables users to become virtual field ecologists by performing experiments such as estimating the number of mice on an imaginary island or restoring prairie land in Iowa. For college instructors and students.

Fundamentals of Soil Ecology -

David C. Coleman 2004-08-11

This fully revised and expanded edition of *Fundamentals of Soil Ecology* continues its holistic approach to soil biology and ecosystem function. Students and ecosystem researchers will gain a greater understanding of the central roles that soils play in ecosystem development and function. The authors emphasize the increasing importance of soils as the organizing center for all terrestrial ecosystems and provide an overview of theory and practice of soil ecology, both from an ecosystem and evolutionary biology point of view. This volume contains updated and greatly expanded coverage of all belowground biota (roots, microbes and fauna) and methods to identify and determine its distribution and abundance. New chapters are provided on soil biodiversity and its relationship to ecosystem processes, suggested laboratory and field methods to measure

biota and their activities in ecosystems.. Contains over 60% new material and 150 more pages Includes new chapters on soil biodiversity and its relationship to ecosystem function Outlines suggested laboratory and field methods Incorporates new pedagogical features Combines theoretical and practical approaches

Soil Science Simplified - Donald P. Franzmeier 2016-04-08
Throughout its previous four editions, *Soil Science Simplified* has helped generations of students understand the basic concepts and scientific principles of soils. The Fifth Edition expands on that foundation, providing a perfect overview for those seeking a concise, practical introduction to the subject. The authors' combined 100 years of teaching experience result in a handbook that won't confuse or intimidate students. The Fifth Edition retains the text's solid grounding in classification,

genesis, and morphology of soils. New chapters cover such contemporary topics as soil mineralogy, soil moisture regimes, current soil survey practices, and how soil management practices directly affect the quality of a variety of water resources.

Walden Warming - Richard B. Primack 2014-04-01

“An unnervingly close-to-home perspective [on] the dynamics and impact of climate change on plants, birds, and myriad other species, including us.”—Booklist
In his meticulous notes on the natural history of Concord, Massachusetts, Henry David Thoreau records the first open flowers of highbush blueberry on May 11, 1853. If he were to look for the first blueberry flowers in Concord today, mid-May would be too late. Warming temperatures have pushed blueberry flowering three weeks earlier, and in 2012, following a period of record-breaking

warmth, blueberries began flowering on April 1—six weeks earlier than in Thoreau’s time. In *Walden Warming*, Richard B. Primack uses Thoreau and Walden, icons of the conservation movement, to track the effects of a warming climate on Concord’s plants and animals, with the notes that Thoreau made years ago transformed from charming observations into scientific data sets. Primack finds that many wildflower species that Thoreau observed, including familiar groups such as irises, asters, and lilies, have declined in abundance or disappeared from Concord. Primack also describes how warming temperatures have altered other aspects of Thoreau’s Concord, from the dates when ice departs from Walden Pond in late winter, to the arrival of birds in the spring, to the populations of fish, salamanders, and butterflies that live in the woodlands, river meadows, and ponds. Demonstrating the effects

of climate change in a unique, concrete way using this historical and literary landmark as a touchstone, Richard Primack urges us to heed the advice Thoreau offers in *Walden*: to live simply and wisely. In the process, we can minimize our own contributions to our warming climate.

A Primer of Conservation Biology - Richard B. Primack 1995

This primer is divided into five chapters, focusing on: biological diversity and its value; the threats to biological diversity; conservation at the population and species levels; protecting and managing habitats and ecosystems; and human societies and sustainable development.

Case studies demonstrate the controversies in the field. The choice of examples show the full range of species, habitats and geographic areas of the world.

Species Problems and Beyond - John S. Wilkins 2022-06-14

Species Problems and Beyond offers a collection of up-to-date essays discussing from an interdisciplinary perspective the many ramifications of the ‘Species Problem.’ The authors represent experts in the philosophy of biology, in species-level evolutionary investigations, and in biodiversity studies and conservation. Some of the topics addressed concern the context sensitivity of the term ‘species’; species as individuals, processes, natural kinds, or as ‘operative concepts’; species delimitation in the age of Big (genomic) Data; and taxonomic inflation and its consequences for conservation strategies. The carefully edited volume will be an invaluable resource for philosophers of biology and evolutionary biologists alike. – Olivier Rieppel, Rowe Family Curator of Evolutionary Biology, Negaunee Integrative Research Center, Field Museum, USA

Species, or ‘the Species Problem’, is a topic in

science, in the philosophy of science, and in general philosophy. In fact, it encompasses many aspects of the same problem, and these are dealt with in this volume. Species are often thought of as fundamental units of biological matter to be used in ecology, conservation, classification, and biodiversity. The chapters in this book present opposing views on the current philosophical and conceptual issues of the Species Problem in biology. Divided into four sections, Concepts and Theories, Practice and Methods, Ranks and Trees and Names, and Metaphysics and Epistemologies, the book is authored by biologists, philosophers, and historians, many leaders in their fields. Topics include ontology of species, definitions of both species category and units, species rank, speciation issues, nomenclature, ecology, and species conservation. *Species Problems and Beyond* aims to clarify the contemporary

issues of the Species Problem. It is ideal for use in upper-level seminars and courses in Evolutionary Biology, Philosophy of Science, Philosophy of Biology, Systematics and Taxonomy, and Phylogenetics/Cladistics, and for any scholar in these fields.

Environmental DNA - Pierre Taberlet 2018-02-02

Environmental DNA (eDNA) refers to DNA that can be extracted from environmental samples (such as soil, water, feces, or air) without the prior isolation of any target organism. The analysis of environmental DNA has the potential of providing high-throughput information on taxa and functional genes in a given environment, and is easily amenable to the study of both aquatic and terrestrial ecosystems. It can provide an understanding of past or present biological communities as well as their trophic relationships, and can thus offer useful insights into

ecosystem functioning. There is now a rapidly-growing interest amongst biologists in applying analysis of environmental DNA to their own research. However, good practices and protocols dealing with environmental DNA are currently widely dispersed across numerous papers, with many of them presenting only preliminary results and using a diversity of methods. In this context, the principal objective of this practical handbook is to provide biologists (both students and researchers) with the scientific background necessary to assist with the understanding and implementation of best practices and analyses based on environmental DNA.

A Primer of Ecology - Nicholas J. Gotelli 1998

A detailed exposition of the most common mathematical models in population and community ecology, covering exponential and logistic population growth,

age-structured demography, metapopulation dynamics, competition, predation, and island biogeography. Intended to demystify ecological models and the math behind them by deriving the models from first principles. The primer may be used as a self-teaching tutorial, as a primary textbook, or as a supplemental text to a general ecology textbook. Annotation copyright by Book News, Inc., Portland, OR

Conservation Biology in Sub-Saharan Africa - Richard Primack
2019-09-10

Conservation Biology in Sub-Saharan Africa comprehensively explores the challenges and potential solutions to key conservation issues in Sub-Saharan Africa. Easy to read, this lucid and accessible textbook includes fifteen chapters that cover a full range of conservation topics, including threats to biodiversity, environmental laws, and protected areas management,

as well as related topics such as sustainability, poverty, and human-wildlife conflict. This rich resource also includes a background discussion of what conservation biology is, a wide range of theoretical approaches to the subject, and concrete examples of conservation practice in specific African contexts. Strategies are outlined to protect biodiversity whilst promoting economic development in the region. Boxes covering specific themes written by scientists who live and work throughout the region are included in each chapter, together with recommended readings and suggested discussion topics. Each chapter also includes an extensive bibliography. Conservation Biology in Sub-Saharan Africa provides the most up-to-date study in the field. It is an essential resource, available online without charge, for undergraduate and graduate students, as well as a handy guide

for professionals working to stop the rapid loss of biodiversity in Sub-Saharan Africa and elsewhere.

Ecology - Michael Begon
2020-11-17

A definitive guide to the depth and breadth of the ecological sciences, revised and updated. The revised and updated fifth edition of *Ecology: From Individuals to Ecosystems* – now in full colour – offers students and practitioners a review of the ecological sciences. The previous editions of this book earned the authors the prestigious ‘Exceptional Life-time Achievement Award’ of the British Ecological Society – the aim for the fifth edition is not only to maintain standards but indeed to enhance its coverage of *Ecology*. In the first edition, 34 years ago, it seemed acceptable for ecologists to hold a comfortable, objective, not to say aloof position, from which the ecological communities around us

were simply material for which we sought a scientific understanding. Now, we must accept the immediacy of the many environmental problems that threaten us and the responsibility of ecologists to play their full part in addressing these problems. This fifth edition addresses this challenge, with several chapters devoted entirely to applied topics, and examples of how ecological principles have been applied to problems facing us highlighted throughout the remaining nineteen chapters. Nonetheless, the authors remain wedded to the belief that environmental action can only ever be as sound as the ecological principles on which it is based. Hence, while trying harder than ever to help improve preparedness for addressing the environmental problems of the years ahead, the book remains, in its essence, an exposition of the science of ecology. This new edition incorporates the results

from more than a thousand recent studies into a fully up-to-date text. Written for students of ecology, researchers and practitioners, the fifth edition of *Ecology: From Individuals to Ecosystems* is an essential reference to all aspects of ecology and addresses environmental problems of the future.

Tropical Rain Forests - Richard T. Corlett 2011-03-03

The first edition of *Tropical Rain Forests: an Ecological and Biogeographical Comparison* exploded the myth of 'the rain forest' as a single, uniform entity. In reality, the major tropical rain forest regions, in tropical America, Africa, Southeast Asia, Madagascar, and New Guinea, have as many differences as similarities, as a result of their isolation from each other during the evolution of their floras and faunas. This new edition reinforces this message with new examples from recent and on-going research. After an

introduction to the environments and geological histories of the major rain forest regions, subsequent chapters focus on plants, primates, carnivores and plant-eaters, birds, fruit bats and gliding animals, and insects, with an emphasis on the ecological and biogeographical differences between regions. This is followed by a new chapter on the unique tropical rain forests of oceanic islands. The final chapter, which has been completely rewritten, deals with the impacts of people on tropical rain forests and discusses possible conservation strategies that take into account the differences highlighted in the previous chapters. This exciting and very readable book, illustrated throughout with color photographs, will be invaluable reading for undergraduate students in a wide range of courses as well as an authoritative reference for graduate and professional ecologists, conservationists, and interested

amateurs.

Conservation Biology for All -

Navjot S. Sodhi 2010

Conservation Biology for All provides cutting-edge but basic conservation science to a global readership. A series of authoritative chapters have been written by the top names in conservation biology with the principal aim of disseminating cutting-edge conservation knowledge as widely as possible. Important topics such as balancing conservation and human needs, climate change, conservation planning, designing and analyzing conservation research, ecosystem services, endangered species management, extinctions, fire, habitat loss, and invasive species are covered. Numerous textboxes describing additional relevant material or case studies are also included. The global biodiversity crisis is now unstoppable; what can be saved in the developing world will require an educated constituency

in both the developing and developed world. Habitat loss is particularly acute in developing countries, which is of special concern because it tends to be these locations where the greatest species diversity and richest centres of endemism are to be found. Sadly, developing world conservation scientists have found it difficult to access an authoritative textbook, which is particularly ironic since it is these countries where the potential benefits of knowledge application are greatest. There is now an urgent need to educate the next generation of scientists in developing countries, so that they are in a better position to protect their natural resources. [Berkshire Encyclopedia of Sustainability 5/10](#) - Robin Kundis Craig 2012-02-27 Ecosystem Management and Sustainability analyzes myriad human-initiated processes and tools developed to foster sustainable natural resource use,

preservation, and restoration. It also examines how humans interact with plant, marine, and animal life in both natural and human-altered environments. Experts explain the complex ecosystem relationships that result from invasive species, roads, fencing, and even our homes by addressing topics such as fire and groundwater management, disturbance, and ecosystem resilience. Because most people in the 21st century live in urban environments, the volume pays special attention to the ecology of cities, with detailed coverage on topics ranging from urban agriculture to landscape architecture. The volume focuses on how ecosystems across the world can be restored, maintained, and used productively and sustainably.

Experimental Design and Data Analysis for Biologists - Gerry P. Quinn 2002-03-21

An essential textbook for any student or researcher in biology

needing to design experiments, sample programs or analyse the resulting data. The text begins with a revision of estimation and hypothesis testing methods, covering both classical and Bayesian philosophies, before advancing to the analysis of linear and generalized linear models. Topics covered include linear and logistic regression, simple and complex ANOVA models (for factorial, nested, block, split-plot and repeated measures and covariance designs), and log-linear models. Multivariate techniques, including classification and ordination, are then introduced. Special emphasis is placed on checking assumptions, exploratory data analysis and presentation of results. The main analyses are illustrated with many examples from published papers and there is an extensive reference list to both the statistical and biological literature. The book is supported by a website that provides all

data sets, questions for each chapter and links to software.

An Introduction to Conservation Biology - Anna Sher 2022

"An Introduction to Conservation Biology is well suited for a wide range of undergraduate courses, as both a primary text for conservation biology courses and a supplement for ecological and environmental science courses. This new edition focuses on engaging students through videos and activities, and includes new pedagogy to scaffold students' learning. Coverage of recent conservation biology events in the news-such as global climate change and sustainable development-keeps the content fresh and current"--

Population Dynamics for Conservation - Louis W. Botsford 2019-10

This book outlines concepts such as population variability, population stability, population viability and persistence, and harvest yield. Also addressed are

specific applications to conservation such as managing species at risk, fishery management, and the spatial management of marine resources.--Adapted from back cover.

A Primer of Life Histories -

Jeffrey A. Hutchings 2021-09-15

Life histories can be defined as the means by which individuals (or more precisely genotypes) vary their age- or stage-specific expenditures of reproductive effort in response to genetic, phenotypic, and environmental correlates of survival and fecundity. Life histories reflect the expression of traits most closely related to individual fitness, such as age and size at maturity, number and size of offspring, and the timing of the expression of those traits throughout an individual's life. In addition to addressing questions of fundamental importance to ecology and evolution, life-history research plays an integral

role in species conservation and management. This accessible primer encompasses the basic concepts, theories, and applied elements of life history evolution, including patterns of trait variability, underlying mechanisms of plastic/evolutionary change, and the practical utility of life-history traits as metrics of species/population recovery, sustainable exploitation, and risk of extinction. Empirical examples are drawn from the entire spectrum of life. *A Primer of Life Histories* is designed for readers from a broad range of academic backgrounds and experience including graduate students and researchers of ecology and evolutionary biology. It will also be useful to a more applied audience of academic/government researchers in fields such as wildlife biology, conservation biology, fisheries science, and the environmental sciences.

Shark Biology and Conservation -

Daniel C. Abel 2020-09-01

Feed your fascination with sharks! This complete resource enlightens readers on the biology, ecology, and behavior of sharks with approachable explanations and more than 250 stunning color illustrations. Studies of shark biology have flourished over the last several decades. An explosion of new research methods is leading to a fascinating era of oceanic discovery. *Shark Biology and Conservation* is an up-to-date, comprehensive overview of the diversity, evolution, ecology, behavior, physiology, anatomy, and conservation of sharks.

Written in a style that is detailed but not intimidating by world-renowned shark specialists Dan Abel and Dean Grubbs, it relays numerous stories and insights from their exciting experiences in the field. While explaining scientific concepts in terms that non-specialists and students can

understand, Abel and Grubbs reveal secrets that will illuminate even the experts. The text provides readers with a robust and wide range of essential knowledge as it • introduces emerging as well as traditional techniques for classifying sharks, understanding their behavior, and unraveling the mysteries of their evolution; • draws on both established shark science and the latest breakthroughs in the field, from molecular approaches to tracking technologies; • highlights the often-neglected yet fascinating subject of shark physiology, including heart function, sensory biology, digestion, metabolic performance, and reproduction; • addresses big picture ecological questions like "Which habitats do sharks prefer?" and "Where do sharks migrate and for what purpose?"; • describes the astonishing diversity of sharks' adaptations to their environment; • discusses which shark conservation

techniques do and don't work; and • comments on the use and misuse of science in the study of sharks. Enhanced by hundreds of original color photographs and beautifully detailed line drawings, *Shark Biology and Conservation* will appeal to anyone who is spellbound by this wondrous, ecologically important, and threatened group, including marine biologists, wildlife educators, students, and shark enthusiasts.

Essentials of Conservation

Biology - Richard B. Primack

1998-01-01

Combines theory and research findings to explain links between conservation biology and environmental economics, ethics, law and the social sciences. The author stresses that people and governments can all contribute to protecting biological diversity and promote sustainable development.

Evolutionary Ecology of Social and Sexual Systems - J. Emmett

Duffy 2007-09-06

Understanding of animal social and sexual evolution has seen a renaissance in recent years with discoveries of frequent infidelity in apparently monogamous species, the importance of sperm competition, active female mate choice, and eusocial behavior in animals outside the traditional social insect groups. Each of these findings has raised new questions, and suggested new answers, about the evolution of behavioral interactions among animals. This volume synthesizes recent research on the sexual and social biology of the Crustacea, one of the dominant invertebrate groups on earth. Its staggering diversity includes ecologically important inhabitants of nearly every environment from deep-sea trenches, through headwater streams, to desert soils. The wide range of crustacean phenotypes and environments is accompanied by a comparable diversity of behavioral and social systems,

including the elaborate courtship and wildly exaggerated morphologies of fiddler crabs, the mysterious queuing behavior of migrating spiny lobsters, and even eusociality in coral-reef shrimps. This diversity makes crustaceans particularly valuable for exploring the comparative evolution of sexual and social systems. Despite exciting recent advances, however, general recognition of the value of Crustacea as models has lagged behind that of the better studied insects and vertebrates. This book synthesizes the state of the field in crustacean behavior and sociobiology and places it in a conceptually based, comparative framework that will be valuable to active researchers and students in animal behavior, ecology, and evolutionary biology. It brings together a group of internationally recognized and rising experts in fields related to crustacean behavioral ecology, ranging from physiology and

functional morphology, through mating and social behavior, to ecology and phylogeny. Each chapter makes connections to other, non-crustacean taxa, and the volume closes with a

summary section that synthesizes the contributions, discusses anthropogenic impacts, highlights unanswered questions, and provides a vision for profitable future research.