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Integral Ecology Springer Science & Business Media
Today there is a bewildering diversity of views on ecology and the natural environment. With more than two hundred distinct and valuable perspectives on the natural world—and with scientists, economists, ethicists, activists, philosophers, and others often taking completely different stances on the issues—how can we come to agreement to solve our toughest environmental problems? In response to this pressing need, Integral Ecology unites valuable insights from multiple perspectives into a comprehensive theoretical framework—one that can be put to use right now. The framework is based on Integral Theory, as well as Ken Wilber’s AQAL model, and is the result of over a decade of research exploring the myriad perspectives on ecology available to us today and their respective methodologies. Dozens of real-life applications and examples of this framework currently in use are examined, including three in-depth case studies: work with marine fisheries in Hawai’i, strategies of eco-activists to protect Canada’s Great Bear Rainforest, and a study of community development in El Salvador. In addition, eighteen personal practices of transformation are provided for you to increase your own integral ecological awareness. Integral Ecology provides the most sophisticated application and extension of Integral Theory available today, and as such it serves as a template for any truly integral effort.
Fundamentals of Soil Ecology Elsevier
It is not possible to understand the apparent stability of the Earth's climate and environment unless we can fully understand how the best possible environmental conditions may be maintained for life to exist. Human colonization of areas with natural biota, for industrial or agricultural activities, will lead to degradation of those natural communities and violation of the BRE (biotic regulation of the environment) principle. Thus to maintain an environment on Earth that is suitable for life it is necessary to preserve and allow the natural recovery of natural biotic communities, both in the oceans and on land. This book is devoted to a quantitative version of the BRE concept, and is built on a foundation of modern scientific knowledge accumulated in the fields of physics and biology.
Cengage Learning
This book brings together the latest information on tropical ungulates in different Latin American countries. These animals are not only important from the point of view of their role in different ecosystems, but also have cultural value for people. The book also discusses topics such as habitat transformation and hunting as these species are an important source of food in many places. Addressing ungulate natural communities in diverse ecosystems and countries, the book provides information on specific aspects of each of the most representative species, and highlights topics to help readers better understand these species and develop effective management and conservation strategies. The information presented also reveals the need for more knowledge and will hopefully provide the incentive for continued studies on this important group of animals. This publication serves as a reference for academic research on ungulate ecology, behavior and dynamics, as well as the basis for conservation strategies.
Ecological Footprint Springer Science & Business Media
First Published in 2004. Routledge is an imprint of Taylor & Francis, an informa company.
The Economy of Nature Praeger
Inspiring people to care about the planet. In the new edition of LIVING IN THE ENVIRONMENT, authors Tyler Miller and Scott Spoolman have partnered with the National Geographic Society to develop a text designed to equip students with the inspiration and knowledge they need to make a difference solving today's environmental issues. Exclusive content highlights important work of National Geographic Explorers, and features over 200 new photos, maps, and illustrations that bring course concepts to life. Using sustainability as the integrating theme, LIVING IN THE ENVIRONMENT 18e, provides clear introductions to the multiple environmental problems that we face and balanced discussions to evaluate potential solutions. In addition to the integration of new and engaging National Geographic content, every chapter has been thoroughly updated and 18 new Core Case Studies offer current examples of present environmental problems and scenarios for potential solutions. The concept-centered approach used in the text transforms complex environmental topics and issues into key concepts that students will understand and remember. Overall, by framing the concepts with goals for more sustainable lifestyles and human communities, students see how promising the future can be and their important role in shaping it. offers additional exclusive National Geographic content, including high-quality videos on important environmental problems and efforts being made to address them. Team up with MIler/Spoolman's, LIVING IN THE ENVIRONMENT and the National Geographic Society to offer your students the most inspiring introduction to environmental science available! Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.
Environmental Science Academic Press
The lesson of interconnectedness has yet to be fully absorbed in environmental policy, which lacks integration of ecological principles. Ecology is an indispensible thread in the cultural tapestry into which environmental policy and law are being woven. Extending beyond the four dimensions of space and time,

ecological sciences are expressed from holistic and reductionist vantages, informing environmental professionals at levels as diverse as ecosystems experimentation and empirical human ecology. This volume renders ecology accessible to anyone lacking scientific preparation who would take an environmental stance: professional, political, legal, or personal.

Ecology for Environmental Professionals PHI Learning Pvt. Ltd.

Quaternary Ecology, Evolution, and Biogeography is an introduction on the study of the ecological and evolutionary processes that have shaped our present biosphere under the influence of glacial-interglacial cycles. Written by a renowned ecologist with paleoecological expertise, the book reviews the climactic changes that have occurred during the last million years, along with the responses of organisms and ecosystems. The book offers an understanding of the evolutionary origin of extant biodiversity, its biogeographical patterns, and the composition of modern ecological communities. In addition, it explores human evolution and the influence of our activities on the biosphere, especially in the last millennia. The valuable resource is intended for a wide audience, including researchers and students in natural sciences. It offers the latest information on how studying the past can contribute to our understanding of present climate issues for a better future.

Towards a Thermodynamic Theory for Ecological Systems Macmillan

"Vladimir Vernadsky was a brilliant and prescient scholar-a true scientific visionary who saw the deep connections between life on Earth and the rest of the planet and understood the profound implications for life as a cosmic phenomenon." -DAVID H. GRINSPOON, AUTHOR OF VENUS REVEALED "The Biosphere should be required reading for all entry level students in earth and planetary sciences." -ERIC D. SCHNEIDER, AUTHOR OF INTO THE COOL: THE NEW THERMODYNAMICS OF CREATIVE DESTRUCTION

Processes in Microbial Ecology Routledge

Provides an essential introduction to modeling terrestrial ecosystems in Earth system models for graduate students and researchers.

Atmosphere-Biosphere Interactions Springer Science & Business Media

The period since World War II, and especially the last decade influenced by the International Biological Program, has seen enormous growth in research on the function of ecosystems. The same period has seen an exponential' rise in environmental problems including the capacity of the Earth to support man's population. The concern extends to man's effects on the "biosphere"-the film of living organisms on the Earth's surface that supports man. The common theme of ecologic research and environmental concerns is primary production the binding of sunlight energy into organic matter by plants that supports all life. Many results from the IBP remain to be synthesized, but enough data are available from that program and other research to develop a convincing sum mary of the primary production of the biosphere-the purpose of this book. The book had its origin in the parallel interests of the two editors and Gene E. Likens, which led them to prepare a symposium on the topic at the Second Biological Congress of the American Institute of Biological Sciences in Miami, Florida, October 24, 1971. Revisions of the papers presented at that symposium appear as Chapters 2, 8, 9, 10, and 15 in this book. We have added other chapters that complement this core; these include discussion and evaluation of methods for measuring productivity and regional production, current findings on tropical productivity, and models of primary productivity.

Stable Isotope Ecology Jones & Bartlett Publishers

Trace element science has undergone some dramatic changes in recent years and considerable discoveries have been made in the wide field of botany. This monograph reviews and summarizes the advances made in trace element research in botanical geography, taxonomy, phytocenology, geochemical ecology, morphology, anatomy, embryology and genetics. After a discussion of some general aspects of trace elements, the author makes a detailed critical analysis of their physiological role - a role that is not only of theoretical importance but one that can also provide a basis for the development of a rational system of plant nutrition. Various aspects of the problems dealt with, therefore, bear on practical issues in agriculture.

Ecology and Control of the Natural Environment Springer Science & Business Media

ENVIRONMENTAL SCIENCE inspires and equips students to make a difference for the world. Featuring sustainability as their central theme, authors Tyler Miller and Scott Spoolman emphasize natural capital, natural capital degradation, solutions, trade-offs, and the importance of individuals. As a result, students learn how nature works, how they interact with it, and how humanity has sustained and can continue to sustain its relationship with the earth by applying nature's lessons to economies and individual lifestyles. Engaging features like Core Case Studies, and Connections boxes demonstrate the relevance of issues and encourage critical thinking. Updated with new learning tools, the latest content, and an enhanced art program, this highly flexible book allows instructors to vary the order of chapters and sections within chapters to meet the needs of their courses. Two new active learning features conclude each chapter. Doing Environmental Science offers project ideas based on chapter content that build critical thinking skills and integrate scientific method principles. Global Environmental Watch offers online learning activities through the Global Environment Watch website, helping students connect the book's concepts to current real-world issues. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Ecological Stoichiometry Benjamin Cummings

The objective of this book is to make analytical methods available to students of ecology. The text deals with concepts of energy exchange, gas exchange, and chemical kinetics involving the interactions of plants and animals with their environments. The first four chapters are designed to show the applications of biophysical ecology in a preliminary, sim plified manner. Chapters 5-10, treating the topics of radiation, convec tion, conduction, and evaporation, are concerned with the physical environment. The spectral properties of radiation and matter are thoroughly described, as well as the geometrical, instantaneous, daily, and annual amounts of both shortwave and longwave radiation. Later chapters give the more elaborate analytical methods necessary for the study of photosynthesis in plants and energy budgets in animals. The final chapter describes the temperature responses of plants and animals. The discipline of biophysical ecology is rapidly growing, and some important topics and references are not included due to limitations of space, cost, and time. The methodology of some aspects of ecology is illustrated by the subject matter of this book. It is hoped that future students of the subject will carry it far beyond its present status. Ideas for advancing the subject matter of biophysical ecology exceed individual capacities for effort, and even today, many investigators in ecology are studying subjects for which they are inadequately prepared. The potential of modern science, in the minds and hands of skilled investigators, to of the interactions of organisms with their advance our understanding environment is

enormous.
Preparing for the Biology AP Exam OUP Oxford
FISH & WILDLIFE, PRINCIPLES OF ZOOLOGY AND ECOLOGY, 3rd Edition, provides a broad-spectrum overview, for high school students, of the wild animals of North America and the environments they live in, including basic principles of science as they apply to wild animals and the habitats they occupy. Fish & Wildlife, Principles of Zoology and Ecology, 3rd Edition, contents includes chapters that detail zoology and ecology basics; zoology and ecology of mammals, birds, fishes, reptiles, and amphibians; and conservation and management of wildlife resources. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.
Fish & Wildlife: Principles of Zoology and Ecology Cambridge University Press
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.
Ecological Vignettes Zed Books
An environmental business book written by a business school professor for business school students.
Climate Change and Terrestrial Ecosystem Modeling Closed Ecological Systems
The only metric that tracks how much nature we have – and how much nature we use Ecological Footprint accounting, first introduced in the 1990s and continuously developed, continues to be the only metric that compares overall human demand on nature with what our planet can renew — its biocapacity — and distils this into one number: how many Earths we use. Our economy is running a Bernie Madoff-style Ponzi scheme with the planet. We use future resources to run the present, using more than Earth can replenish. Like any such scheme, this works for a limited time, followed by a crash. Avoiding ecological bankruptcy requires rigorous resource accounting — a challenging task, but doable with the right tools. Ecological Footprint provides a complete introduction, covering: Footprint and biocapacity accounting Data and key findings for nations Worldwide examples including businesses, cities, and countries Strategies for creating regenerative economies Whether you’re a student, business leader, future-oriented city planner, economist, or have an abiding interest in humanity’s future, Footprint and biocapacity are key parameters to be reckoned with and Ecological Footprint is your essential guide.
Ecology National Academies Press
The book presents a consistent and complete ecosystem theory based on thermodynamic concepts. The first chapters are devoted to an interpretation of the first and second law of thermodynamics in ecosystem context. Then Prigogine's use of far from equilibrium thermodynamic is used on ecosystems to explain their reactions to perturbations. The introduction of the concept exergy makes it possible to give a more profound and comprehensive explanation of the ecosystem's reactions and growth-patterns. A tentative fourth law of thermodynamic is formulated and applied to facilitate these explanations. The trophic chain, the global energy and radiation balance and pattern and the reactions of ecological networks are all explained by the use of exergy. Finally, it is discussed how the presented theory can be applied more widely to explain ecological observations and rules, to assess ecosystem health and to develop ecological models.
ESSENTIALS OF ECOLOGY AND ENVIRONMENTAL SCIENCE Routledge
The prevalence of low temperature habitats on Earth makes the ecology of organisms adapted to low temperature environments (psychrophiles) an important area of research. Studies of low temperature ecosystems including the deep sea, sea ice, glacial ice, permafrost, and snow have provided a wealth of knowledge on the resilience of psychrophilic microbial ecosystems in the face of anthropogenic and natural disturbance, the history of microbial life on Earth, and the potential distribution of life in extraterrestrial environments. Taking these three knowledge areas as motivation, this dissertation further explores psychrophile ecology. Chapter 1 introduces the history of research on psychrophiles. Chapters 2 and 3 explore the diversity of Bacteria found in two understudied psychrophile habitats; multiyear sea ice and frost flowers. Chapter 4 explores the metabolic potential of the latter environment through metagenomics. Chapter 5 introduces a novel method for evaluating genome plasticity in populations, and applies this method in a comparative analysis of psychrophiles and mesophiles. Chapter 6 examines how psychrophilic enzymes are optimized for low temperatures through amino acid substitutions and introduces a model for further exploration of amino acid preferences. Chapter 7 explores the potential for psychrophiles to degrade alkanes, a major component of crude oil, by the presence of genes coding for alkane hydroxylases.
Principles of Environmental Economics and Sustainability Cengage Learning
This revised fifth edition, is a lucid presentation of the fundamental concepts and principles of ecology and environmental science. Extensively illustrated, the book provides in-depth coverage of major areas such as atmospheric and soil science, hydrobiology, biodiversity, and pollution ecology. It seeks to impart comprehensive understanding of the major ecological issues, policies and laws, crucial for solving environmental problems. New sections on vital topics such as acid rain and deposition, metapopulations, environmental disasters and the Bali Summit on Climate Change 2007 contribute strongly to this endeavour. The book is primarily intended for undergraduate (B.Sc.) students of environmental science and other relevant biological sciences. It will also be very useful for postgraduate (M.Sc.) students of these subjects as well as field professionals and researchers. KEY FEATURES • Use of indigenous examples for explaining subject matter • Coverage of extreme environments such as Antarctica, the Arctic region, open oceans, and deserts, along with up-to-date information on major ecosystems • Chapters devoted to biodiversity as well as natural and genetic resources of India • Detailed descriptions of

ecocompartments such as atmosphere and lithosphere