Fundamentals of Ecology Eugene P. Odum 2005 Master the study of ecology in the twenty-first century with this new edition of one of the most important ecological science, this biology text shows you the application of ecological principles in the real world and how to use what you learn to solve problems in fields such as resource management, conservation biology, ecotourism, ecosystem health, landscape ecology, and restoration ecology. Introduction to ecosystems, the development of biomass: futurologists. Brief description of major natural ecosystem types of the biosphere.

Ecology: Eugene P. Odum 1987 This is an introduction to the principles of modern ecology as they relate to today's threats to Earth's life-support systems. Themes examined include life-support systems, hierarchies, ecosystems and landscapes, component physical factors, population, development and evolution.

The End of Food Paul Roberts 2009-05-06 Paul Roberts, the best-selling author of The End of Oil, turns his attention to the modern food economy and finds that the system entrapped to meet our most basic need is failing. In this carefully researched, vivid narrative, Roberts lays out the stark economic realities behind modern food and shows how our system of making, marketing, and moving what we eat is growing less and less compatible with the billions of consumers that system was built to serve. At the heart of The End of Food is a grim paradox: the rise of large-scale food production, though it has made more food and cheaper than at any time in history, has reached a point of diminishing returns. Our high-volume factory systems are creating new risks for food safety. From highly toxic herbicides to highly radioactive plutonium, we are now eating into a portion of the global electromagnetic spectrum, most of all, declining nutritional quality. While nearly one billion people worldwide are overweight or obese, the same number of people—one in every seven of us—can’t get enough to eat. In some of the least-fertile regions, such as parts of Western Europe and Japan, the lack of five vitamin A children per mile, set to the world's food systems.

The Future of Nature-Lily Bobin 2013-10-22 This anthology provides an historical overview of the scientific ideas behind environmental protection and how, as predictions about environmental change have been taking more seriously, they have affected politics, policies, and public perception. Through an array of authoritative texts, this book provides a real hands-on approach to learning the essential concepts and techniques of landscape ecology. The book offers a range of tools, such as color images and coded-sections for easy browsing, making this a complete educational package.

Fundamentals of Materials for Energy and Environmental Sustainability will enable today's scientists and educators future generations.

Learning Landscape Ecology Sarah E. Goodell 2004-04-18 Filled with numerous exercises this practical guide provides a real hands-on approach to learning the essential concepts and techniques of landscape ecology. It provides a real hands-on approach to learning the essential concepts and techniques of landscape ecology. Landscape ecology is a rapidly growing knowledge gained enables students to address landscape-ecological and management issues. A variety of approaches are presented, including: group discussions, thought problems, written exercises, and modelling. Each exercise is categorized as to whether it is for individual, small group, or whole class study.

A Climate of Crisis-Patrick Allitt 2014-03-20 This provocative sociological history of the environmental movement in America, showing how this rise to political and social prominence produced a culture of alarm that has often distorted our understanding of the facts Few issues today excite more passion or alarm than the specter of climate change. In A Climate of Crisis, historian Patrick Allitt shows that our present climate of crisis is far from exceptional. Indeed, the environmental debates of the last half century are defined by exaggeration and overreaching from all sides, often at the expense of the facts. In a real sense, Allitt shows us, collective anxiety about widespread environmental danger has become a cultural obsession. Although this obsession is an understandable response to the threats confronting the planet, it has also clouded our ability to address these threats effectively. While some scientists are concerned with the facts behind the science, they point to the specter of climate change as an excuse for inaction, or even as a threat to social stability. This book provides a balanced view of the facts behind the science, and of the different perspectives on how to address these threats.

Peterson Field Guide to Mushrooms of North America, Second Edition Karl B. McKnight 2011-04-05 A new approach to identifying mushrooms based on five key features that can be observed while in the field. Touchable, trifoliate, boletes, and morels, witches' brooms, conks, corals, puffballs and earthtongues: mushrooms are both mystically and ecologically essential. They can also be either delicious or deadly. Thousands of different species of mushrooms appear across North America in the woods, backyards, and in unexpected corners. Learning to distinguish them is a rewarding challenge for a naturalist or chef. Covering most of the common edible and poisonous species, the Peterson Field Guide to Mushrooms of North America is a comprehensive guide to creating a mushroom identification chart, and to understanding the interactions between mushrooms and their environment. The guide includes a comprehensive list of all the species known to science, along with detailed keys and illustrations to help you identify each species. This guide uses a unique system of symbols and colors to help you identify the species quickly and accurately. Peterson Field Guide to Mushrooms of North America is a comprehensive guide to creating a mushroom identification chart, and to understanding the interactions between mushrooms and their environment.

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intellectual imports, and another Sea Grant Program the major backer, of another symposium, the “International Symposium: Concepts and Controversies in Tidal Marsh Ecology.” This one re-examines the ideas of that first conference, ideas that stimulated four decades of research and led to major legislation in the United States to conserve coastal wetlands. It is dedicated, appropriately, to two then young scientists—Eugene P. Odum and John M. Teal—whose inspiration has been the starting place for a generation of coastal wetland and estuarine research. I do not mean to suggest that wetland research started at Sapelo Island. In 1899 H. C. Cowles described succession processes in Lake Michigan freshwater marsh ponds. There is a long and valuable early literature about northern bogs, most of it from Europe and the former USSR, although Erleb Gefrank and R. L. Linderman made significant contributions to the American literature before 1960. V. J.

Encyclopedia of Environmental Science and Engineering
James R. Poffl ill 1992

Enzyme Biochemistry, Biotechnology, Tretier Pulver 2004

Living in the Environment—C. Tyler Miller 2014-02-28 Inspiring people to care about the planet. In the new edition of LIVING IN THE ENVIRONMENT, authors C. 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 11e, provides clear connections to the multiple environmental problems that face us today, and identifies possible directions for potential solutions. In addition to the integration of new and enriching 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 Miller/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 test may not be available in the ebook version.

A History of the Ecosystem Concept in Ecology—Frank B. Golley 1993-01-01 The ecosystem concept—the idea that flora and fauna interact with the environment to form an ecological complex—has long been central to the public perception of ecology and to increasing awareness of environmental degradation. In this book an eminent ecologist explores the concept's history, providing insights into how numerous American and European researchers contributed to its evolution, and discussing the explosive growth of ecosystem studies. Golley surveys the development of the ecosystem concept in the late nineteenth and early twentieth centuries and discusses the coinage of the term ecosystem by the English ecologist Sir Arthur George Tansley in 1935. He then reviews how the American ecologist Raymond Lindeman applied the concept to a small lake in Minnesota and showed how the size and the environment of the lake interacted through the exchange of energy. Golley describes how a seminal textbook on ecology written by Eugene P. Odum helped to popularize the ecosystem concept and how numerous other scientists investigated its principles and published their results. He relates how ecosystem studies dominated ecology in the 1960s and became a key element of the International Biological Program lines studies in the United States—a program aimed at “the betterment of mankind” specifically through conservation, human genetics, and improvements in the use of natural resources; how a study of watershed ecosystems in Hubbard Brook, New Hampshire, blazed new paths in ecosystem research by defining the limits of the system in a natural way, and how current research uses the ecosystem concept. Throughout Golley shows how the ecosystem concept has been shaped internationally by both developments in other disciplines and by personalities and politics.

Sustaining Life on Earth—Colin Lionel Soskolne 2008 Sustaining Life on Earth brings together a broad range of specialists to address issues and challenges facing the world. The book draws upon current research in the various fields of ecology while providing accessible examples that help students understand species natural history, specific ecosystems, the process of science, and ecological patterns at both an evolutionary and demographic scale. To engage students in using and interpreting data, a wide variety of Quantitative Ecology boxes walk step-by-step examples of equations and statistical techniques. The enhanced companion website (www.ecologyplace.com) features new MapMaster™ interactive map activities for exploratory learning, physical and digital globes, an image bank, and popular social media, along with popular GRAPHLab, and Quantitify! exercises that help students further master and apply math skills, and a new Pearson eText.

Overseas—William R. Cattet 1982-06 Our Day-to-day experiences over the past decade have taught us that there must be limits to our tremendous appetite for energy, nature resources, and consumer goods. Even utility and oil companies now promote conservation in the face of demands for dwindling energy reserves. And for years biologists have warned us of the direct correlation between scarcity and population growth. These scientists see an appalling future riding the tidal wave of a worldwide growth of population and technology. A ruin but unfailing realist, Cattet suggests that we cannot stop this wave— we have already overshot the Earth’s capacity to support so huge a load. He contradicts those scientists, engineers, and technicians who continue to write optimistically about energy alternatives. Cattet asserts that the technological panaceas proposed by those who would harvest from the sea, harness the winds, and farm the deserts are ignoring the fundamental premise that “the principles of ecology apply to all living things.” These principles tell us that within a finite system, economic gain is not irreversible, and that consumption cannot indefinitely continue. If we disregard these facts, our nagging American Dream will soon shatter completely.

Law and the Environment—Robert V. Percival 1997 Law and the Environment: A Multi-disciplinary Reader brings together for the first time some of the most important original work on environmental policy by scientists, ecologists, philosophers, historians, economists, and legal scholars. Each of the book’s four parts provides a different focus on the nature and scope of environmental problems and attempts to use public policy to address these concerns. Part I examines how ecology, economics, and ethics analyze environmental problems and why they support collective action to respond to them. Part II examines the history and present state of environmental law, from early attempts to engage the government to the current debate over the effectiveness of environmental policy. Part III explores the process by which environmental law gets translated into regulatory policy. Part IV considers the future of environmental law at a time when international environmental concerns have become a major force in global diplomacy and international trade agreements. In drawing together a wide variety of perspectives on these issues, Robert V. Percival and Dorothy C. Alexius offer a comprehensive examination of how society has responded to the difficult challenges posed by environmental problems. The selections provide a rich introduction to the complexities of environmental policy disputes. A perfect text for courses in anthropology, environmental studies, and human biology.

Principles and Methods in Landscape Ecology—Almo Farina 2008-01-22 Landscape ecology is an integrative and multidisciplinary science and Principles and Methods in Landscape Ecology reconciles the geological, botanical, ecological, and human perspectives. In particular, new paradigms and theories such as percolation, meta-population, hierarchies, source-sink models have been integrated in this last edition with the recent theories on bio-ecology, information and cognitive sciences. Methods for studying landscape ecology are covered including spatial geometry models and remote sensing in order to create-confidence toward techniques and approaches that require a high experience and long-time dedication. Principles and Methods in Landscape Ecology is a textbook used to present the landscape in a multi-disciplinary perspective for undergraduate and graduate students of biology, ecology, geography, forestry, agronomy, landscape architecture and planning. Sociology, economics, history, archaeology, anthropology, ecological psychology are some sciences that can benefit of the holistic vision offered by this textbook.

Environmental Microbiology—Eugene L. Madsen 2011-08-31 This well-referenced, inquiry-driven text presents the latest in our understanding of the dynamic, emerging field of environmental microbiology. Environmental Microbiology offers students unique perspectives on the history and current status of the field, including an introduction to the basic principles of microbial ecology. It addresses the role of microorganisms in pollution control and pollution prevention. The book also includes expanded coverage of the human and ecological implications of new technologies in the field, as well as an introduction to modern methods and techniques. New to this edition are a chapter introducing the subject of aerosol microbiology and an exploration of emerging topics such as nanotechnology and environmental forensics. This is an ideal text for graduate or upper-level undergraduate courses in environmental microbiology, as well as for professionals in environmental consulting and regulatory agencies.

Environmental Microbiology—M. L. S. Madhavan 2011-08-31 An introduction to the principles and research basis of cultural ecology is the textbook for advanced undergraduate and beginning graduate courses that deal with the intersections of human and the environment in traditional societies. After introducing the basic principles of cultural ecology, anthropological, environmental, and human biological adaptations to the environment, the book provides a thorough discussion of the history of, and theoretical basis behind, cultural ecology. The bulk of the book outlines the broad economic strategies used by traditional cultures: hunting/gathering, horticulture, pastoralism, and agriculture. Fully equipped with cases, illustrations, and charts on topics as diverse as salmon ceremonies among Northwest Indians, contemporary Maya agriculture, and the sake groves in southern China, this book gives the reader a "big picture" view of the strategies of humans in the environment. This book is a must for anyone interested in environmental and cultural ecology.

Elements of Ecology—Eugene L. Madsen 2011-08-31 This well-referenced, inquiry-driven text presents the latest in our understanding of the dynamic, emerging field of environmental microbiology. Environmental Microbiology offers students unique perspectives on the history and current status of the field, including an introduction to the basic principles of microbial ecology. It addresses the role of microorganisms in pollution control and pollution prevention. The book also includes expanded coverage of the human and ecological implications of new technologies in the field, as well as an introduction to modern methods and techniques. New to this edition are a chapter introducing the subject of aerosol microbiology and an exploration of emerging topics such as nanotechnology and environmental forensics. This is an ideal text for graduate or upper-level undergraduate courses in environmental microbiology, as well as for professionals in environmental consulting and regulatory agencies.

Living in the Environment—Eugene P. Odum 1992


Thunder on the Mountain—Peter A. Galazka 2012-09-18 Traces the April 2010 disaster, concerning that Massey Energy’s defiance of regulators resulted in safety violations and perpetuated a corporate culture that prioritized profits over lives, communities, and the environment.

Ecology: Concepts and Applications—Manuel Molles 2015-06-16 Ecology: Concepts and Applications by Molles places great emphasis on helping students group the main concepts of ecology while keeping the presentation more applied than theoretical. An evolutionary perspective forms the foundation of the entire discussion. The book begins with the natural history of the planet, considers portions of the whole in the middle chapters, and ends with another perspective of the entire planet in the concluding chapter. Its unique organization of focusing only on several key concepts in each chapter sets it apart from other ecology texts. Users who purchase Connect Plus receive access to the full online ebook version of the textbook.

Living in the Environment—C. Tyler Miller 2014-02-28 Inspiring people to care about the planet. In the new edition of LIVING IN THE ENVIRONMENT, authors C. 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 11e, provides clear connections to the multiple environmental problems that face us today, and identifies possible directions for potential solutions. In addition to the integration of new and enriching 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 Miller/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 test may not be available in the ebook version.