

Ecology Principles And Applications

Human activity during the Anthropocene has transformed landscapes worldwide on a scale that rivals or exceeds even the largest of natural forces. Landscape ecology has emerged as a science to investigate the interactions between natural and anthropogenic landscapes and ecological processes across a wide range of scales and systems: from the effects of habitat or resource distributions on the individual movements, gene flow, and population dynamics of plants and animals; to the human alteration of landscapes affecting the structure of biological communities and the functioning of entire ecosystems; to the sustainable management of natural resources and the ecosystem goods and services upon which society depends. This novel and comprehensive text presents the principles, theory, methods, and applications of landscape ecology in an engaging and accessible format that is supplemented by numerous examples and case studies from a variety of systems, including freshwater and marine "scapes".

This second edition covers recent developments around the world with contributors from 33 different countries. It widens the handbook's scope by including ecological design; consideration of cultural dimensions of the use and conservation of urban nature; the roles of government and civil society; and the continuing issues of equity and fairness in access to urban greenspaces. New features include an emphasis on the biophilic design of homes and workplaces, demonstrating the value of nature, in order to counter the still prevalent attitude among many developers that nature is a constraint rather than a value. The volume explores great practical achievements that have occurred since the first edition, with many governments increasingly recognising and legislating on urban nature and green infrastructure matters, since cities play a major role in adapting to change, particularly to climate crisis. New topics such as the ecological role of light at night and human microbiota in the urban ecosystem are introduced. Additional attention is given to food production in cities, particularly the multiple roles of urban agriculture and household gardens in different contexts from wealthy communities to the poorest informal settlements in deprived communities. The emphasis is on demonstrating what can be achieved, and what is already being done. The book will help scholars and graduate students by providing an invaluable and up-to-date guide to current urban ecological thinking across the range of disciplines, such as geography, ecology, environmental science/studies, planning, urban studies, that converge in the study of towns and cities and urban design and living. It will also assist practitioners and civil society members in discovering the ways different specialists and thinkers approach urban nature.

A New Ecology presents an ecosystem theory based on the following ecosystem properties: physical openness, ontic openness, directionality, connectivity, a complex dynamic for growth and development, and a complex dynamic response to disturbances. Each of these properties is developed in detail to show that these basic and characteristic properties can be applied to explain a wide spectrum of ecological observations and conceptions. It is also shown that the properties have application for environmental management and for assessment of ecosystem health. * Demonstrates an ecosystem theory that can be applied to explain ecological observations and rules * Presents an ecosystem theory based upon a systems approach * Discusses an ecosystem theory that is based on a few basic properties that are characteristic for ecosystems

A completely revised and rewritten edition of this comprehensive survey of the botanical problems of pollination ecology approached from both a theoretical and a practical viewpoint. Examples are drawn from all geographical areas where pollination has been studied and general principles are illustrated by a number of concrete examples. Introductory chapters survey the technical problems and draw comparisons with spore dissemination in cryptogams and pollination in gymnosperms. The following chapters deal with angiosperm pollination and are divided into three parts: organs involved in pollination, flower types and pollinator activities

Principles of Ecology

Ecology 2/Ed : Principles And Applications (Clpe)

Habitat Suitability and Distribution Models

principles and applications

Freshwater ecology

Advanced Ecological Theory is intended for both postgraduate students and professional researchers in ecology. It provides an overview of current advances in the field as well as closely related areas in evolution, ecological economics, and natural-resource management, familiarizing the reader with the mathematical, computational and statistical approaches used in these different areas. The book has an exciting set of diverse contributions written by leading authorities.

This is a comprehensive textbook for A-level students and first-year undergraduates taking courses in biology, geography and Earth sciences.

This book provides a current synthesis of principles and applications in landscape ecology and conservation biology. Bringing together insights from leaders in landscape ecology and conservation biology, it explains how principles of landscape ecology can help us understand, manage and maintain biodiversity. Gutzwiller also identifies gaps in current knowledge and provides research approaches to fill those voids. Explains the structure, function and dynamics of terrestrial ecosystems and demonstrates the application of ecosystem ecology to current environmental problems.

Concepts and Environmental Applications of Limnology

Structure and function of running waters

First Ecology

Principles of Pollination Ecology

This A Level Biology textbook covers all the requirements of the AS and A2 Biology specifications. This second edition has been updated to include: revisions to the content to reflect changing AS and A Level specifications; revised chapters on the underlying principles of ecology and modern biotechnology; a new chapter on genetic engineering; updated examination questions from recent past papers; and the use of full colour throughout.

Landscape ecology – the ecology of large heterogeneous areas, landscapes, regions, or simply of land mosaics, has rapidly emerged in the past decade as an important and useful tool for land-use planners and landscape architects. Landscape Ecology Principles in Landscape Architecture and Land-Use Planning is an essential handbook that presents and explains principles of landscape ecology and provides numerous examples of how those principles can be applied in specific situations.

A completely rewritten and expanded new edition of Introduction to Freshwater Ecology. Building on the successful approach in that book, it presents a comprehensive outline regarding the scientific principles of the topic. Features fresh material on the use of ecological techniques for the management and conservation of lakes, rivers and streams and the life they support.

Ecology: Concepts and Applications by Molles places great emphasis on helping students grasp 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.

Advanced Ecological Theory

Systems Perspective

Principles and Applications of Soil Microbiology

Ecological Economics, Second Edition

Principles of Terrestrial Ecosystem Ecology

This book introduces an interdisciplinary framework to understand the interaction between terrestrial ecosystems and climate change. It reviews basic meteorological, hydrological and ecological concepts to examine the physical, chemical and biological processes by which terrestrial ecosystems affect and are affected by climate. The textbook is written for advanced undergraduate and graduate students studying ecology, environmental science, atmospheric science and geography. The central argument is that terrestrial ecosystems become important determinants of climate through their cycling of energy, water, chemical elements and trace gases. This coupling between climate and vegetation is explored at spatial scales from plant cells to global vegetation geography and at timescales of near instantaneous to millennia. The text also considers how human alterations to land become important for climate change. This restructured edition, with updated science and references, chapter summaries and review questions, and over 400 illustrations, including many in colour, serves as an essential student guide.

Features review questions at the end of each chapter; Includes suggestions for recommended reading; Provides a glossary of ecological terms; Has a wide audience as a textbook for advanced undergraduate students, graduate students and as a reference for practicing scientists from a wide array of disciplines

This book introduces the key stages of niche-based habitat suitability model building, evaluation and prediction required for understanding and predicting future patterns of species and biodiversity. Beginning with the main theory behind ecological niches and species distributions, the book proceeds through all major steps of model building, from conceptualization and model training to model evaluation and spatio-temporal predictions. Extensive examples using R support graduate students and researchers in quantifying ecological niches and predicting species distributions with their own data, and help to address key environmental and conservation

problems. Reflecting this highly active field of research, the book incorporates the latest developments from informatics and statistics, as well as using data from remote sources such as satellite imagery. A website at www.unil.ch/hsdm contains the codes and supporting material required to run the examples and teach courses.

Witecha, John M. Yeiser

Advanced Biology

Principles, Patterns, Methods and Applications

Wetland Ecology

Loose Leaf for Ecology: Concepts and Applications

Social Ecology in the Digital Age

How much do we know about the living world? Enough to predict its future? First Ecology: ecological principles and environmental issues provides a critical and evaluative introduction to the science of ecology. Alan Beeby and Anne-Maria Brennan present a succinct survey of ecology, describing and explaining the relationship between living organisms and their environment. The third edition of this popular book continues to introduce ecology from a human perspective. This view of humanity as part of the ecology of the planet makes the fundamental relevance of ecology to all life science students apparent throughout. First Ecology develops in sequence the core themes in ecology at each level of organisation - subcellular, population, ecosystem, landscape and planetary. Understanding this hierarchy - and the interplay between these levels - is crucial to the environmental decisions our species faces at the start of the twenty-first century. First Ecology is the ideal primer for you to develop this understanding. Online Resource Centre: The Online Resource Centre features the following materials: For lecturers (password protected): · A virtual field course comprising a series of basic exercises using real data helps students prepare for, and gain more from, their time in the field · Figures from the book, available to download to facilitate lecture preparation · PowerPoint slides introducing key concepts, supported with integrated figures from the book, help to save time in preparing and planning lectures · Routes help students follow and understand various themes and connections throughout the book and offer schemes for independent study · Answers to exercises provided in the book For students: · Hyperlinks to the primary literature cited in the book to facilitate access to original research papers · Routes map out how key themes are developed throughout the book · Web link library of all the URLs included in the book, together with additional web links on specific topics

Landscape ecology is an integrative and multi-disciplinary science and Principles and Methods in Landscape Ecology reconciles the geological, botanical, zoological and human perspectives. In particular, new paradigms and theories such as percolation, metapopulation, hierarchies, source-sink models have been integrated in this last edition with the recent theories on bio-complexity, 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 useful to present the landscape in a multi-vision 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.

This book began life as a series of lectures given to second and third year undergraduates at Oxford University. These lectures were designed to give students insights as to how marine ecosystems functioned, how they were being affected by natural and human interventions, and how we might be able to conserve them and manage them sustainably for the good of people, both recreationally and economically. This book presents 10 chapters, beginning with principles of oceanography important to ecology, through discussions of the magnitude of marine biodiversity and the factors influencing it, the

functioning of marine ecosystems at within trophic levels such as primary production, competition and dispersal, to different trophic level interactions such as herbivory, predation and parasitism. The final three chapters look at the more applied aspects of marine ecology, discussion fisheries, human impacts, and management and conservation. Other textbooks covering similar topics tend to treat the topics from the point of view of separate ecosystems, with chapters on reefs, rocks and deep sea. This book however is topic driven as described above, and each chapter makes full use of examples from all appropriate marine ecosystems. The book is illustrated throughout with many full colour diagrams and high quality photographs. The book is aimed at undergraduate and graduate students at colleges and universities, and it is hoped that the many examples from all over the world will provide global relevance and interest. Both authors have long experience of research and teaching in marine ecology. Martin Speight's first degree was in marine zoology at UCNW Bangor, and he has taught marine ecology and conservation at Oxford for 25 years. His research students study tropical marine ecology from the Caribbean through East Africa to the Far East. Peter Henderson is a Senior Research Associate at the University of Oxford, and is Director of Pisces Conservation in the UK. He has worked on marine and freshwater fisheries, as well as ecological and economic impacts and exploitation of the sea in North and South America as well as Europe.

Running waters are enormously diverse, ranging from torrential mountain brooks, to large lowland rivers, to great river systems whose basins occupy subcontinents. While this diversity makes river ecosystems seem overwhelmingly complex, a central theme of this volume is that the processes acting in running waters are general, although the settings are often unique. The past two decades have seen major advances in our knowledge of the ecology of streams and rivers. New paradigms have emerged, such as the river continuum and nutrient spiraling. Community ecologists have made impressive advances in documenting the occurrence of species interactions. The importance of physical processes in rivers has attracted increased attention, particularly the areas of hydrology and geomorphology, and the inter-relationships between physical and biological factors have become better understood. And as is true for every area of ecology during the closing years of the twentieth century it has become apparent that the study of streams and rivers cannot be carried out by excluding the role of human activities, nor can we ignore the urgency of the need for conservation. These developments are brought together in *Stream Ecology: Structure and function of running waters*, designed to serve as a text for advanced undergraduate and graduate students, and as a reference book for specialists in stream ecology and related fields.

with Applications in R

Towards a Science of the Landscape

Fresh Water Ecology: Principles and Applications

Solving Complex Problems in a Globalized World

Stream Ecology

As Ecology teachers ourselves we have become increasingly aware of the lack of a single comprehensive textbook of Ecology which we can recommend unreservedly to our students. While general, review texts are readily available in other fields, recent publications in Ecology have tended for the most part to be small, specialised works on single aspects of the subject. Such general texts as are available are often rather too detailed and, in addition, tend to be somewhat biased towards one aspect of the discipline or another and are thus not truly balanced syntheses of current knowledge. Ecology is, in addition, a rapidly developing subject: new information is being gathered all the time on a variety of key questions; new approaches and techniques open up whole new areas of research and establish new principles. Already things have changed radically since the early '70s and we feel there is a need for an up to date student text that will include some of this newer material. We have tried, therefore, to create a text that will review all the major principles and tenets within the whole field of Ecology, presenting the generally accepted theories and fundamentals and

reviewing carefully the evidence on which such principles have been founded. While recent developments in ecological thought are emphasised, we hope that these will not dominate the material to the extent where the older-established principles are ignored or overlooked.

Ecology Principles and Applications Cambridge University Press

This book provides comprehensive coverage on current trends in marine omics of various relevant topics such as genomics, lipidomics, proteomics, foodomics, transcriptomics, metabolomics, nutrigenomics, pharmacogenomics and toxicogenomics as related to and applied to marine biotechnology, molecular biology, marine biology, marine microbiology, environmental biotechnology, environmental science, aquaculture, pharmaceutical science and bioprocess engineering.

Theoretical Ecology: concepts and applications continues the authoritative and established sequence of theoretical ecology books initiated by Robert M. May which helped pave the way for ecology to become a more robust theoretical science, encouraging the modern biologist to better understand the mathematics behind their theories. This latest instalment builds on the legacy of its predecessors with a completely new set of contributions. Rather than placing emphasis on the historical ideas in theoretical ecology, the Editors have encouraged each contribution to: synthesize historical theoretical ideas within modern frameworks that have emerged in the last 10-20 years (e.g. bridging population interactions to whole food webs); describe novel theory that has emerged in the last 20 years from historical empirical areas (e.g. macro-ecology); and finally to cover the rapidly expanding area of theoretical ecological applications (e.g. disease theory and global change theory). The result is a forward-looking synthesis that will help guide the field through a further decade of discovery and development. It is written for upper level undergraduate students, graduate students, and researchers seeking synthesis and the state of the art in growing areas of interest in theoretical ecology, genetics, evolutionary ecology, and mathematical biology.

Theoretical Ecology

Population Ecology

Soundscape Ecology

Marine Ecology

Biological Control

In its first edition, this book helped to define the emerging field of ecological economics. This new edition surveys the field today. It incorporates all of the latest research findings and grounds economic inquiry in a more robust understanding of human needs and behavior. Humans and ecological systems, it argues, are inextricably bound together in complex and long-misunderstood ways. According to ecological economists, conventional economics does not reflect adequately the value of essential factors like clean air and water, species diversity, and social and generational equity. By excluding biophysical and social systems from their analyses, many conventional economists

have overlooked problems of the increasing scale of human impacts and the inequitable distribution of resources. This introductory-level textbook is designed specifically to address this significant flaw in economic thought. The book describes a relatively new "transdiscipline" that incorporates insights from the biological, physical, and social sciences. It provides students with a foundation in traditional neoclassical economic thought, but places that foundation within an interdisciplinary framework that embraces the linkages among economic growth, environmental degradation, and social inequity. In doing so, it presents a revolutionary way of viewing the world. The second edition of Ecological Economics provides a clear, readable, and easy-to-understand overview of a field of study that continues to grow in importance. It remains the only stand-alone textbook that offers a complete explanation of theory and practice in the discipline.

Soundscape Ecology represents a new branch of ecology and it is the result of the integration of different disciplines like Landscape ecology, Bioacoustics, Acoustic ecology, Biosemiotics, etc. The soundscape that is the object of this discipline, is defined as the acoustic context resulting from natural and human originated sounds and it is considered a relevant environmental proxy for animal and human life. With Soundscape Ecology Almo Farina means to offer a new cultural tool to investigate a partially explored component of the environmental complexity. For this he intends to set the principles of this new discipline, to delineate the epistemic domain in which to develop new ideas and theories and to describe the necessary integration with all the other ecological/environmental disciplines. The book is organized in ten chapters. The first two chapters delineate principles and theory of soundscape ecology. Chapters three and four describe the bioacoustic and communication theories. Chapter five is devoted to the human dimension of soundscape. Chapters six to eight regard the major sonic patterns like noise, choruses and vibrations. Chapter nine is devoted to the methods in soundscape ecology and finally chapter ten describes the application of the soundscape analysis.

Freshwater Ecology, Second Edition, is a broad, up-to-date treatment of everything from the basic chemical and physical properties of water to advanced unifying concepts of the

community ecology and ecosystem relationships as found in continental waters. With 40% new and expanded coverage, this text covers applied and basic aspects of limnology, now with more emphasis on wetlands and reservoirs than in the previous edition. It features 80 new and updated figures, including a section of color plates, and 500 new and updated references. The authors take a synthetic approach to ecological problems, teaching students how to handle the challenges faced by contemporary aquatic scientists. This text is designed for undergraduate students taking courses in Freshwater Ecology and Limnology; and introductory graduate students taking courses in Freshwater Ecology and Limnology. Expanded revision of Dodds' successful text. New boxed sections provide more advanced material within the introductory, modular format of the first edition. Basic scientific concepts and environmental applications featured throughout. Added coverage of climate change, ecosystem function, hypertrophic habitats and secondary production. Expanded coverage of physical limnology, groundwater and wetland habitats. Expanded coverage of the toxic effects of pharmaceuticals and endocrine disrupters as freshwater pollutants More on aquatic invertebrates, with more images and pictures of a broader range of organisms Expanded coverage of the functional roles of filterer feeding, scraping, and shredding organisms, and a new section on omnivores. Expanded appendix on standard statistical techniques. Supporting website with figures and tables - <http://www.elsevierdirect.com/companion.jsp?ISBN=9780123747242> Ecology is capturing the popular imagination like never before, with issues such as climate change, species extinctions, and habitat destruction becoming ever more prominent. At the same time, the science of ecology has advanced dramatically, growing in mathematical and theoretical sophistication. Here, two leading experts present the fundamental quantitative principles of ecology in an accessible yet rigorous way, introducing students to the most basic of all ecological subjects, the structure and dynamics of populations. John Vandermeer and Deborah Goldberg show that populations are more than simply collections of individuals. Complex variables such as distribution and territory for expanding groups come into play when mathematical models are applied. Vandermeer and Goldberg build these models from the ground up, from first

principles, using a broad range of empirical examples, from animals and viruses to plants and humans. They address a host of exciting topics along the way, including age-structured populations, spatially distributed populations, and metapopulations. This second edition of Population Ecology is fully updated and expanded, with additional exercises in virtually every chapter, making it the most up-to-date and comprehensive textbook of its kind. Provides an accessible mathematical foundation for the latest advances in ecology Features numerous exercises and examples throughout Introduces students to the key literature in the field The essential textbook for advanced undergraduates and graduate students An online illustration package is available to professors

Freshwater Ecology

Terrestrial Ecosystem Ecology

First Principles - Second Edition

Epidemiology and Plant Ecology

Ecological Principles and Environmental Issues

Written by leading experts in their respective fields, Principles and Applications of Soil Microbiology 3e, provides a comprehensive, balanced introduction to soil microbiology, and captures the rapid advances in the field such as recent discoveries regarding habitats and organisms, microbially mediated transformations, and applied environmental topics. Carefully edited for ease of reading, it aids users by providing an excellent multi-authored reference, the type of book that is continually used in the field. Background information is provided in the first part of the book for ease of comprehension. The following chapters then describe such fundamental topics as soil environment and microbial processes, microbial groups and their interactions, and thoroughly addresses critical nutrient cycles and important environmental and agricultural applications. An excellent textbook and desk reference, Principles and Applications of Soil Microbiology, 3e, provides readers with broad, foundational coverage of the vast array of microorganisms that live in soil and the major biogeochemical processes they control. Soil scientists, environmental scientists, and others, including soil health and conservation specialists, will find this material invaluable for understanding the amazingly diverse world of soil microbiology, managing agricultural and environmental systems, and formulating environmental policy. Includes discussion of major microbial methods, embedded within topical chapters Includes information boxes and case studies throughout the text to illustrate major concepts and connect fundamental knowledge with potential applications Study questions at the end of each chapter allow readers to evaluate their understanding of the materials

This book enhances our understanding of biological control,

integrating historical analysis, theoretical models and case studies in an ecological framework.

Social Ecology in the Digital Age: Solving Complex Problems in a Globalized World provides a comprehensive overview of social ecological theory, research, and practice. Written by renowned expert Daniel Stokols, the book distills key principles from diverse strands of ecological science, offering a robust framework for transdisciplinary research and societal problem-solving. The existential challenges of the 21st Century - global climate change and climate-change denial, environmental pollution, biodiversity loss, food insecurity, disease pandemics, inter-ethnic violence and the threat of nuclear war, cybercrime, the Digital Divide, and extreme poverty and income inequality confronting billions each day - cannot be understood and managed adequately from narrow disciplinary or political perspectives. Social Ecology in the Digital Age is grounded in scientific research but written in a personal and informal style from the vantage point of a former student, current teacher and scholar who has contributed over four decades to the field of social ecology. The book will be of interest to scholars, students, educators, government leaders and community practitioners working in several fields including social and human ecology, psychology, sociology, anthropology, criminology, law, education, biology, medicine, public health, earth system and sustainability science, geography, environmental design, urban planning, informatics, public policy and global governance. Winner of the 2018 Gerald L. Young Book Award from The Society for Human Ecology "Exemplifying the highest standards of scholarly work in the field of human ecology." <https://societyforhumanecology.org/human-ecology-homepage/awards/gerald-l-young-book-award-in-human-ecology/> The book traces historical origins and conceptual foundations of biological, human, and social ecology Offers a new conceptual framework that brings together earlier approaches to social ecology and extends them in novel directions Highlights the interrelations between four distinct but closely intertwined spheres of human environments: our natural, built, sociocultural, and virtual (cyber-based) surroundings Spans local to global scales and individual, organizational, community, regional, and global levels of analysis Applies core principles of social ecology to identify multi-level strategies for promoting personal and public health, resolving complex social problems, managing global environmental change, and creating resilient and sustainable communities Underscores social ecology's vital importance for understanding and managing the environmental and political upheavals of the 21st Century Highlights descriptive, analytic, and transformative (or moral) concerns of social ecology Presents strategies for educating the next generation of social ecologists emphasizing transdisciplinary, team-based, translational, and transcultural approaches

The spatial aspects of epidemics have been a largely ignored feature of plant ecology, yet an understanding of the spatial dynamics of pathogens is essential to quantifying the impact of diseases on wild

plants. Moreover, it may provide valuable information for the control of human diseases. This seminal work fulfills such a role by describing the basics of botanical epidemiology within the context of plant ecology. A variety of models are covered to estimate key parameters at both the individual plant and population levels, with emphasis on the value of spatial-temporal models in the evolutionary dynamics of pathogens. Practical methods are presented to validate these models, thus making this book accessible to theorists and empiricists alike.

Principles and Methods in Landscape Ecology

Marine OMICS

Principles and Conservation

The Routledge Handbook of Urban Ecology

Ecological Climatology

People have always shown an interest in their natural surroundings. You may know someone who can identify every animal, plant, and rock they see. Every day, you also interact with houseflies, mosquitoes, billions of dust mites, and other organisms that you cannot even see. What affects their environment also affects you. Understanding what affects the environment is important because it is where you live. Ecology takes biology from the relative simplicity of individuals to the complexity of interactions between organisms and their environments. Its implications stretch beyond biology into environmental science and the grand challenges facing society. To maintain the ecosystem many biochemical cycles are going on like water, carbon, nitrogen, and phosphorus and limited nutrients. If we want to conserve and protect nature and prevent the extinction of species, we need to know how they all fit together, what their habitat requirements are, how they influence each other, what the minimum population sizes are to ensure their survival, etc. For survival of species, natural areas, as well as agricultural sustainability, ecology is important. Without a good knowledge of ecology, the study of other fields will be useless and the human species will extinct. Ecology: Principles And Applications is intended to provide the concepts and principles that support cooperative actions to conserve rich biodiversity. It contains theory and real world cases in all areas of ecological sciences, focusing on behavioral, environmental, evolutionary, and population ecology will be considered, as well new findings relating to biodiversity, conservation, and paleoecology. The topics stated in this book are not new but the issues and technologies mentioned will be new and equally advanced for the readers too. This book will be benefit the students, researchers, fellow professors, and resource managers as well as to all those in the field of ecology working for its conservation.

This introductory general ecology text features a strong emphasis on helping students grasp the main concepts of ecology while keeping the presentation more applied than theoretical. An evolutionary perspective forms the foundation of the entire discussion. Evolution is brought to center stage throughout the book, as it is needed to support understanding of major concepts. The discussion begins with a brief introduction to the nature and history of the discipline of ecology, followed by section I, which includes two chapters on natural history--life on land and life in water. The intent is to establish a common foundation of natural history upon which to base the later discussions of ecological concepts. The introduction and natural history chapters can stand on their own and should be readily accessible to most students. They may be assigned as background reading, leaving 17 chapters to cover in a one-semester course. Sections II through VI build a hierarchical perspective: section II concerns the ecology of individuals; section III focuses on population ecology; section IV presents the ecology of interactions; section V summarizes community and ecosystem ecology; and finally, section VI discusses large-scale ecology and includes chapters on landscape, geographic, and global

ecology. These topics were first introduced in section I within a natural history context. In summary, 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.

This text provides a synthesis of the existing field of wetland ecology using a few central themes, including key environmental factors that produce wetland community types and some unifying problems such as assembly rules, restoration and conservation.

Ecology: Principles and Applications is a comprehensive textbook for A-level students and first-year undergraduates taking courses in biology, geography and Earth sciences, who require an introduction to ecology. Studies of human ecology are integrated into the text, and the links to related disciplines are emphasised. The text begins with the ecology of individual organisms and moves on, through communities and ecosystems, to global considerations of biogeography, co-evolution and conservation. Case histories, historical perspectives, controversial theories and extension material are highlighted throughout the book. The second edition has been brought up to date with current syllabuses by the addition of further material on the key issue of conservation, giving excellent coverage of the principles of conservation and using case studies to provide examples of conservation policies in practice. The authors are experienced teachers of ecology at sixth form and undergraduate level.

Wildlife Management and Landscapes

Essentials of Landscape Ecology

Applying Landscape Ecology in Biological Conservation

Principles and Applications

Landscape Ecology Principles in Landscape Architecture and Land-Use Planning