Ecology Paper Topics

News headlines are forever reporting diseases that take huge tolls on humans, wildlife, domestic animals, and both cultivated and native plants worldwide. These diseases can also completely transform the ecosystems that feed us and provide us with other critical benefits, from flood control to water purification. And yet diseases sometimes serve to maintain the structure and function of the ecosystems on which humans depend. Gathering thirteen essays by forty leading experts who convened at the Cary Conference at the Institute of Ecosystem Studies in 2005, this book develops an integrated framework for understanding where these diseases come from, what ecological factors influence their impacts, and how they in turn influence ecosystem dynamics. It marks the first comprehensive and in-depth exploration of the rich and complex linkages between ecology and disease, and provides conceptual underpinnings to understand and ameliorate epidemics. It also sheds light on the roles that diseases play in ecosystems, bringing vital new insights to landscape management issues in particular. While the ecological context is a key piece of the puzzle, effective control and understanding of diseases requires the interaction of professionals in medicine, epidemiology, veterinary medicine, forestry, agriculture, and ecology. The essential resource on the subject, Infectious Disease Ecology seeks to bridge these fields with an ecological approach that focuses on systems thinking and complex interactions.

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Landscape ecology has generated a wealth of knowledge that could enhance forest policy, but little of this knowledge has found its way into practice. This the first book to introduce landscape ecologists to the discipline of knowledge transfer. The book considers knowledge transfer in general, critically examines aspects that are unique to forest landscape ecology, and reviews case studies of successful applications for policy developers and forest managers in North America.

This volume explores the challenges of sustaining long-term ecological research through a historical analysis of the Long Term Ecological Research Program created by the U.S. National Science Foundation in 1980. The book examines reasons for the creation of the Program, an overview of its 40-year history, and in-depth historical analysis of selected sites. Themes explored include the broader impact of this program on society, including its relevance to environmental policy and understanding global climate change, the challenge of extending ecosystem ecology into urban environments, and links to creative arts and humanities projects. A major theme is the evolution of a new type of network science, involving comparative studies, innovation in information management, creation of socio-ecological frameworks, development of governance structures, and formation of an International Long Term Ecological Research Network with worldwide reach. The book's themes will interest historians, philosophers and social scientists interested in ecological and environmental sciences, as well as researchers across many disciplines who are involved in long-term ecological research.

Tropical Ecological Systems

Carabid Beetles: Ecology and Evolution

Forest Landscape Ecology

Contemporary Ecology Research in China

Issues in Ecological Research and Application: 2011 Edition

Ecological Responses at Mount St. Helens: Revisited 35 years after the 1980 Eruption

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This book builds on existing work exploring succession, disturbance ecology, and the interface between geophysical and biological systems in the aftermath of the 1980 eruptions of Mount St. Helens. The eruption was dramatic both in the spatial extent of impacts and the range of volcanic disturbance types and intensities. Complex geophysical forces created unparalleled opportunities to study initial ecological responses and long-term succession processes that occur in response to a major contemporary eruption across a great diversity of ecosystems—lowland to alpine forests, meadows, lakes, streams, and rivers. These factors make Mount St. Helens an extremely rich environment for learning about the ecology of volcanic areas and, more generally, about ecosystem response to major disturbance of many types, including land management. Lessons about ecological recovery at Mount St. Helens are shaping thought about succession, disturbance ecology, ecosystem management, and landscape ecology. In the first five years after the eruption several syntheses documented the numerous, intensive studies of ecological recovery. The 2005 volume "Ecological Responses to the 1980 Eruption of Mount St. Helens" (Springer Publishing) was the first ecological synthesis since 1987 of the scores of ecological studies underway in the area. More than half of the world's published studies on plant and animal responses to volcanic eruptions have taken place at Mount St. Helens. The 25-year synthesis, which generally included investigations (i.e., data) from 1980-2000, made it possible to more thoroughly analyze initial stages of ecological responses and to test the validity of early interpretations and the duration of early phenomena. And 35 years after the eruption, it is time for many of the scientists working in the first three-decade, post-eruption period to pass the science baton to the next generation of scientists to work at Mount St. Helens, and a synt hesis a t this time of transfer of responsibility to a younger cohort of scientists will be an enormous asset to the continuation of work at the volcano.

"In 2009, the third edition of the Encyclopedia of Microbiology and the Desk Encyclopedia of Microbiology published, providing customers with a six-volume compendium and condensed reference, respectively, on the vast subject of microbiology. This derivative will compile thirty-two chapters from the original MRW relating to microbial ecology (the study of how microbes interact with each other and their environments) and present them in a single thematic volume that will appeal to researchers, technicians,and students in the environmental science and microbial ecology fields. Classic and cutting-edge entries on topics including air quality, marine habitats, food webs, and microbial adhesion will be fully updated by their original authors (when possible), providing a up-to-date and affordable option to those with focused research interests"--Provided by publisher.

When learning new subjects, note-taking is very helpful. Use this book to keep your Ecology notes organized. You can take notes for up to 100 Ecology topics. In this book, there is even a Table of Contents that you can fill out in order to help yourself navigate through your notes. This is a 6" x 9" paperback notebook. At the top of each note-taking page, there is a line labeled "Topic" for you to write down the name of the topic that you are taking notes on. The paper in this book is thicker than most notebook paper. --- Ecology: a branch of science concerned with the interrelationship of organisms and their environments. ---

North American Monarch Butterfly Ecology and Conservation

An Introduction to Molecular Ecology

Forest Landscapes and Global Change

A Collection of Articles from Science and Technology Review

Energy, Ecology, and the Environment

Plant community ecology: Papers in honor of Robert H. Whittaker

Growth in the field of landscape ecology has included the development of methods and results that can be applied to an impressive range of environmental issues. This book addresses a broad spectrum of political, theoretical and applied aspects that often arise in the design and execution of landscape studies. The concepts of geographical scale and hierarchy arising within the confines of landscape ecology are examined, and a series of to address problems in spatial and temporal analysis. This book will provide the reader with a current perspective on this rapidly evolving science.

The Carabidae form one of the largest and best studied families of insects, occurring in nearly every terrestrial habitat. The contributions included in this book cover a broad spectrum of recent research into this beetle family, with an emphasis on various aspects of ecology and evolution. They deal both with individual carabid species, for example in studies on population and reproductive biology or life history in general, and with ground bee exemplified in papers treating assemblages in natural habitats, on agricultural land and in forests. Disciplines range from biogeography and faunistics, over morphology, taxonomy and phylogenetics, ecophysiology and functional ecology, to population, community, conservation and landscape ecology. This volume is the result of the 8th European Carabidologists' Meeting, 2nd International Symposium of Carabidology, September 1-4, 1992

The Chinese government is increasingly focusing on ecological construction and has subscribed to a national "Ecological Civilization Construction". Ecological research and protection practice develop so fast and achieve a lot at the national agenda.This book is a synthesis of five most exciting and dominant themes in contemporary ecological research in China: biodiversity, ecosystem management, degraded ecosystem restoration, global sustainable development.This book spans all the Earth's major ecosystems, such as forests, oceans, grasslands, wetlands, lakes, rivers, farmland and cities.This book provides a platform for scientific research across a variety of disciplines. It will be invaluable to experts, policymakers and local officers and will also be a highly useful resource for undergraduate and postgraduate students.This book will allow researchers, students and policy to learn about the significant achievements and applications of ecological research within China.

Landscape ecology is a relatively new area of study, which aims to understand the pattern of interaction of biological and cultural communities within a landscape. This book brings together leading figures from the field to provide an up-to-date survey of recent advances, identify key research problems and suggest a future direction for development and expansion of knowledge. Providing in-depth reviews of the principles and methods for ur landscape patterns and changes, the book illustrates concepts with examples of innovative applications from different parts of the world. Forming a current 'state-of-the-science' for the science of landscape ecology, this book forms an essential reference for graduate students, academics, professionals and practitioners in ecology, environmental science, natural resource management, and landscape planning and design.

Understanding Ecology by Biologically-Inspired Computation

Challenges for Research and Management

Changing the Nature of Scientists

Issues in Ecosystem Ecology: 2013 Edition

Ecology and Behaviour of Free-Ranging Animals Studied by Advanced Data-Logging and Tracking Techniques

Ecology Research Progress

Ecological Informatics is defined as the design and application of computational techniques for ecological analysis, synthesis, forecasting and management. The book provides an introduction to the scope, concepts and techniques of this newly emerging discipline. It illustrates numerous applications of Ecological Informatics for stream systems, river systems, freshwater lakes and marine systems as well as image recognition at micro and macro scale. Case studies focus on applications of artificial neural networks, genetic algorithms, fuzzy logic and adaptive agents to current ecological management issues such as toxic algal blooms, eutrophication, habitat degradation, conservation of biodiversity and sustainable fishery.

The International Handbook of Political Ecology features chapters by leading scholars from around the world in a unique collection exploring the multi-disciplinary field of political ecology. This landmark volume canvasses key developments, topics, iss

Urbanization is next to global warming the largest threat to biodiversity. Indeed, it is becoming increasingly evident that many bird species get locally extinct as a result of urban development. However, many bird species benefit from urbanization, especially through the abundance of human-provided resources, and increase in abundance and densities. These birds are intriguing to study in relation to its resilience and adaption to urban environments, but also in relation to its susceptibility and the potential costs of urban life. This Research Topic consisting of 30 articles (one review, two meta-analyzes and 27 original data papers) provides insights into species and population responses to urbanization through diverse lenses, including biogeography, community ecology, behaviour, life history evolution, and physiology.

R. K. Peet Dep. of Botany, University of North Carolina, Chapel Hill, N. C. 27514, USA Robert Whittaker's contributions to ecology were many and remarkably varied. His publication record will long stand as a monument to his greatness, and whatever we do to honor him will likely be rather small in comparison. Less well known were his personal interactions and the impact they had on the development of ecology as well as individual scientists. Over the years he touched many of us and we felt not just a professional but also a deep personal loss in his passing. After his death I was contacted by numerous colleagues who wondered what they might do to honor him. Whittaker had long served on the editorial board of Vegetatio, which prompted Eddy van der Maarel to suggest that a series of papers in the journal might be a fitting memorial, and so this project was conceived. Whittaker was a master of synthesis and during his career he published numerous review papers which showed clearly how his work related to and built on that of others. For this reason it seemed inappropriate and redundant to solicit papers reviewing areas to which Whittaker made important contributions. Instead, I chose to solicit research papers illustrating current applications of approaches Whittaker developed and showing a few of the recent advances which have grown directly from his pioneering work.

Behavioural and Ecological Consequences of Urban Life in Birds

Long-Term Ecological Research

Industrial Ecology

2012-2013 UNCG Graduate School Bulletin

Effects of Ecosystems on Disease and of Disease on Ecosystems

Fifty Years of Invasion Ecology

In 1971 the International Society of Tropical Ecology and the International Association for Ecology held a meeting on Tropical Ecology, with an emphasis on organic production in New Delhi, India. At this meeting a Working Group on Tropical Ecology was organized, consisting of K. C. Misra (India), F. Malaisse (Zaire), E. Medina (Venezuela) and F. Golley (U.S.A.). The object of this Working Group was to stimulate interaction between tropical ecologists through future scientific meetings and other exchanges and communications. A second meeting of ISTE and INTECOL was held in Caracas, Venezuela in 1973, under the direction of Medina and Golley and sponsored by the Depart ment of Ecology, Institute Venezolano Investigaciones Cientificas (IVIC). The basic structure of the meeting was provided by series of invited papers which considered topics of special interest from both an applied and theoretical view. These included physiological ecology (Pannier), populations (Rabinovich), tropical savannas (Lamotte), rivers (Sioli), estuaries (Rodriguez), and island ecosystems (Mueller-Dombois). Contributed papers considered details of these and other ecological topics, including the application of ecology to human problems. The present volume includes the invited papers listed above and a sampling of contributed papers which together illustrate the trends of research in tropical ecology. The papers show that tropical ecology is a vigorous subject of research. While the papers in this volume do not provide reviews of all the topics of study in tropical ecology, they do present authoritative statements on progress in the major subject in the field.

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Invasion ecology is the study of the causes and consequences of the introduction of organisms to areas outside their native range. Interest in this field has exploded in the past few decades. Explaining why and how organisms are moved around the world, how and why some become established and invade, and how best to manage invasive species in the face of global change are all crucial issues that interest biogeographers, ecologists and environmental managers in all parts of the world. This book brings together the insights of more than 50 authors to examine the origins, foundations, current dimensions and potential trajectories of invasion ecology. It revisits key tenets of the foundations of invasion ecology, including contributions of pioneering naturalists of the 19th century, including Charles Darwin and British ecologist Charles Elton, whose 1958 monograph on invasive species is widely acknowledged as having focussed scientific attention on biological invasions.

Climate change, urban sprawl, abandonment of agriculture, intensification of forestry and agriculture, changes in energy generation and use, expansion of infrastructure networks, habitat destruction and degradation, and other drivers of change occur at increasing rates. They affect patterns and processes in forest landscapes, and modify ecosystem services derived from those ecosystems. Consequently, rapidly changing landscapes present many new challenges to scientists and managers. While it is not uncommon to encounter the terms "global change" and "landscape" together in the ecological literature, a global analyses of drivers of change in forest landscapes, and their ecological consequences have not been addressed adequately. That is the goal of this volume: an exploration of the state of knowledge of global changes in forested landscapes with emphasis on causes and effects, and challenges faced by researchers and land managers. Initial chapters identify and describe major agents of landscape change: climate, fire, and human activities. The next series of chapters address implications of changes on ecosystem services, biodiversity conservation and carbon flux. A chapter that describes methodologies of detecting and monitoring landscape changes is presented followed by chapter that highlights the many challenges forest landscape managers face amidst of global change. Finally, we present a summary and a synthesis of the main points presented in the book. Each chapter will contain the individual research experiences of chapter authors, augmented by review and synthesis of global scientific literature on relevant topics, as well as critical input from multiple peer reviewers.

Issues in Ecological Research and Application: 2013 Edition

Advances in Ungulate Ecology

Foundations of Restoration Ecology

The Challenges of Long Term Ecological Research: A Historical Analysis

The Routledge Handbook of Research Methods for Social-Ecological Systems

Trends in Terrestrial and Aquatic Research

The book presents the latest research on ecology which is the study of the interrelationships between organisms and their environment, including the biotic and abiotic components. There are at least six kinds of ecology: ecosystem, physiological, behavioural, population, and community. Specific topics include: Acid Deposition, Acid Rain Revisited, Biodiversity, Biocomplexity, and Carbon Sequestration in Soils, Coral Reefs, Ecosystem Services, Environmental Justice, Fire Ecology, Floods, Global Climate Change, Hypoxia, and Invasion.

Energy, Ecology, and the Environment discusses how our need for energy and the different means required to obtain it affect the environment and the harnessing of different natural resources. The book also aims to show more efficient ways to use and generate energy. The book, after a brief introduction to the concept of energy, covers topics such as the different energy resources and the demands, costs, and policies regarding energy. The book also discusses the problems brought about by the production of energy such as the hazards to nature and man; environmental problems and pollution; and accidents and sabotage that it can bring about. Also tackled are issues such as the transport and disposal of wastes; the conversion of energy; and the regulation of the energy industry. The text is recommended for naturalists who would like to know more about the effects of the energy industry on the environment, as well as for energy scientists who are looking for alternative sources and ways to achieve clean energy.

Key Topics in Landscape EcologyCambridge University Press

The Long-Term Ecological Research (LTER) Program is, in a sense, an experiment to transform the nature of science, and represents one of the most effective mechanisms for catalyzing comprehensive site-based research that is collaborative, multidisciplinary, and long-term in nature. The scientific contributions of the Program are prodigious, but the broader impacts of participation have not been examined in a formal way. This book captures the consequences of participation in the Program on the perspectives, attitudes, and practices of environmental scientists. The edited volume comprises three sections. The first section includes two chapters that provide an overview of the history, goals, mission, and inner workings of the LTER network of sites. The second section comprises three dozen retrospective essays by scientists, data managers or educators who represent a broad spectrum of LTER sites from deserts to tropical forests and from arctic to marine ecosystems. Each essay addresses the same series of probing questions to uncover the extent to which participation has affected the ways that scientists conduct research, educate students, or provide outreach to the public. The final section encompasses 5 chapters, whose authors are biophysical scientists, historians, behavioral scientists, or social scientists. This section analyzes, integrates, or synthesizes the content of the previous chapters from multiple perspectives and uncovers emergent themes and future directions.

The Impact of Weather on the Behavior and Ecology of Birds

The International Handbook of Political Ecology

Applied Urban Ecology

Invasion Ecology

History of Landscape Ecology in the United States

Ecology Notebook

The new book presents important recent research on ecology which is the study of the interrelationships between organisms and their environment, including the biotic and abiotic components. There are at least six kinds of ecology: ecosystem, physiological, behavioural, population, and community. specific topics include: Acid Deposition, Acid Rain Revisited, Biodiversity, Biocomplexity, Carbon Sequestration in Soils, Coral Reefs, Ecosystem Services, Environmental Justice, Fire Ecology , Floods, Global Climate Change, Hypoxia, and Invasion.

Invasion Ecology is the second volume in the four-part Environmental Inquiry curriculum series, designed to show you how to apply scientific knowledge to solving real-life problems.

Contains a selection of articles illustrating the beginning of an industrial ecology research program at Livermore National Laboratory. Topics addressed include: technological issues involved with the automobile, improved economic & environmental efficiency through better engineering, understanding the links between human economic activity & underlying natural systems through the development of complex models, & the direct application of technology to environmental issues. Photos. Charts & tables.

Applied Urban Ecology: A Global Framework explores ways in which the environmental quality of urban areas can be improved starting with existing environmental conditions and their dynamics. Written by an internationally renowned selection of scientists and practitioners, the book covers a broad range of established and novel approaches to applied urban ecology. Approaches chosen for the book are placed in the context of issues such as climate change, green- and open-space development, flood-risk assessment, threats to urban biodiversity, and increasing environmental pollution (especially in the "megacities" of newly industrialized countries). All topics covered were chosen because they are socially and socio-politically relevant today. Further topics covered include sustainable energy and budget management, urban water resource management, urban land management, and urban landscape planning and design. Throughout the book, concepts and methods are illustrated using case studies from around the world. A closing synopsis draws conclusions on how the findings of urban ecological research can be used in strategic urban management in the future. Applied Urban Ecology: A Global Framework is an advanced textbook for students, researchers and experienced practitioners in urban ecology and urban environmental research, planning, and practice.

A Global Framework

Infectious Disease Ecology

Unifying Ecology Across Scales: Progress, Challenges and Opportunities

Ecological Informatics

Topics in Ecological and Environmental Microbiology

Lizard Ecology

This book describes the emergence of landscape ecology, its current status as a new integrative science, and how distinguished scholars in the field of landscape ecology view the future regarding new challenges and career opportunities. Over the past thirty years, landscape ecology has utilized development in technology and methodology (e.g., satellites, GIS, and systems technologists) to monitor large temporal-spatial scale events and phenomena. These events include changes in vegetative cover and composition due to both natural disturbance and human cause—changes that have academic, economic, political, and social manifestations. There is little doubt, due to the temporal-spatial scale of this integrative science, that scholars in fields of study ranging from anthropology to urban ecology will desire to compare their fields with landscape ecology during this intellectually and technologically fertile time. History of Landscape Ecology in the United States brings to light the vital role that landscape ecologists will play in the future as the human population continues to increase and fragment the natural environment. Landscape ecology is known as a synthesized intersection of disciplines; but new theories, concepts, and principles have emerged that form the foundation of a new transdiscipline.

The book "Ecological and Environmental Science: A Research Perspective" is a compilation of authors' original research papers, scientific articles, review articles, popular articles, general articles, and short notes on forest ecology, wetland ecology, plant ecology, bird ecology, and animal ecology. The book is a perfect amalgamation of burgeoning and thrust topics spanning biodiversity, and conservation and management of floral and faunal elements including ecology and biodiversity of phytoplankton, zooplankton, aquatic macrophytes, mangroves, terrestrial plants, animals (butterflies, reptiles, mammals) and birds. It covers ecological and environmental factors affecting abiotic and biotic components prevailed in forest, desert, grassland and wetland habitats and ecosystems. The present book highlights field studies and laboratory investigations carried out by the authors during their research journey of 22 years (1998-2020). It discusses phenology, ethnobotanical, ethnomedicinal and aesthetic values of plants, resource use patterns by local inhabitants, socio-cultural aspects, livelihood dependency, rare and endangered plants, animals and birds, anthropogenic pressures, conservation and management strategies of endemic, exotic, and invasive species, and so on. The book covers unique and promising research topics e.g. hydrochemistry, geochemistry, biomonitoring of heavy metals in aquatic and terrestrial plants, metal remediation, environmental modeling, environmental archaeology, environmental bioindicators, environmental forensics, etc. The authors believes that this book is a perfect blend of their research work on two integral branches of biology i.e. ecology and environmental science, which will undoubtedly enrich and enhance the knowledge and awareness of laymen and scientific community world over especially in the field of ecology and biodiversity of plants, animals, and birds, associated with physical, chemical, biological, ecological and environmental factors. The present book would certainly be useful and handy as a ready-reference material for students, academicians, researchers, scientists, ecological and environmental consultants, restoration specialists, practitioners, conservationists, and biodiversity managers at regional, national and global platform.

Originally published in 2006, this book was the first critical review of the effects of lizard foraging modes in 30 years.

As the practical application of ecological restoration continues to grow, there is an increasing need to connect restoration practice to areas of underlying ecological theory. Foundations of Restoration Ecology is an important milestone in the field, bringing together leading ecologists to bridge the gap between theory and practice by translating elements of ecological theory and current research themes into a scientific framework for the field of restoration ecology. Each chapter addresses a particular area of ecological theory, covering traditional levels of biological hierarchy (such as population genetics, demography, community ecology) as well as topics of central relevance to the challenges of restoration ecology (such as species interactions, fine-scale heterogeneity, successional trajectories, invasive species ecology, ecophysiology). Several chapters focus on research tools (research design, statistical analysis, modeling), or place restoration ecology research in a larger context (large-scale ecological phenomena, macroecology, climate change and paleoecology, evolutionary ecology). The book makes a compelling case that a stronger connection between ecological theory and the science of restoration ecology will be mutually beneficial for both fields: restoration ecology benefits from a stronger grounding in basic theory, while ecological theory benefits from the unique opportunities for experimentation in a restoration context. Foundations of Restoration Ecology advances the science behind the practice of restoring ecosystems while exploring ways in which restoration ecology can inform basic ecological questions. It provides the first comprehensive overview of the theoretical foundations of restoration ecology, and is a must-have volume for anyone involved in restoration research, teaching, or practice.

Transferring Knowledge to Practice

6" X 9"

Ecology Research Trends

Issues and Applications

Landscape Ecological Analysis

The Legacy of Charles Elton

The Encyclopedia of Ecology and Environmental Managementaddresses the core definitions and issues in pure and appliedecology. It is neither a short entry dictionary nor a long entryencyclopedia, but lies somewhere in between. The mixture of shortentry definitions and long entry essays gives a comprehensive andup-to-date alphabetical guide to over 3000 topics, and allows anysubject to be accessed to varying levels of detail; while thelonger entries provide general reviews of subjects, the shortdefinitions provide specific details on more specialised areas. Animportant feature of the Encyclopedia which sets it apart fromother similar works is the comprehensive cross-referencing. The most comprehensive and up-to-date reference work in pureand applied ecology. Definitions cover the entire spectrum of pure and appliedecological research. Distinguished editorial board: Dr Peter Moore, Professor JohnGrace, Professor Bryan Shorrocks, Professor Steven Stearns,Professor Don Falk. International team of distinguished authors - over 200contributors from 20 countries. 3000 headwords defined. Over 250 long entries review major topics. Heavily illustrated, with a section of colour plates. Complete one volume guide to pure and applied ecology. Presents cutting edge definitions in emerging fields as well asgrounding in well-established areas of ecology.

The Routledge Handbook of Research Methods for Social-Ecological Systems provides a synthetic guide to the range of methods that can be employed in social-ecological systems (SES) research. The book is primarily targeted at graduate students, lecturers and researchers working on SES, and has been written in a style that is accessible to readers entering the field from a variety of different disciplinary backgrounds. Each chapter discusses the types of SES questions to which the particular methods are suited and the potential resources and skills required for their implementation, and provides practical examples of the application of the methods. In addition, the book contains a conceptual and practical introduction to SES research, a discussion of key gaps and frontiers in SES research methods, and a glossary of key terms in SES research. Contributions from 97 different authors, situated at SES research hubs in 16 countries around the world, including South Africa, Sweden, Germany and Australia, bring a wealth of expertise and experience to this book. The first book to provide a guide and introduction specifically focused on methods for studying SES, this book will be of great interest to students and scholars of sustainability science, environmental management, global environmental change studies and environmental governance. The book will also be of interest to upper-level undergraduates and professionals working at the science–policy interface in the environmental arena.

An Introduction to Molecular Ecology introduces the latest molecular concepts and techniques, demonstrating how genetic markers and molecular tools can be used to answer ecological questions such as "How do we know whether a particular species is monogamous or promiscuous?"; "How can we monitor the illegal trafficking of wildlife?"; and "How can we differentiate between the many similar species making up a microbial community?" Such questions, whoseanswers were previously out of our reach, can now be probed, revolutionizing our understanding of ecological systems and phenomena.Blending conceptual detail with the most instructive examples, An Introduction to Molecular Ecology is an ideal resource for those new to the subject needing todevelop a strong working understanding of the field. The book captures the broad scope of the subject, exploring the use of molecular tools in the context of topics including behavioural genetics, phylogeography, microbial ecology, and conservation.

Ecological and Environmental Science: A Research Perspective

Encyclopedia of Ecology and Environmental Management

Key Topics in Landscape Ecology