

Holt Environmental Science Biodiversity Test Answer Key

This open access book identifies and discusses biodiversity's contribution to physical, mental and spiritual health and wellbeing. Furthermore, the book identifies the implications of this relationship for nature conservation, public health, landscape architecture and urban planning – and considers the opportunities of nature-based solutions for climate change adaptation. This transdisciplinary book will attract a wide audience interested in biodiversity, ecology, resource management, public health, psychology, urban planning, and landscape architecture. The emphasis is on multiple human health benefits from biodiversity - in particular with respect to the increasing challenge of climate change. This makes the book unique to other books that focus either on biodiversity and physical health or natural environments and mental wellbeing. The book is written as a definitive 'go-to' book for those who are new to the field of biodiversity and health.

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 disruptors 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>

Grand Challenges in Environmental Sciences National Academies Press

The invasive species problem will become increasingly important in the years to come. Trade, travel and tourism are rapidly globalized, and border controls are reduced. This affects natural ecosystems in which aggressive invaders may have disastrous effects. `New' diseases affect human, animal and crop health. The Convention on Biological Diversity presents national authorities with a tall order in coping with this problem. For the first time in one volume, this book presents both ecological, biological and epidemiological aspects of invasive species, as well as the problem of disease organisms for agriculture and human health. The book constitutes a comprehensive background to the global strategy for managing invasive alien species which now is being developed by SCOPE and UNEP. The book is well suited for management staff in various environmental, economic and social sectors. It is essential for university and college teachers, researchers in ecology, natural resources management, and social sciences, as well as M.Sc. and Ph.D. students.

Until recently community ecology—a science devoted to understanding the patterns and processes of species distribution and

abundance—focused mainly on specific and often limited scales of a single community. Since the 1970s, for example, metapopulation dynamics—studies of interacting groups of populations connected through movement—concentrated on the processes of population turnover, extinction, and establishment of new populations. Metacommunities takes the hallmarks of metapopulation theory to the next level by considering a group of communities, each of which may contain numerous populations, connected by species interactions within communities and the movement of individuals between communities. In examining communities open to dispersal, the book unites a broad range of ecological theories, presenting some of the first empirical investigations and revealing the value of the metacommunity approach. The collection of empirical, theoretical, and synthetic chapters in *Metacommunities* seeks to understand how communities work in fragmented landscapes. Encouraging community ecologists to rethink some of the leading theories of population and community dynamics, *Metacommunities* urges ecologists to expand the spatiotemporal scales of their research.

Metacommunity ecology links smaller-scale processes that have been the provenance of population and community ecology—such as birth-death processes, species interactions, selection, and stochasticity—with larger-scale issues such as dispersal and habitat heterogeneity. Until now, the field has focused on evaluating the relative importance of distinct processes, with niche-based environmental sorting on one side and neutral-based ecological drift and dispersal limitation on the other. This book moves beyond these artificial categorizations, showing how environmental sorting, dispersal, ecological drift, and other processes influence metacommunity structure simultaneously. Mathew Leibold and Jonathan Chase argue that the relative importance of these processes depends on the characteristics of the organisms, the strengths and types of their interactions, the degree of habitat heterogeneity, the rates of dispersal, and the scale at which the system is observed. Using this synthetic perspective, they explore metacommunity patterns in time and space, including patterns of coexistence, distribution, and diversity. Leibold and Chase demonstrate how these processes and patterns are altered by micro- and macroevolution, traits and phylogenetic relationships, and food web interactions. They then use this scale-explicit perspective to illustrate how metacommunity processes are essential for understanding macroecological and biogeographical patterns as well as ecosystem-level processes. Moving seamlessly across scales and subdisciplines, *Metacommunity Ecology* is an invaluable reference, one that offers a more integrated approach to ecological patterns and processes.

Nematodes are the most wide spread multicellular animals in Nature and analysis of nematodes in terrestrial, freshwater and marine environments as well as their role and function in ecosystems can be used for environmental monitoring. Classical and molecular approaches to nematode community analysis will be addressed and the contemporary field of nematodes as biosensors and genomic and post genomic aspects of nematode bioindicators will also be included. Case studies stress the importance of these bioindicators and demonstrate the commercial potential of these technologies.

The major subdisciplines of ecology--population ecology, community ecology, ecosystem ecology, and evolutionary ecology--have diverged increasingly in recent decades. What is critically needed today is an integrated, real-world approach to ecology that reflects the interdependency of biodiversity and ecosystem functioning. From *Populations to Ecosystems* proposes an innovative theoretical synthesis that will enable us to advance our fundamental understanding of ecological systems and help us to respond to today's emerging global ecological crisis. Michel Loreau begins by explaining how the principles of population dynamics and ecosystem functioning can be merged. He then addresses key

issues in the study of biodiversity and ecosystems, such as functional complementarity, food webs, stability and complexity, material cycling, and metacommunities. Loreau describes the most recent theoretical advances that link the properties of individual populations to the aggregate properties of communities, and the properties of functional groups or trophic levels to the functioning of whole ecosystems, placing special emphasis on the relationship between biodiversity and ecosystem functioning. Finally, he turns his attention to the controversial issue of the evolution of entire ecosystems and their properties, laying the theoretical foundations for a genuine evolutionary ecosystem ecology. *From Populations to Ecosystems* points the way to a much-needed synthesis in ecology, one that offers a fuller understanding of ecosystem processes in the natural world.

Today, there is growing interest in conservation and anthropologists have an important role to play in helping conservation succeed for the sake of humanity and for the sake of other species. Equally important, however, is the fact that we, as the species that causes extinctions, have a moral responsibility to those whose evolutionary unfolding and very future we threaten. This volume is an examination of the relationship between conservation and the social sciences, particularly anthropology. It calls for increased collaboration between anthropologists, conservationists and environmental scientists, and advocates for a shift towards an environmentally focused perspective that embraces not only cultural values and human rights, but also the intrinsic value and rights to life of nonhuman species. This book demonstrates that cultural and biological diversity are intimately interlinked, and equally threatened by the industrialism that endangers the planet's life-giving processes. The consideration of ecological data, as well as an expansion of ethics that embraces more than one species, is essential to a well-rounded understanding of the connections between human behavior and environmental wellbeing. This book gives students and researchers in anthropology, conservation, environmental ethics and across the social sciences an invaluable insight into how innovative and intensive new interdisciplinary approaches, questions, ethics and subject pools can close the gap between culture and conservation.

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

be these locations where the greatest species diversity and richest centres of endemism are to be found. Sadly, developing world conservation scientists have found it difficult to access an authoritative textbook, which is particularly ironic since it is these countries where the potential benefits of knowledge application are greatest. There is now an urgent need to educate the next generation of scientists in developing countries, so that they are in a better position to protect their natural resources.

The Earth's biodiversity-the rich variety of life on our planet-is disappearing at an alarming rate. And while many books have focused on the expected ecological consequences, or on the aesthetic, ethical, sociological, or economic dimensions of this loss, *Sustaining Life* is the first book to examine the full range of potential threats that diminishing biodiversity poses to human health. Edited and written by Harvard Medical School physicians Eric Chivian and Aaron Bernstein, along with more than 100 leading scientists who contributed to writing and reviewing the book, *Sustaining Life* presents a comprehensive--and sobering--view of how human medicines, biomedical research, the emergence and spread of infectious diseases, and the production of food, both on land and in the oceans, depend on biodiversity. The book's ten chapters cover everything from what biodiversity is and how human activity threatens it to how we as individuals can help conserve the world's richly varied biota. Seven groups of organisms, some of the most endangered on Earth, provide detailed case studies to illustrate the contributions they have already made to human medicine, and those they are expected to make if we do not drive them to extinction. Drawing on the latest research, but written in language a general reader can easily follow, *Sustaining Life* argues that we can no longer see ourselves as separate from the natural world, nor assume that we will not be harmed by its alteration. Our health, as the authors so vividly show, depends on the health of other species and on the vitality of natural ecosystems. With a foreword by E.O. Wilson and a prologue by Kofi Annan, and more than 200 poignant color illustrations, *Sustaining Life* contributes essential perspective to the debate over how humans affect biodiversity and a compelling demonstration of the human health costs. It is the winner of the Gerald L. Young Book Award in Human Ecology Best Sci-Tech Books of 2008 for Biology by Gregg Sapp of *Library Journal*

"This volume provides a series of essays on open questions in ecology with the overarching goal being to outline to the most important, most interesting or most fundamental problems in ecology that need to be addressed. The contributions span ecological subfields, from behavioral ecology and population ecology to disease ecology and conservation and range in tone from the technical to more personal meditations on the state of the field. Many of the chapters start or end in moments of genuine curiosity, like one which takes up the question of why the world is green or another which asks what might come of a thought experiment in which we "turn-off" evolution entirely"--

"The new book Mapping Ecosystem Services provides a comprehensive collection of theories, methods and practical applications of ecosystem services (ES) mapping, for the first time bringing together valuable knowledge and techniques from leading international experts in the field." (www.eurekalert.org).

Human well-being relies critically on ecosystem services provided by nature. Examples include water and air quality regulation, nutrient cycling and decomposition, plant pollination and flood control, all of which are dependent on biodiversity. They are predominantly public goods with limited or no markets and do not command any price in the conventional economic system, so their loss is often not detected and continues unaddressed and unabated. This in turn not only impacts human well-being, but also seriously undermines the sustainability of the economic system. It is against this background that TEEB: The Economics of Ecosystems and Biodiversity project was set up in 2007 and led by the United Nations Environment Programme to provide a comprehensive global assessment of economic aspects of these issues. This book, written by a team of international experts, represents the scientific state of the art, providing a comprehensive assessment of the fundamental ecological and economic principles of measuring and valuing ecosystem services and biodiversity, and showing how these can be mainstreamed into public policies. This volume and subsequent TEEB outputs will provide the authoritative knowledge and guidance to drive forward the biodiversity conservation agenda for the next decade.

Includes articles on agriculture, ecology, forests, wetlands, and environment, as well as organisms

Biodiversity and Human Health brings together leading thinkers on the global environment and biomedicine to explore the human health consequences of the loss of biological diversity.

climate changes have had dramatic repercussions, including large numbers of extinctions and extensive shifts in species ranges

Biodiversity observation systems are almost everywhere inadequate to meet local, national and international (treaty) obligations. As a result of alarmingly rapid declines in biodiversity in the modern era, there is a strong, worldwide desire to upgrade our monitoring systems, but little clarity on what is actually needed and how it can be assembled from the elements which are already present. This book intends to provide practical guidance to broadly-defined biodiversity observation networks at all scales, but predominantly the national scale and higher. This is a practical how-to book with substantial policy relevance. It will mostly be used by technical specialists with a responsibility for biodiversity monitoring to establish and refine their systems. It is written at a technical level, but one that is not discipline-bound: it should be intelligible to anyone in the broad field with a tertiary education.

Inspiring people to care about the planet. In the new edition of LIVING IN THE ENVIRONMENT, authors Tyler Miller and

Scott Spoolman have partnered with the National Geographic Society to develop a text designed to equip students with the inspiration and knowledge they need to make a difference solving today's environmental issues. Exclusive content highlights important work of National Geographic Explorers, and features over 200 new photos, maps, and illustrations that bring course concepts to life. Using sustainability as the integrating theme, *LIVING IN THE ENVIRONMENT 18e*, provides clear introductions to the multiple environmental problems that we face and balanced discussions to evaluate potential solutions. In addition to the integration of new and engaging National Geographic content, every chapter has been thoroughly updated and 18 new Core Case Studies offer current examples of present environmental problems and scenarios for potential solutions. The concept-centered approach used in the text transforms complex environmental topics and issues into key concepts that students will understand and remember. Overall, by framing the concepts with goals for more sustainable lifestyles and human communities, students see how promising the future can be and their important role in shaping it. offers additional exclusive National Geographic content, including high-quality videos on important environmental problems and efforts being made to address them. Team up with 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 text may not be available in the ebook version.

Determining the scientific relationship between biodiversity and ecosystem functioning has now emerged as one of the most important challenges in ecological and environmental science. This book provides a timely synthesis and critical assessment in order to generate a consensus on the main issues involved and stimulate new perspectives for future research.

Habitat loss and fragmentation arguably pose the greatest threats to biological diversity. This title provides a blueprint for advancing understanding of conservation in agricultural regions. It combines the efforts of ecologists, economists, statisticians, mathematicians and land-use specialists.

Resource-management decisions, especially in the area of protecting and maintaining biodiversity, are usually incremental, limited in time by the ability to forecast conditions and human needs, and the result of tradeoffs between conservation and other management goals. The individual decisions may not have a major effect but can have a cumulative major effect. *Perspectives on Biodiversity* reviews current understanding of the value of biodiversity and the methods that are useful in assessing that value in particular circumstances. It recommends and details a list of components-including diversity of species, genetic variability within and among species, distribution of species across the ecosystem, the aesthetic satisfaction derived from diversity, and the duty to preserve and protect biodiversity. The book

also recommends that more information about the role of biodiversity in sustaining natural resources be gathered and summarized in ways useful to managers. Acknowledging that decisions about biodiversity are necessarily qualitative and change over time because of the nonmarket nature of so many of the values, the committee recommends periodic reviews of management decisions.

Phylogenies in Ecology is the first book to critically review the application of phylogenetic methods in ecology, and it serves as a primer to working ecologists and students of ecology wishing to understand these methods. This book demonstrates how phylogenetic information is transforming ecology by offering fresh ways to estimate the similarities and differences among species, and by providing deeper, evolutionary-based insights on species distributions, coexistence, and niche partitioning. Marc Cadotte and Jonathan Davies examine this emerging area's explosive growth, allowing for this new body of hypotheses testing. Cadotte and Davies systematically look at all the main areas of current ecophylogenetic methodology, testing, and inference. Each chapter of their book covers a unique topic, emphasizes key assumptions, and introduces the appropriate statistical methods and null models required for testing phylogenetically informed hypotheses. The applications presented throughout are supported and connected by examples relying on real-world data that have been analyzed using the open-source programming language, R. Showing how phylogenetic methods are shedding light on fundamental ecological questions related to species coexistence, conservation, and global change, Phylogenies in Ecology will interest anyone who thinks that evolution might be important in their data.

Teeming with weird and wonderful life--giant clams and mussels, tubeworms, "eyeless" shrimp, and bacteria that survive on sulfur--deep-sea hot-water springs are found along rifts where sea-floor spreading occurs. The theory of plate tectonics predicted the existence of these hydrothermal vents, but they were discovered only in 1977. Since then the sites have attracted teams of scientists seeking to understand how life can thrive in what would seem to be intolerable or extreme conditions of temperature and fluid chemistry. Some suspect that these vents even hold the key to understanding the very origins of life. Here a leading expert provides the first authoritative and comprehensive account of this research in a book intended for students, professionals, and general readers. Cindy Lee Van Dover, an ecologist, brings nearly two decades of experience and a lively writing style to the text, which is further enhanced by two hundred illustrations, including photographs of vent communities taken in situ. The book begins by explaining what is known about hydrothermal systems in terms of their deep-sea environment and their geological and chemical makeup. The coverage of microbial ecology includes a chapter on symbiosis. Symbiotic relationships are further developed in a section on physiological ecology, which includes discussions of adaptations to sulfide, thermal tolerances, and sensory adaptations. Separate chapters are devoted to trophic relationships and reproductive ecology. A chapter on community dynamics

reveals what has been learned about the ways in which vent communities become established and why they persist, while a chapter on evolution and biogeography examines patterns of species diversity and evolutionary relationships within chemosynthetic ecosystems. Cognate communities such as seeps and whale skeletons come under scrutiny for their ability to support microbial and invertebrate communities that are ecologically and evolutionarily related to hydrothermal faunas. The book concludes by exploring the possibility that life originated at hydrothermal vents, a hypothesis that has had tremendous impact on our ideas about the potential for life on other planets or planetary bodies in our solar system.

This book provides readers with information on the factors underlying the emergence of infectious diseases originating in animals and spreading to people. The One Health concept recognizes the important links between human, animal, and environmental health and provides an important strategy in epidemic mitigation and prevention. The essential premise of the One Health concept is to break down the silos among the different health professions and promote transdisciplinary collaborations. These concepts are illustrated with in-depth analyses of specific zoonotic agents and with examples of the successes and challenges associated with implementing One Health. The book also highlights some of the challenges societies face in confronting several specific zoonotic diseases. A chapter is included on comparative medicine to demonstrate the broad scope of the One Health concept. Edited by a team including the One Health Initiative pro bono members, the book is dedicated to those studying zoonotic diseases and comparative medicine in both human and veterinary medicine, to those involved in the prevention and control of zoonotic infections and to those in the general public interested in the visionary field of One Health.

Tanzania is one of the most biologically diverse nations in the world. Traveling from west to east across Tanzania, one encounters an incredible array of ecosystems and species. Beginning at Lakes Victoria, Tanganyika, and Nyasa that form much of the western boundary of Tanzania, one finds the most diverse and some of the most spectacular concentrations of endemic fish in any of the world's lakes. Moving further inland from the lakes, one meets the woodlands and plains of Serengeti, Ngorongoro, Tarangire, and Lake Manyara. The assemblages and movements of large mammals in these protected areas are unparalleled worldwide. Traveling yet further to the east, one comes to Mount Kilimanjaro, the highest mountain in Africa. Mount Kilimanjaro is of sufficient height to not only contain seven major vegetation zones, but also maintain permanent glaciers. Finally, shortly before arriving at the Indian Ocean, one encounters the Eastern Arc Mountains, a series of isolated and geologically ancient mountains, which due to their height and proximity to the Indian Ocean intercept sufficient precipitation to support, in many areas, moist tropical forest. The Eastern Arc Mountains are among the richest sites biologically in all of Africa and harbor unusually high concentrations of

endemic species - species whose geographic distribution are restricted to these mountains. Unfortunately, much of Tanzania's biodiversity is threatened by habitat alteration, destruction, and exploitation. The Eastern Arc forests face some of the most severe threats to any of Tanzania's biologically unique sites.

The term biodiversity defines not only all the variety of life in the Earth but also their complex interactions. Under the current scenario of biodiversity loss, and in order to preserve it, it is essential to achieve a deep understanding on all the aspects related to the biological interactions, including their functioning and significance. This volume contains several contributions (nineteen in total) that illustrate the state of the art of the academic research in the field of biological interactions in its widest sense; that is, not only the interactions between living organisms are considered, but also those between living organisms and abiotic elements of the environment as well as those between living organisms and the humans.

Much effort has been devoted to developing theories to explain the wide variation we observe in reproductive allocation among environments. *Reproductive Allocation in Plants* describes why plants differ in the proportion of their resources that they allocate to reproduction and looks into the various theories. This book examines the ecological and evolutionary explanations for variation in plant reproductive allocation from the perspective of the underlying physiological mechanisms controlling reproduction and growth. An international team of leading experts have prepared chapters summarizing the current state of the field and offering their views on the factors determining reproductive allocation in plants. This will be a valuable resource for senior undergraduate students, graduate students and researchers in ecology, plant ecophysiology, and population biology. 8 outstanding chapters dedicated to the evolution and ecology of variation in plant reproductive allocation
Written by an international team of leading experts in the field
Provides enough background information to make it accessible to senior undergraduate students
Includes over 60 figures and 29 tables

The Great Lakes Basin in North America holds more than 20 percent of the world's fresh water. Threats to habitats and biodiversity have economic, political, national security, and cultural implications and ramifications that cross the US-Canadian border. This multidisciplinary book presents the latest research to demonstrate the interconnected nature of the challenges facing the Basin. Chapters by U.S. and Canadian scholars and practitioners represent a wide range of natural science and social science fields, including environmental sciences, geography, political science, natural resources, mass communications, environmental history and communication, public health, and economics. The book covers threats from invasive species, industrial development, climate change, agricultural and chemical runoff, species extinction, habitat restoration, environmental disease, indigenous conservation efforts, citizen engagement, environmental regulation, and pollution. Overall the book provides political, cultural, economic, scientific, and social contexts for

recognizing and addressing the environmental challenges faced by the Great Lakes Basin.

Scientists have long sought to unravel the fundamental mysteries of the land, life, water, and air that surround us. But as the consequences of humanity's impact on the planet become increasingly evident, governments are realizing the critical importance of understanding these environmental systems and investing billions of dollars in research to do so. To identify high-priority environmental science projects, Grand Challenges in Environmental Sciences explores the most important areas of research for the next generation. The book's goal is not to list the world's biggest environmental problems. Rather it is to determine areas of opportunity that with a concerted investment could yield significant new findings. Nominations for environmental science's "grand challenges" were solicited from thousands of scientists worldwide. Based on their responses, eight major areas of focus were identified—areas that offer the potential for a major scientific breakthrough of practical importance to humankind, and that are feasible if given major new funding. The book further pinpoints four areas for immediate action and investment.

Reducing environmental hazard and human impact on different ecosystems, with special emphasis on rural landscapes is the main topic of different environmental policies designed in developed countries and needed in most developing countries. This book covers the bioindication approach of rural landscapes and man managed ecosystems including both urbanised and industrialised ones. The main techniques and taxa used for bioindication are considered in detail.

Remediation and contamination is faced with diversity, abundance and dominance of biota, mostly invertebrates.

Invertebrate Biodiversity as Bioindicators of Sustainable Landscapes provides a basic tool for students and scientists involved in landscape ecology and planning, environmental sciences, landscape remediation and pollution.

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.

This open access book features essays written by philosophers, biologists, ecologists and conservation scientists facing the current biodiversity crisis. Despite increasing communication, accelerating policy and management responses, and notwithstanding improving ecosystem assessment and endangered species knowledge, conserving biodiversity continues to be more a concern than an accomplished task. Why is it so? The overexploitation of natural resources by our species is a frequently recognised factor, while the short-term economic interests of governments and stakeholders typically clash with the burdens that implementing conservation actions imply. But this is not the whole story. This book develops a different perspective on the problem by exploring the conceptual challenges and practical defiance posed by conserving biodiversity, namely: on the one hand, the difficulties in defining what biodiversity is and characterizing that “thing” to which the word ‘biodiversity’ refers to; on the other hand, the reasons why assessing biodiversity and putting in place effective conservation actions is arduous.

There has been a deluge of material on biodiversity, starting from a trickle back in the mid-1980's. However, this book is entirely unique in its treatment of the topic. It is unique in its meticulously crafted, scientifically informed, philosophical examination of the norms and values that are at the heart of discussions about biodiversity. And it is unique in its point of view, which is the first to comprehensively challenge prevailing views about biodiversity and its value. According to those dominant views, biodiversity is an extremely good thing – so good that it has become the emblem of natural value. The book's broader purpose is to use biodiversity as a lens through which to view the nature of natural value. It first examines, on their own terms, the arguments for why biodiversity is supposed to be a good thing. This discussion cuts a very broad and detailed swath through the scientific, economic, and environmental literature. It finds all these arguments to be seriously wanting. Worse, these arguments appear to have consequences that should dismay and perplex most environmentalists. The book then turns to a deeper analysis of these failures and suggests that they result from posing value questions from within a framework that is inappropriate for nature's value. It concludes with a novel suggestion for framing natural value. This new proposal avoids the pitfalls of the ones that prevail in the promotion of biodiversity. And it exposes the goals of conservation biology, restoration biology, and the world's largest conservation organizations as badly ill-conceived.

Annotation A collection of papers regarding the conservation of Costa Rica's tropical dry forest, which is disappearing more rapidly than its rain forest, due to ease of conversion to agriculture.

[Copyright: 39d30740a49e081c0a9db0b8aa238d00](#)