



This is an up-to-date study of patterns and processes involving two or more species. The book strikes a balance between plant and animal species and among studies of marine, freshwater and terrestrial communities.

One program that ensures success for all students

Concepts of Biology is designed for the single-semester introduction to biology course for non-science majors, which for many students is their only college-level science course. As such, this course represents an important opportunity for students to develop the necessary knowledge, tools, and skills to make informed decisions as they continue with their lives.

Rather than being mired down with facts and vocabulary, the typical non-science major student needs information presented in a way that is easy to read and understand. Even more importantly, the content should be meaningful. Students do much better when they understand why biology is relevant to their everyday lives. For these reasons, Concepts of Biology

grounded on an evolutionary basis and includes exciting features that highlight careers in the biological sciences and everyday applications of the concepts at hand. We also strive to show the interconnectedness of topics within this extremely broad discipline. In order to meet the needs of today's instructors and students, we maintain the overall organization and coverage found in most syllabi for this course. A strength of Concepts of Biology is that instructors can customize the book, adapting it to the approach that works best in their classroom. Concepts of Biology also includes an innovative art program that incorporates critical thinking and clicker questions to help students understand--and apply--key concepts.

Mathematics and 21st Century Biology

Microbes in Time

Attitudes Toward Green Infrastructure Strategies for More Livable and Sustainable Communities

Respiration in Aquatic Ecosystems

From Life Histories to Ecosystem Services

Ecotoxicology

The Ecology of Sandy Shores

Global environmental change (including climate change, biodiversity loss, changes in hydrological and biogeochemical cycles, and intensive exploitation of natural resources) is having significant impacts on the world's oceans. This book advances knowledge of the structure and functioning of marine ecosystems, and their past, present, and future responses to physical and anthropogenic forcing. It illustrates how climate and humans impact marine ecosystems, providing a comprehensive review of the physical and ecological processes that

structure marine ecosystems as well as the observation, experimentation, and modelling approaches required for their study. Recognizing the interactive roles played by humans in using marine resources and in responding to global changes in marine systems, the book includes chapters on the human dimensions of marine ecosystem changes and on effective management approaches in this era of rapid change. A final section reviews the state of the art in predicting the responses of marine ecosystems to future global change scenarios with

the intention of informing both future research agendas and marine management policy. Marine Ecosystems and Global Change provides a detailed synthesis of the work conducted under the auspices of the Global Ocean Ecosystems Dynamics (GLOBEC) programme. This research spans two decades, and represents the largest, multi-disciplinary, international effort focused on understanding the impacts of external forcing on the structure and dynamics of global marine ecosystems.

Soil science has undergone a renaissance with increasing awareness of the importance of soil organisms and below-ground biotic interactions as drivers of community and ecosystem properties.

Climate change poses many challenges that affect society and the natural world. With these challenges, however, come opportunities to respond. By taking steps to adapt to and mitigate climate change, the risks to society and the impacts of continued climate change can be lessened. The National Climate Assessment, coordinated by the U.S. Global Change Research Program, is a mandated report intended to inform response decisions. Required to be developed every four years, these reports provide the most comprehensive and up-to-date evaluation

of climate change impacts available for the United States, making them a unique and important climate change document. The draft Fourth National Climate Assessment (NCA4) report reviewed here addresses a wide range of topics of high importance to the United States and society more broadly, extending from human health and community well-being, to the built environment, to businesses and economies, to ecosystems and natural resources. This report evaluates the draft NCA4 to determine if it meets the requirements of the federal mandate, whether it provides accurate information grounded in the scientific literature, and whether it effectively communicates climate science, impacts, and responses for general audiences including the public, decision makers, and other stakeholders.

Ecology of Desert Systems

A Resource Book for Protecting Ecosystems and Communities

Biology

Effects of Flow Regime on Fishes and Fisheries

Concepts of Biology