A Functional Biology Of Scyphozoa

Advances in Marine Biology has been providing in-depth and up-to-date reviews on all aspects of marine biology since 1963 -- over 40 years of outstanding coverage! The series is well known for both its excellence of reviews and editing. Now edited by Michael Lesser (University of New Hampshire, USA), with renowned Editorial Board, the serial publishes in-depth and up-to-date content on a wide range of topics that will appeal to postgraduates and researchers in marine biology, fisheries science, ecology, zoology, and biological oceanography. Advances in Marine Biology has been providing in-depth and up-to-da aspects of marine biology since 1963

You know there is a problem. You need to prove it. You need to design a study that pinpoints all the relevant issues. Studying Temperate Marine Environments: A Handbook for Ecologists provides you with guidelines, examples, leads, and suggestions for beginning the process.

The first edition of Invertebrate Zoology offered undergraduates studying the biology and evolution of invertebrate animals a new approach to the subject. While the text of the second edition has been revised significantly, the original format has been maintained and enhanced. The chapters, written by expert a contemporary accounts of the functional, physiological, and reproductive biology of the invertebrate phyla. The final chapter of the book reviews modern interpretations of the phylogeny of invertebrates, based on cladistic and molecular evidence. The study of invertebrates has advanced rapidly in recent years changes are highlighted in this new edition. Separate chapters now reflect the recognition that the former 'aschelminths' include two disparate groups of phyle, a protostome group related to annelids and molluscs, and an ecdysozoan group related to arthropods. All classifications have been updated, and the re the phyla have been further clarified. Generously illustrated throughout, and with an emphasis on readability and clear presentation, this book will be a valuable resource for all students of invertebrate zoology as well as those involved in current advances in the biological sciences.

Alfred Goldsborough Mayor, Pioneer in Marine Biology

Gulf of Mexico Origin, Waters, and Biota

Jellyfish Blooms IV

Zooplankton of the Atlantic and Gulf Coasts

Studying Temperate Marine Environments

Interactions with humans and fisheries

We present you with an updated reference book aimed for upper-level undergraduate and graduate students interested in Marine Biology. The textbook is designed to introduce the fundamentals of marine organisms and their ecological roles in the world’s oceans, and is organized by functional groups, emphasizing marine biodiversity rather than systematics or habitats. Each chapter has been written and peer-reviewed by renowned international experts in their respective fields, and includes updated information on relevant topics, from the microbial loop and primary production in the oceans, to marine megafauna and the impacts of projected climate change on marine life and ecosystems.

Invertebrate Zoology: A Tree of Life Approach is a comprehensive and authoritative textbook adopting an explicitly phylogenetic organization. Most of the classical anatomical and morphological work has not been changed – it established the foundation of Invertebrate Zoology. With the explosion of Next-Generation Sequencing approaches, there has been a sea-change in the recognized phylogenetic relationships among and between invertebrate lineages. In addition, the merger of evolutionary and developmental biology (evo-devo) has dramatically contributed to changes in the understanding of invertebrate biology. Synthesizing these three approaches (classical morphology, sequencing data, and evo-devo studies) offers students an entirely unique perspective of invertebrate diversity. Key Features One of the first textbooks to combine classical morphological approaches and newer evo-devo and Next-Generation Sequencing approaches to address Invertebrate Zoology Organized along taxonomic lines in accord with the latest understanding of invertebrate phylogeny Will provide background in basic systematic analysis useful within any study of biodiversity A wealth of ancillary materials for students and teachers, including downloadable figures, lecture slides, web links, and phylogenetic data matrices

Papers presented at the symposium organised by Marine Biological Station, Zoological Survey of India, in association with National Biodiversity Authority, and Indian Society for Ecological Economics, Delhi, during 26-29 December 2005.

Handbook of Biomineralization

Seafaring Scientist

Studies of Mesopelagic Cnidarians in Monterey Bay, California

Jellyfish Blooms

Spineless

Brazilian Journal of Oceanography

Jellyfish generally are considered to be nuisances because they interfere with human activities by stinging swimmers, clogging power plant intakes and nets of fishermen, killing fish in aquaculture pens, and being both predators and competitors of fish. There is concern that environmental changes such as global warming, eutrophication, over-fishing, and coastal construction may benefit jellyfish populations. During this past decade following the first Jellyfish Blooms volume, some species have bloomed more frequently, expanded their range, and caused more problems for humans. Mnemiopsis leidyi, the ctenophore that invaded the Black Sea in the 1980s and damaged fisheries, now also blooms in the North, Baltic, and Mediterranean seas. Nemopilema nomurai, a giant Asian jellyfish, has bloomed frequently during this decade, causing severe damage to the Japanese fishing industry. Jellyfish Blooms: Interactions with Humans and Fisheries is the fourth volume in this series. Syntheses and original research articles address the question if jellyfish have increased globally and what factors may have contributed to the abundance of jellyfish. This volume is the most extensive to date, containing papers from all continents (except Antarctica) on scyphozoans, hydrozoans, cubozoans, staurozoans, and ctenophores, and on the fate of jellyfish blooms. This is a key reference for students and professional marine biologists, oceanographers, and fishery scientists and managers.

Previously published in Hydrobiologia, vol. 690, 2012?

This first comprehensive overview of the modern aspects of biomineralization represents life and materials science at its best: Bioinspired pathways are the hot topics in many disciplines and this holds especially true for biomineralization. Here, the editor has assembled an international team of renowned authors to provide first-hand research results. This first of three volumes deals with the biology of biominerals structure formation, with sections on silica-hydrated polysilicondioxide, iron sulfides and oxides, calcium carbonates and sulfates, as well as calcium phosphates. An interdisciplinary must-have account, for biochemists, bioinorganic chemists, lecturers in chemistry and biochemistry, materials scientists, biologists, and solid state physicists.

This landmark scientific reference for scientists, researchers, and students of marine biology tackles the monumental task of taking a complete biodiversity inventory of the Gulf of Mexico with full biotic and biogeographic information. Presenting a comprehensive summary of knowledge of Gulf biota through 2004, the book includes seventy-seven chapters, which list more than fifteen thousand species in thirty-eight phyla or divisions and were written by 138 authors from seventy-one institutions in fourteen countries. This first volume of Gulf of Mexico Origin, Waters, and Biota, a multivolumed set edited by John W. Tunnell Jr., Darryl L. Felder, and Sylvia A. Earle, provides information on each species' habitat, biology, and geographic range, along with full references and a narrative introduction to the group, which opens each chapter.

Guide to Reference and Information Sources in the Zoological Sciences

Trends in Research on Cnidaria and Ctenophora

Volume I, Biodiversity

Cumulative Book Index

The Leeuwenhorst, Noordwijkerhout, the Netherlands, 16-21 July 1995

Proceedings of the 6th International Conference on Coelenterate Biology

As the global rate of marine introductions increases, exotic species exert greater economic and ecological impacts, affecting ecosystems and human health. The complexity of marine ecosystems challenges our ability to find easy solutions to prevention, management, and control of introductions. This book highlights issues of timely importance in marine bioinvasion science. Selected topics explore the potential evolutionary consequences and ecological impacts of introduced organisms, examine the feasibility of biological control, and describe patterns of introduction. These papers were presented at the Second International Conference on Marine Bioinvasions, which featured new marine invasion research from around the world. These papers should be of interest to scientists, students, and managers with an interest in marine bioinvasions and the application of knowledge to management concerns.

Zooplankton are critical to the vitality of estuaries and coastal waters. In this revised edition of Johnson and Allen's instant classic, readers are taken on a tour of the miniature universe of zooplankton, including early developmental stages of familiar and diverse shrimps, crabs, and fishes. Zooplankton of the Atlantic and Gulf Coasts details the behavior, morphology, and coloration of these tiny aquatic animals. Precise descriptions and labeled illustrations of hundreds of the most commonly encountered species provide readers with the best source available for identifying zooplankton. Inside the second edition• an updated introduction that orients readers to the diversity, habitats, environmental responses, collection, history, and ecological roles of zooplankton• descriptions of life cycles• illustrations (including 88 new drawings) that identify 340-plus taxa and life stages• range, habits, and ecology for each entry located directly opposite the illustration• appendices with information on collection and observation techniques and citations of more than 1,300 scientific articles and books

"A book full of wonders" —Helen Macdonald, author of H Is for Hawk "Witty, insightful. . . .The story of jellyfish. . . is a significant part of the environmental story. Berwald's engaging account of these delicate, often ignored creatures shows how much they matter to our oceans' future." —New York Times Book Review Jellyfish have been swimming in our oceans for well over half a billion years, longer than any other animal that lives on the planet. They make a venom so toxic it can kill a human in three minutes. Their sting—microscopic spears that pierce with five million times the acceleration of gravity—is the fastest known motion in the animal kingdom. Made of roughly 95 percent water, some jellies are barely perceptible virtuosos of disguise, while others glow with a luminescence that has revolutionized biotechnology. Yet until recently, jellyfish were largely ignored by science, and they remain among the most poorly understood of ocean dwellers. More than a decade ago, Juli Berwald left a career in ocean science to raise a family in landlocked Austin, Texas, but jellyfish drew her back to the sea. Recent, massive blooms of jellyfish have clogged power plants, decimated fisheries, and caused millions of dollars of damage. Driven by questions about how overfishing, coastal development, and climate change were contributing to a jellyfish population explosion, Juli embarked on a scientific odyssey. She traveled the globe to meet the biologists who devote their careers to jellies, hitched rides on Japanese fishing boats to see giant jellyfish in the wild, raised jellyfish in her dining room, and throughout it all marveled at the complexity of these alluring and ominous biological wonders. Gracefully blending personal memoir with crystal-clear distillations of science, Spineless is the story of how Juli learned to navigate and ultimately embrace her ambition, her curiosity, and her passion for the natural world. She discovers that jellyfish science is more than just a quest for answers. It’s a call to realize our collective responsibility for the planet we share.

Overview of the Conservation of Australian Marine Invertebrates

Development of the Nervous System in Aurelia (cnidaria, Scyphozoa)

A Handbook for Ecologists

A Functional Evolutionary Approach

A Guide to the Seashores of Eastern Africa and the Western Indian Ocean Islands

Jellyfish Blooms: Causes, Consequences and Recent Advances

This thorough revision of "Invertebrate Zoology" provides a survey by groups, emphasizing adaptive morphology and physiology, while covering anatomical ground plans and basic developmental patterns. The most modern evolutionary research is included.

A world list of books in the English language.

Scyphozoa have attracted the attention of many types of people. Naturalists watch their graceful locomotion. Fishermen may dread the swarms which can prevent fishing or eat larval fish. Bathers retreat from the water if they are stung. People from some Asiatic countries eat the medusae. Comparative physiologists examine them as possibly simple models for the functioning of various systems. This book integrates data from those and other investigations into a functional biology of scyphozoa. It will emphasize the wide range of adaptive responses possible in these morphologically relatively simple animals. The book will concentrate on the research of the last 35 years, partly because there has been a rapid expansion of knowledge during that period, and partly because much of the previous work was summarized by books published between 1961 and 1970. Bibliographies of papers on scyphozoa were included in Mayer (1910) and Kramp (1961). Taxonomic diagnoses are also included in those monographs, as well as in a monograph on the scyphomedusae of the USSR published by Naumov (Naumov, 1961). Most impor tantly, a genenttion of scyphozoan workers has used as its 'bible' the monograph by F.S.Russell (1970) The Medusae of the British Isles. In spite of its restrictive title, his book reviews most of the information on the biology of scyphozoa up to that date.

Marine Bioinvasions: Patterns, Processes and Perspectives

New Perspective & Challenges : Proceedings of the Asia-Pacific Conference on Marine Science & Technology, 12-16 May 2002, Kuala Lumpur, Malaysia

Pacific Coast Pelagic Invertebrates

A Guide to the Common Gelatinous Animals

Oceanography and Marine Biology: An Annual Review: Volume 38

Marine Biology

Infused with a sense of adventure and zeal for discovery, Seafaring Scientist recounts the achievements of a giant in the field of marine biology. Alfred Goldsborough Mayor (18681922), a Harvard-trained marine biologist and close associate of Alexander Agassiz, founded and directed on behalf of the Carnegie Institution the first tropical marine biological laboratory in the Western hemisphere. Located on Loggerhead Key in the Gulf of Mexico, the Tortugas Laboratory attracted some of America's most brilliant scientists. Mayor himself achieved international prominence in the field of biology for his authoritative work on jellyfishes and coral reefs.

Jellyfish form spectacular population blooms and there is compelling evidence that jellyfish blooms are becoming more frequent and widespread. Blooms have enormous ecological, economic, and social impacts. For example, they have been implicated in the decline of commercial fisheries, they block the cooling water intakes of coastal industries and ships, and reduce the amenity of coastal waters for tourists. Blooms may be caused by overfishing, climate change, and coastal pollution, which all affect coastal waters around the world. Jellyfish Blooms: Causes, Consequences and Recent Advances presents reviews and original research articles written by the world’s leading experts on jellyfish. Topics covered include the evolution of jellyfish blooms, the impacts of climate change on jellyfish populations, advances in acoustic and molecular methods used to study jellyfish, the role of jellyfish in food webs and nutrient cycles, and the ecology of the benthic stages of the jellyfish life history. This is a valuable resource for students and professional marine biologists, fisheries scientists, oceanographers, and researchers of climate change.

A new edition of this thorough, comprehensive and respected review source for oceanographers and marine biologists. A must for every station, institute and university involved with marine biology.

Advances in Marine Biology

A Report for Environment Australia

The Population Biology and Ecology of Aurelia Sp. (Scyphozoa: Semaeostomeae) in a Tropical Meromictic Marine Lake in Palau, Micronesia

A Functional Approach to the Oceans and their Organisms

Fisheries Centre Research Reports

National Symposium on Conservation and Valuation of Marine Biodiversity

Animals have been studied for centuries. But what are the most important and relevant reference and information sources in the zoological sciences? This work is a comprehensive, thoroughly annotated directory filled with hundreds of esteemed resources published in the field of zoology, including indexes, abstracts, bibliographies, journals, biographies and histories, dictionaries and encyclopedias, textbooks, checklists and classification schemes, handbooks and field guides, associations, and Web sites. A complete revision of the award-winning Guide to the Zoological Literature: The Animal Kingdom (1994), this new title includes extensive, up-to-date coverage of invertebrates, arthropods, vertebrates, fishes, amphibians and reptiles, birds, and mammals. In addition, the work features a detailed introduction by the author, as well as thorough subject, title, and author indexes. Students and researchers can now quickly and easily pinpoint works in their field of study. The book is of equal importance to LIS students specializing in science or biology librarianship, as it provides a comprehensive, straight-forward overview of zoological information sources. An essential addition to the core reference collection of public and academic libraries!

This volume provides an identification key for the ephyrae of 18 common scyphozoan species, documents the Mediterranean-wide bloom of the invasive ctenophore Mnemiopsis leidyi, and addresses the direct effects of ocean acidification on jellyfish.

`Jellyfish', a group that includes scyphomedusae, hydromedusae, siphonophores and ctenophores, are important zooplankton predators throughout the world's estuaries and oceans. These beautiful creatures have come to public attention as featured exhibits in aquaria and in news headlines as invaders and as providers of genes used in biomedical research. Nevertheless, jellyfish are generally considered to be nuisances because they interfere with human activities by stinging swimmers, clogging power plant intakes and nets of fishermen and fish farms, and competing with fish and eating fish eggs and larvae. There is concern that environmental changes such as global warming, eutrophication, and over-fishing may result in increased jellyfish populations. The literature reviews and research papers in this volume explore the interactions between jellyfish and humans. Papers cover the medical aspects of jellyfish stings, jellyfish as human food and jellyfish fisheries, interactions of jellyfish and fish, effects of environmental changes on jellyfish, effects of introduced ctenophores on the Black Sea ecosystem, factors causing increases or concentrations of jellyfish, and others aspects of jellyfish ecology. This is an important reference for students and professional marine biologists, oceanographers, fishery scientists, and aquarists.

Marine Science Into the New Millennium

Coelenterate Biology 2003

Canadian Journal of Zoology

Proceedings of the International Conference on Jellyfish Blooms, held in Gulf Shores, Alabama, 12–14 January 2000

Life and environment

Invertebrate Zoology

This fine monograph is the first all-color photo guide to the jellies, comb jellies, pelagic snails, salps and pyrosomes. This field guide covers animals that are found from Alaska to Baja California, many of which occur in most of the world's seas. A total of 160 species are illustrated with a color photo-95 cnidarians, 28 ctenophers, 23 molluscs and 14 tunicates. The narrative for each species includes a detailed description, geographic range, and natural history. Also included are a glossary, selected references and an index.

General Editor: Peter Calow, Department of Zoology, University of Sheffield, England The main aim of this series will be to illustrate and to explain the way organisms 'make a living' in nature. At the heart of this - their Junctional biology - is the way organisms acquire and then make use of resources in metabolism, movement, growth, reproduction, and so on. These processes will form the fundamental framework of all the books in the series. Each book will concentrate on a particular taxon (species, family, class or even phylum) and will bring together information on the form, physiology, ecology and evolutionary biology of the group. The aim will be not only to describe how organisms work, but also to consider why they have come to work in that way. By concentrating on taxa which are well known, it is hoped that the series will not only illustrate the success of selection, but also show the constraints imposed upon it by the physiological, morphological and developmental limitations of the groups. Another important feature of the series will be its organismic orientation. Each book will emphasize the importance of functional integration in the day-to-day lives and the evolution of organisms. This is crucial since, though it may be true that organisms can be considered as collections of gene determined traits, they nevertheless interact with their environment as integrated wholes and it is in this conte that individual traits have been subjected to natural selection and have evolved.

This volume, the proceedings of the Seventh International Conference on Coelenterate Biology, is organized as the meeting was around six topics. Because several sessions of ICCB7 constituted the 2003 North American meeting of the International Society for Reef Studies, the subjec coral reefs is strongly represented in the section on Ecology. The other themes are Neurobiology; Reproduction, Development, and Life Cycles; Pioneers in Coelenterate Biology; Cnidae; and Taxonomy and Systematics. Ctenophores, as well as representatives of all four classes of cnidarians are among the study subjects of the research reported in this volume. The theme of variability runs through the volume - be it in cnidae, morphology, behavior, neurobiology, ecology, colony form, or reproduction, variability is a major reason these animals are so interesting and challenging to study This is a must-read resource for anyone doing research - or planning to do research - on cnidarians and ctenophores.

Oceanology

Jellyfish Blooms: Ecological and Societal Importance

The Science of Jellyfish and the Art of Growing a Backbone

Grzimek's Animal Life Encyclopedia: Lower metazoans and lesser deuterosomes

A Functional Biology of Sea Anemones

A Tree of Life Approach

Jellyfish are one of the most conspicuous animals in our oceans and are renowned for their propensity to form spectacular blooms. The unique features of the biology and ecology of jellyfish that enable them to bloom also make them successful invasive species and, in a few places around the world, jellyfish have become problematic. As man increasingly populates the world’s coastlines, interactions between humans and jellyfish are rising, often to the detriment of coastal-based industries such as tourism, fishing and power generation. However we must not lose sight of the fact that jellyfish have been forming blooms in the oceans for at least 500 million years, and are an essential component of normal, healthy ocean ecosystems. Here many of the world’s leading jellyfish experts explore the science behind jellyfish blooms. We examine the unique features of jellyfish biology and ecology that cause populations to ‘bloom and bust’, and, using case studies, we show why jellyfish are important to coastal and ocean ecosystem function. We outline strategies coastal managers can use to mitigate the effects of blooms on coastal industries thereby enabling humans to coexist with these fascinating creatures. Finally we highlight how jellyfish benefit society; providing us with food and one of the most biomedically-important compounds discovered in the 20th century.

"This volume is intended to be a companion to Yen and Butcher's (1997) overview of the conservation of non-marine invertebrates. As with that work, we see one of our major roles as addressing the "perceptual and

practical imbalance" in the current approach to conservation and facilitating the conservation of marine invertebrates in Australia and its Exclusive Economic Zone (EEZ)"--Introduction.
A Guide to Their Identification and Ecology
An Annual Review: Volume 38
Invertebrate Reproduction & Development
A Functional Biology of Scyphozoa
Jellyfish Blooms: New Problems and Solutions