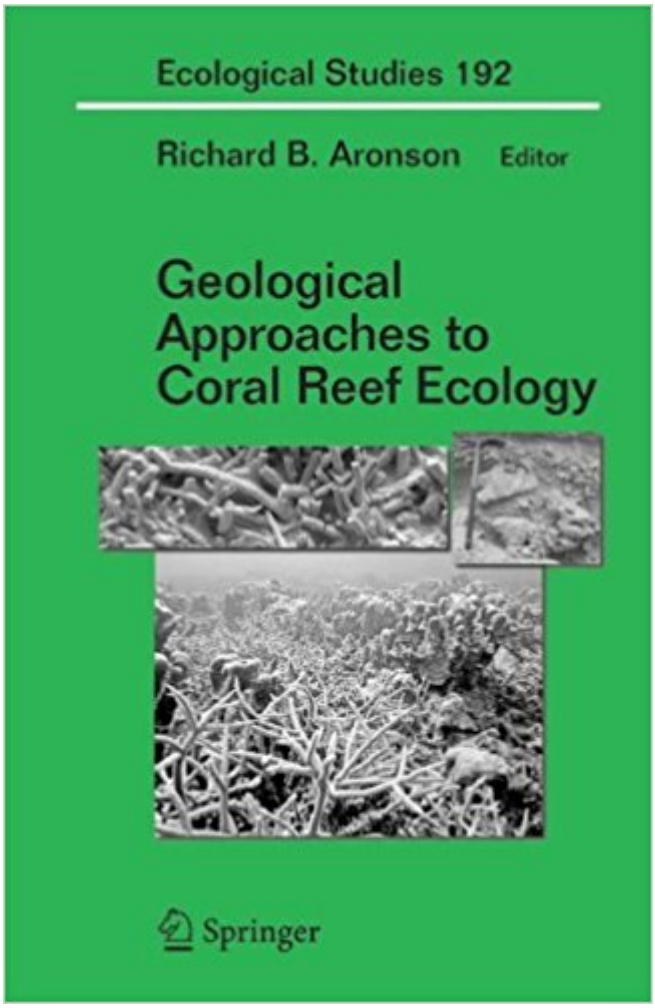
# Geological Approaches To Coral Reef Ecology (Ecological Studies)



## Synopsis

This book provides a unique perspective on the destruction - both natural and human-caused - of coral reef ecosystems. Reconstructing the ecological history of coral reefs, the authors evaluate whether recent dramatic changes are novel events or part of a long-term trend or cycle. The text combines principles of geophysics, paleontology, and marine sciences with real-time observation, examining the interacting causes of change: hurricane damage, predators, disease, rising sea-level, nutrient loading, global warming and ocean acidification. Predictions about the future of coral reefs inspire strategies for restoration and management of ecosystems. Useful for students and professionals in ecology and marine biology, including environmental managers.

## Book Information

Series: Ecological Studies (Book 192)

Hardcover: 444 pages

Publisher: Springer; 2007 edition (November 18, 2006)

Language: English

ISBN-10: 0387335382

ISBN-13: 978-0387335384

Product Dimensions: 6.1 x 1 x 9.2 inches

Shipping Weight: 1.6 pounds (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #970,277 in Books (See Top 100 in Books) #17 inÃ Â Books > Science & Math > Nature & Ecology > Ecosystems > Coral Reefs #115 inÃ Â Books > Politics & Social Sciences > Philosophy > Movements > Pragmatism #395 inÃ Â Books > Science & Math > Biological Sciences > Biology > Marine Biology

## Customer Reviews

From the reviews: "The editor has brought together as contributors 19 well-known coral-reef workers, including both biologists and geoscientists. At the end of the book there is a comprehensive index of over 650 items....the book represents a very good summary of current directions in reef ecology research, based on geological or historic approaches, including modern techniques and, for the most part, state-of-the-art knowledge. The book also includes a number of studies that make it quite clear that coral reefs are not only in decline, but that the decline is to a large part caused by human disturbance, and that we need to take actions to decelerate this process. I can highly recommend this book to both reef scientists and students of reef systems,

either with a biological and a geoscientific background." (Eberhard Gischler, Johann Wolfgang Goethe-Universitat, Frankfurt am Main, Germany). "Geological Approaches to Coral Reef Ecology presents a historical perspective on contemporary natural and human-induced impacts on reef systems Ã¢â ¬Â¦. The book is well presented, and its content is a welcome addition to coral reef literature. Ã¢â ¬Â¦ highlights the value of geological approaches in contextualizing reef ecology, and it should be of great interest to all reef scientists and students of coral reefs, particularly those with a keen interest in the Caribbean reef province." (Paul Kench, Eos, Vol. 89 (38), 2008)

Coral reefs around the world are sustaining massive damage at an alarming rate. Geological Approaches to Coral Reef Ecology provides a uniquely historical perspective on the destructionÃ¢â ¬â ¢through both natural and human processesÃ¢â ¬â ¢of coral reef ecosystems. Chapters applying the principles of geophysics, paleontology, geochemistry, and physical and chemical oceanography supply novel insights into the workings of coral reefs, complementing real-time ecologicalÃ Â studies and providing critical information for crafting realistic environmental policy. By reconstructing the ecological history of coral reefs, the authors are able to evaluate whether or not recent, dramatic changes to reef ecosystems are novel events or part of a long-term trend or cycle. The contributions examine the interacting causes of change, which include hurricane damage, regional outbreaks of coral-consuming predators, disease epidemics, sea-level rise, nutrient loading, global warming and acidification of the oceans. Crucial predictions about the future of coral reefs lead to practical strategies for the successful restoration and management of reef ecosystems. Geological Approaches to Coral Reef Ecology will be of particular interest to students and professionals in ecology and marine biology, including environmental managers. About the Editor: Richard B. Aronson is Senior Marine Scientist at the Dauphin Island Sea Lab, Dauphin Island, AlabamaÃ Â and Professor of Marine Sciences at the University of South Alabama, Mobile, Alabama, USA.

World)) Drawing Geological Structures (Geological Field Guide) Ecological and Environmental Physiology of Mammals (Ecological and Environmental Physiology Series) Long-Term Dynamics of Lakes in the Landscape: Long-Term Ecological Research on North Temperate Lakes (Long-Term Ecological Research Network Series) Wetland Ecology (Cambridge Studies in Ecology) Time and Complexity in Historical Ecology: Studies in the Neotropical Lowlands (Historical Ecology Series) Functional and Evolutionary Ecology of Fleas: A Model for Ecological Parasitology The Ecology of Fishes on Coral Reefs Coral Reefs of the Indian Ocean: Their Ecology and Conservation The Snorkeller's Guide to the Coral Reef: From the Red Sea to the Pacific Ocean National Geographic Readers: Swim Fish!: Explore the Coral Reef Coral Reef Food Chains The Coral Reef at Night