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Waters: A New World to Discover -- Neglected Part of the Animal Forest: Hydrozoans as an Example -- Octocoral and Hexacoral Diseases in a Changing Ocean -- Pollution Effects on Tropical Animal Forests -- Role of Fishes in Tropical Coral Reefs -- Secondary Metabolites and Chemical Ecology in the Animal Forest -- Seston Quality and Available Food: Importance in the Benthic Biogeochemical Cicles -- Where Seaweed Forests Meet Animal Forests: the Examples of Macroalgae in Coral Reefs and the Mediterranean Coralligene -- Why Corals Should Care About Ocean Acidification: General Consensus and Misconceptions -- Benthic-pelagic Coupling: New Perspectives in the Animal Forests -- Drawing the Line at Neglected Marine Ecosystems: Ecology of Vermetid Reefs in a Changing Ocean -- Energetics, Particle Capture, and Trophic Ecology of Suspension Feeders -- Importance of Recruitment Processes in the Dynamics and Resilience of Reef Coral Assemblages -- Living in the Canopy of the Animal forest: Physical and Chemical Aspects -- Resilience of the Animal Forest -- Demography of Animal Forests: the Example of Mediterranean Gorgonians -- Genetic Connectivity in Harvested and not Harvested Species: Resilience and Management -- Mesophotic Coral Ecosystems -- Restoration of the Animal Forests: Considering Silviculture Concepts in Coral Transplantation -- Sponge Grounds as Key Marine Habitats: a Synthetic Review of Types, Structure, Functional Roles, and Conservation Concerns -- Threats Affecting the Calcium Carbonate Budget of the Animal Forest -- Animal Forest in the Chilean Fiords: Discoveries and Perspectives in Shallow and Deep Waters -- Animal Forests in Deep Coastal Bottoms and Continental Shelves of the Mediterranean Sea -- Coexistence in Cold Waters: Animal Forests in Seaweed-Dominated Habitats in Southern High-Latitudes -- Conservation and Management of Vulnerable Marine Benthic Ecosystems -- Framework-forming Scleractinian Cold-water Corals Through Space and Time: A Late Quaternary North Atlantic Perspective -- Global Biodiversity in Cold-Water Coral Reef Ecosystems -- Growth Patterns in Long-lived Benthic Suspension Feeders -- Impact of Bottom Fishing on Animal Forests: Science, Conservation and Fisheries Management -- Measuring the Impact of Anthropogenic Activity on Cold-water corals -- Suprabenthic Communities: the Forgotten Biodiversity.

Sommario/riassunto

During the last decades there has been an increasing evidence of drastic changes in marine ecosystems due to human-induced impacts, especially on benthic ecosystems. The so called “animal forests” are currently showing a dramatic loss of biomass and biodiversity all over the world. These communities are dominated by sessile suspension feeder organisms (such as sponges, corals, gorgonians, bivalves, etc.) that generate three-dimensional structures, similar to the trees in the terrestrial forest. The animal forest provide several ecosystem services such as food, protection and nursery to the associated fauna, playing an important role in the local hydrodynamic and biogeochemical cycles near the sea floor and acting also as carbon sinks. The present book focus its attention on these three dimensional animal structures including, for the first time, all the different types of animal forests of the world in a single volume. During the last decades there has been an increasing evidence of drastic changes in marine ecosystems due to human-induced impacts, especially on benthic ecosystems. The so called “animal forests” are currently showing a dramatic loss of biomass and biodiversity all over the world. These communities are dominated by sessile suspension feeder organisms (such as sponges, corals, gorgonians, bivalves, etc.) that generate three-dimensional structures, similar to the trees in the terrestrial forest. The animal forest provide several ecosystem services such as food, protection and nursery to the

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