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Nota di contenuto	Antarctic Seaweeds: Biogeography, Adaptation and Ecosystem Services -- Diversity of Antarctic Seaweeds -- Biogeographic Processes Influencing Antarctic and Sub-Antarctic Seaweeds -- Detached Seaweeds as Important Dispersal Agents Across the Southern Ocean.- Biogeography of Antarctic Seaweeds Facing Climate Changes -- Comparative Phylogeography of Antarctic Seaweeds: Genetic Consequences of Historical Climatic Variations -- Underwater Light Environment of Antarctic Seaweeds -- Production and Biomass of Seaweeds in Newly Ice-Free Areas: Implications for Coastal Processes in a Changing Antarctic Environment -- Carbon Balance Under a Changing

Light Environment -- Life History Strategies, Photosynthesis and Stress Tolerance in Propagules of Antarctic Seaweeds -- Form and Function in Antarctic Seaweeds: Photobiological Adaptations, Zonation Patterns and Ecosystem Feedbacks -- Successional Processes in Antarctic Benthic Algae -- Seaweed-Herbivore Interactions: Grazing as Biotic Filtering in Intertidal Antarctic Ecosystems -- Diversity and Functioning of Antarctic Seaweed Microbiomes -- Seaweeds in the Antarctic Marine Coastal Food Web -- Trophic Networks and Ecosystem Functioning -- Chemical Mediation of Antarctic Macroalgal-Grazer Interactions -- Brown Algal Phlorotannins: An Overview of their Functional Roles.

Sommario/riassunto

Seaweeds (macroalgae) represent the most striking living components in the Antarctic's near-shore ecosystems, especially across the West Antarctic Peninsula and adjacent islands. Due to their abundance, their central roles as primary producers and foundation organisms, and as sources of diverse metabolically active products, seaweed assemblages are fundamental to biogeochemical cycles in Antarctic coastal systems. In recent years, the imminence of climate change and the direct impacts of human beings, which are affecting vast regions of the Antarctic, have highlighted the importance of seaweed processes in connection with biodiversity, adaptation and interactions in the benthic network. Various research groups have been actively involved in the investigation of these topics. Many of these research efforts have a long tradition, while some "newcomers" have also recently contributed important new approaches to the study of these organisms, benefiting polar science as a whole. This book provides an overview of recent advances and insights gleaned over the past several years. Focusing on a timely topic and extremely valuable resource, it assesses the challenges and outlines future directions in the study of Antarctic seaweeds.