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Nota di contenuto	Frontmatter -- Contents -- 1. Introduction. Biology of polar benthic algae -- Environment, biogeography and biodiversity -- 2. The abiotic environment of polar marine benthic algae -- 3. Biodiversity, biogeography and zonation of marine benthic micro- and macroalgae in the Arctic and Antarctic -- 4. Notes on the systematics and biogeographical relationships of Antarctic and sub-Antarctic Rhodophyta with descriptions of four new genera and five new species -- Chemical ecology -- 5. Defenses of polar macroalgae against herbivores and biofoulers -- 6. Field studies on deterrent properties of phlorotannins in Antarctic brown algae -- Primary production and ecophysiology -- 7. Benthic microalgal production in the Arctic: applied methods and status of the current database -- 8. Microphytobenthic biomass along gradients of physical conditions in Arctic Kongsfjorden, Svalbard -- 9. Phenology and seasonal physiological performance of polar seaweeds -- 10. Light and temperature demands of marine benthic microalgae and seaweeds in polar regions -- 11. Freezing tolerance and photosynthetic performance of polar seaweeds at low temperatures -- Polar benthic algae in a changing world -- 12. Impact

of oceanic warming on the distribution of seaweeds in polar and cold-temperate waters -- 13. Physiological responses of polar benthic algae to ultraviolet radiation -- 14. Drivers of colonization and succession in polar benthic macro- and microalgal communities -- 15. Conclusion and outlook. Future perspectives on the investigation of polar benthic algae -- Backmatter

Sommario/riassunto

This work synthesizes the current state of knowledge on the biology of polar benthic marine algae and presents an outlook on their responses to changing environmental conditions in polar regions. Topics treated include environment, biodiversity and biogeography of micro- and macroalgae, including an update of the knowledge of the red algal flora of Antarctica. It treats the chemical ecology as well as the primary production and ecophysiology of polar benthic algae with new information on the important contribution of benthic microalgae to the productivity in coastal areas.
