

1. Record Nr.	UNINA9910913776803321
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Titolo	Plankton in a Changing World : The Impact of Global Change on Marine Ecosystems / / by Albert Calbet
Pubbl/distr/stampa	Cham : , : Springer Nature Switzerland : , : Imprint : Springer, , 2024
ISBN	9783031761218 3031761219
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (228 pages)
Disciplina	577.6 577.7
Soggetti	Freshwater ecology Marine ecology Ecology Oceanography Biodiversity Bioclimatology Freshwater and Marine Ecology Biooceanography Ocean Sciences Climate Change Ecology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I: Introduction To Plankton Ecology And Major Groups -- Chapter 1: An Introduction To The World Of Marine Plankton -- Chapter 2: Plankton Size Classification -- Chapter 3: From The Bottom Up: Phytoplankton's Major Groups -- Chapter 4: Ocean's Hidden Gardeners: The World Of Underwater Micrograzers -- Chapter 5: Bacteria And Archaea: The Crucial Roles Of Prokaryotes In Ocean Environments -- Chapter 6: Tiny Terrors Of The Ocean: Planktonic Viruses And Parasites -- Chapter 7: The Hidden World Of Marine Fungi -- Part II: Plankton Distribution And Habitats -- Chapter 8: The Biomass Distribution In Earth's Ecosystems -- Chapter 9: A Patchy Ocean: From Microscopic Meals To Macroscale Aggregations -- Chapter

10: Plankton Across Ecosystems -- Chapter 11: Adrift But Not Lost: Dispersal And Colonization Strategies Of Plankton -- Chapter 12: Sailing Through Chaos: Turbulence's Impacts On Plankton -- Chapter 13: Plankton Sentinels: Resting Cysts And Dormancy -- Chapter 14: The Paradox Of Plankton: The Kill The Winner Hypotheses -- Part III: Global Environmental Change -- Chapter 15: Understanding Global Change, Global Warming, And Climate Change: A Comprehensive Guide -- Chapter 16: The Impacts Of Global Warming On Marine Plankton -- Chapter 17: The Consequences Of Smaller Plankton In A Warmer Ocean -- Chapter 18: The Ocean's Biological Pump: A Crucial Ally Against Global Warming -- Chapter 19: Blue Carbon Revolution: Exploiting Plankton To Combat CO Emissions -- Chapter 20: The Impacts Of Large-Scale Climatological Events On Plankton Populations -- Chapter 21: Ocean Acidification And Plankton -- Chapter 22: Nutrient Availability And Its Consequences For Plankton In A Changing World -- Chapter 23: Global Change And Salinity: Implications For Plankton -- Chapter 24: The Underappreciated Threat Of Ultraviolet Radiation To Marine Plankton -- Chapter 25: The Silent Killers: Classic And Emerging Pollutants And Marine Plankton -- Chapter 26: The Unseen Threats: Effects Of Sound And Light Pollution On Plankton -- Chapter 27: Plankton And Global Fisheries -- Chapter 28: Predicting The Future Of Our Seas And Ocean Ecosystems: Reality Or Chimera? -- Chapter 29: The Plankton Time Machine: A Journey Through Geological Eras -- Part IV: Case Studies And Regional Perspectives -- Chapter 30: The Effects Of Global Change On Plankton In Polar Regions -- Chapter 31: The Effects Of Global Change On Plankton In Tropical And Subtropical Waters -- Chapter 32: The Effects Of Global Change On Plankton In Temperate Ecosystems -- Part VI: Future Directions -- Chapter 33: Plankton And Human Society -- Chapter 34: Emerging Trends And Future Research Directions In Plankton Studies.

Sommario/riassunto

Plankton form the very foundation of marine ecosystems. As climate change, pollution, and human activities continue to reshape our world, understanding the intricate dynamics of plankton becomes increasingly crucial. "Plankton in a Changing World: The Impact of Global Change on Marine Ecosystems" invites readers to explore the microscopic hidden world beneath the waves. This book unravels the fundamental concepts of plankton ecology and their relevance, while exploring the profound impacts of global environmental changes on these vital organisms. Written in a clear and engaging way for the general public, it begins with a foundational overview of plankton, allowing it to stand alone. However, reading "The Wonders of Marine Plankton," from the same author, is encouraged for a deeper understanding of plankton ecology and peculiarities. Addressing issues such as rising temperatures, ocean acidification, pollution, and overfishing, the book highlights the complex challenges plankton face. Regional perspectives and case studies illustrate varied responses across different climates, showcasing the diverse impacts and adaptive strategies. Through engaging prose and rich scientific insight, invites readers to appreciate the delicate balance of our ocean and the pivotal role plankton play in maintaining it. Concluding with future research directions, it underscores the need for innovative approaches and public awareness to safeguard these essential organisms. "Plankton in a Changing World: The Impact of Global Change on Marine Ecosystems" is an essential read for those interested in marine life and environmental science. Discover how tiny organisms can have a colossal impact and why their survival is intertwined with the future of our world.
