

1. Record Nr.	UNINA9910830044403321
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Titolo	Marine mussels : ecology, physiology, genetics and culture // Elizabeth Gosling
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , [2021] ©2021
ISBN	1-119-29396-0 1-119-29393-6 1-119-29392-8
Descrizione fisica	1 online resource (883 pages)
Disciplina	594.4
Soggetti	Mytilidae - Ecology Mytilidae Mussel culture
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
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Sommario/riassunto

"A comprehensive volume providing broad and detailed coverage of marine mussels *Marine Mussels: Ecology, Physiology, Genetics and Culture* provides readers with in-depth, fully up-to-date information on all major aspects of marine mussels. Written by an internationally-renowned expert in the field, this authoritative volume addresses morphology, ecology, feeding, phylogeny and evolution, reproduction and larval development, settlement and recruitment, genetics, disease, management of culture systems, and more. The book encompasses many different species of marine mussels: genus *Mytilus*, other important commercial marine genera such as *Perna*, *Aulacomya* and *Choromytilus*, and non-commercial genera including *Modiolus*, *Geukensia*, *Brachidontes* and hydrothermal vent *Bathymodiolus*. Comprising twelve extensively cross-referenced chapters, the book discusses a diversity of integrated topics that range from fundamental physiology of marine mussels to new techniques being applied in their biology and ecology. Author Elizabeth Gosling reviews contemporary developments and issues in the field such as the use of DNA genetic markers in detecting and diagnosing different strains of pathogenic bacteria, the use of mussels as monitors of marine contaminants, sophisticated modelling techniques that simulate disease and forecast outbreaks, and the impacts of global warming, ocean acidification, and hypoxia on marine mussels. Presenting an inclusive, highly detailed treatment of mussel biology, physiology, genetics, and culture, this invaluable resource: Contains thorough descriptions of external and internal anatomy, global and local distribution patterns, the impacts of mussels on marine ecosystems, and the processes of circulation,

respiration, excretion, and osmoregulation Reflects significant advances in mussel science and new areas of research in marine mussels Describes the fundamentals of mussel aquaculture, the types and levels of contaminants in the marine environment, and new approaches for sustainable aquaculture development Discusses the application of genetic methods, population genetics, global breeding programmes, and the emerging area of bivalve genomics Addresses the role of mussels in disease transmission to humans, including production and processing controls, regulation of monitoring, and quality control Marine Mussels: Ecology, Physiology, Genetics and Culture is essential reading for biological scientists, researchers, instructors, and advanced students in the fields of biology, ecology, aquaculture, environmental science, toxicology, genetics, pathology, taxonomy, and public health"--
