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Nota di contenuto	METHODS FOR THE STUDY OF MARINE BENTHOS; Contents; Contributors; Dedication; Preface to the Fourth Edition; Acknowledgements; Chapter 1 Design and Analysis in Benthic Surveys in Environmental Sampling; 1.1 Introduction; 1.2 Variability in benthic populations; 1.3 Appropriate replication; Appropriate spatial replication; Appropriate temporal replication; 1.4 Size of sampling unit; 1.5 Independence in sampling; 1.6 Multivariate measures of assemblages; 1.7 Transformations and scales of measurement; 1.8 Data-checking and quality control 1.9 Detecting environmental impacts as statistical interactions 1.10 Precautionary principles and errors in interpretations; 1.11 Precision and the size of samples; 1.12 Gradients and hierarchies in sampling; 1.13 Combining results from different places or times; 1.14 Conclusions; Acknowledgements; References; Chapter 2 Characterising the Physical Properties of Seabed Habitats; 2.1 Introduction; 2.2 Remote acoustic methods for surveying the seabed; Background; Echo-sounders (single beam systems); Acoustic ground discrimination systems based on single beam echo-sounder; Swathe bathymetry

Swathe bathymetry 2.3 Particle (grain) size analysis; Sample collection and storage; Sediment grade scales; Analytical techniques; Presentation and analysis of grain size data; 2.4 Other important sediment properties; Bulk and dry density, water content and porosity; Organic matter content; Chlorophyll; EPS carbohydrate; Temperature; Eh and pH; In Situ Sediment Characterisation Methods; Disclaimer; References; Chapter 3 Imaging Techniques; 3.1 Introduction; 3.2 Acoustic imaging; Acoustic ground discriminating systems; Sidescan sonar; Swathe bathymetry; 3.3 Video Underwater video camera systems Lenses; Housings; Data transmission; Format; Storage media; Power supply; Video monitors; Illumination; Calibration and measurement; 3.4 Photography; 3.5 Carrier platforms; Diving; Drop frames; Specialised towed platforms; Remotely operated vehicles; Autonomous underwater vehicles; Manned submersibles; Navigation and positioning of the carrier platform; Data acquisition and processing; 3.6 Special applications; Sediment profile imagery; Laser technologies; Application of medical technologies; 3.7 Laboratory imaging; 3.8 Image analysis; 3.9 Afternote; References Chapter 4 Diving 4.1 Diving systems; SCUBA; Remotely supplied systems; Breathing gas and supply systems; 4.2 Saturation diving and underwater habitats; 4.3 Data collection and recording; Slate or notepad and pencil; Voice recording; Image recording; Video systems; 4.4 Underwater site marking and relocation; General considerations; Air drills and underwater fasteners; Acoustic pingers and receivers; 4.5 Sampling methods; Corers; Suction samplers; Yabby pumps and slurp guns; Scrapers; 4.6 Other study techniques; Resin casting; 4.7 Survey methods; Manta tows; Transect and quadrat surveys Plotless and rapid survey techniques

Sommario/riassunto

The continuing global decline of the health of the sea, and the increasing depletion of marine resources and biodiversity, caused by human activity and climate change, have led to ever-increasing international concern. These changes in the marine environment highlight the importance of effective monitoring of the ecology of the benthos which has been shown to be a sensitive index of such alterations. Completely revised and updated to include many new methods and technologies, this Fourth Edition of *Methods for the Study of Marine Benthos* provides comprehensive coverage on the t
