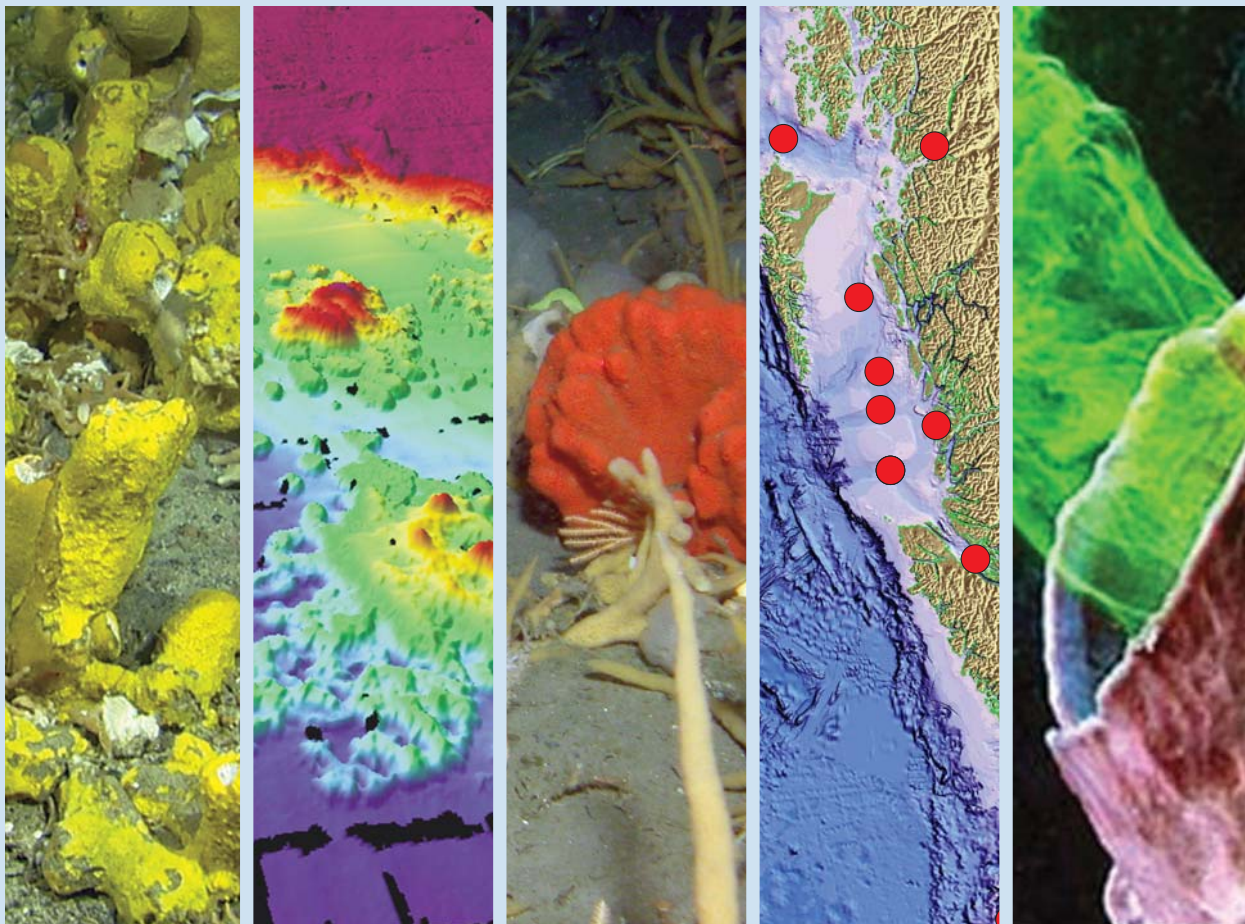
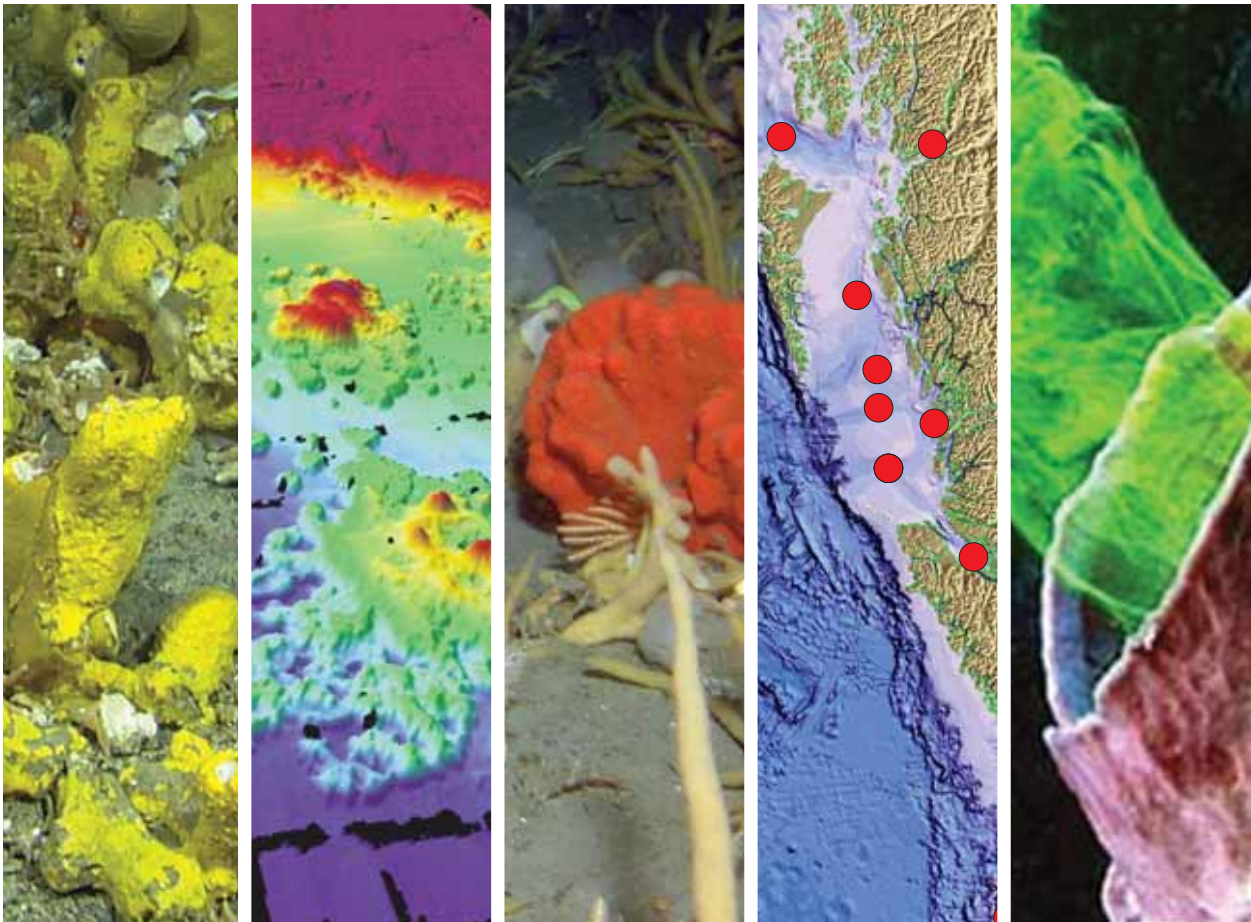


Deep-sea sponge grounds



Reservoirs of biodiversity

Deep-sea sponge grounds



Reservoirs of biodiversity



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IMAGES

Front cover and title page (left to right): see pages 11, 35, 42, 33, 20. Back cover: see page 41. Page 8, top to bottom, left: see pages 14, 35, 34, 41, 48; right: see pages 21, 65, 43, 15, 29.

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Preface

Long overlooked, deep-water sponge grounds are now emerging as a key component of deep-sea ecosystems, creating complex habitats hosting many other species. They are an important refuge in the deep ocean and they are also reservoirs of great species diversity, including commercially important fish. Playing a similar role to that of cold-water coral reefs with which they often co-occur, sponge grounds are even more ecologically and geographically diverse, consisting of many individual species and occurring in many places around the world.

The rapid development of sophisticated technology has provided opportunities to observe and study deep-water sponges in a way that has never been previously possible. This report highlights what is currently known about deep-water sponge grounds in terms of their distribution, biology, ecology and present-day uses in biotechnology and drug discovery, and introduces case studies of particular deep-water sponge habitats from around the world.

Worrying findings are presented on the impacts of human activities, in particular bottom trawling used by commercial fisheries, and gaps in knowledge are also brought to our attention. We do not yet know the full global distribution of

deep-water sponges, or fully understand their biological processes and ecological roles. Furthermore, there is limited scientific understanding of the ramifications of climate change and ocean acidification on the health and continued function of these important and fragile deep-water habitats.

This report highlights the need to minimize the risk of damage to deep-sea sponge grounds through appropriate conservation and careful management, and presents further evidence of the need to improve awareness and understanding to ensure that future generations have the opportunity to explore, study and benefit from these vulnerable deep-water habitats. I therefore welcome the recommendations made by the authors. As a result of their work, deep-water sponge grounds – for so long out of sight – will no longer be out of mind.

Chris Elliott
Executive Director, Conservation
WWF International

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Contents

Preface	3
Executive summary	7
 CHAPTER 1: INTRODUCTION	 11
 CHAPTER 2: RESEARCH	 13
Technology.....	13
Remote sensing	15
Mapping and acoustics	15
Submersibles	16
Remotely operated vehicles	17
 CHAPTER 3: BIOLOGY	 18
Anatomy.....	18
Spicules	20
Chemical ecology.....	20
Growth, size and longevity.....	22
Reproduction	22
Disease	23
 CHAPTER 4: BIODIVERSITY.....	 25
Associated fauna	26
 CHAPTER 5: THREATS.....	 27
Commercial trawling and other fishing gear.....	27
Hydrocarbon exploration and exploitation	29
Cable and pipeline placement.....	30
Waste disposal and dumping	30
Mining of geological resources	30
Global climate change.....	31
Assessing the risks.....	31
 CHAPTER 6: CASE STUDY 1: Glass sponge reefs off the west coast of Canada – a living fossil	 33
Sponge reefs in Earth’s history.....	33
Mapping and sampling	34
Distribution and reef form.....	35
Sponge reef habitat and sensitivity to human impacts	36
 CHAPTER 7: CASE STUDY 2: Sponge grounds in the Northeast Atlantic	 38
 CHAPTER 8: CASE STUDY 3: The bird’s nest sponge (<i>Pheronema carpenteri</i>)	 39
 CHAPTER 9: CASE STUDY 4: The deep Antarctic shelf, a ‘sponge kingdom’	 41

CHAPTER 10: USES OF SPONGES	45
Historical perspectives	45
Current uses in biotechnology	45
Fibre optics, engineering and design	49
CHAPTER 11: INTERNATIONAL ACTIONS	51
United Nations General Assembly and UNCLOS	51
Food and Agriculture Organization of the United Nations (FAO)	52
Global conventions and partnerships	52
International Union for Conservation of Nature (IUCN)	52
European Union	52
OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic	53
International Council for the Exploration of the Sea (ICES)	53
Academia	53
World Wide Fund for Nature (WWF)	54
Deep-Sea Conservation Coalition	54
CHAPTER 12: CONSERVATION CONSIDERATIONS	55
Are deep-water sponge grounds vulnerable marine ecosystems?	55
Assessment of 'significant adverse impacts'	59
Mitigation measures	59
Prospective	64
Are deep-water sponge grounds ecologically and biologically sensitive areas?	65
Can deep-water sponge grounds be designated marine protected areas?	68
CHAPTER 13: RECOMMENDATIONS	69
Acronyms	73
Glossary	74
References	76
Institutions and experts working on deep-water sponges	84

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