

31AUG-4SEPT 2015
AVEIRO . PORTUGAL

14th
DSBS
DEEP · SEA
BIOLOGY SYMPOSIUM

Programme of the sessions

Oral presentations

Monday, August 31

Grande Auditório

Opening Session

Chairpersons: Marina R Cunha, Ricardo S Santos

9:30 **Opening:** Welcome, brief statements from the Secretary of State for the Sea, the Rector of Universidade de Aveiro, The Mayor of the city and the President of the Deep-Sea Biology Society

10:15 **Coffee break**

Plenary session

10:45 **1 Gjerde KM**, Gebicka A - Deep seabed mining on the near-term horizon: What will future environmental management look like?

Stewardship of our deep oceans (DOSI)

Chairpersons: Maria Baker, Lisa Levin

11:30 **6 Ingole BS**, Sautya S, Singh R et al - Diversity and distribution of benthic meio and macro fauna in the nodule rich Central Indian

11:45 **7 Rowden AA**, Leduc D, Torres LG et al - Distribution of epifaunal communities associated with phosphorite

nodule deposits on Chatham Rise, Southwest Pacific: implications for management of seabed mining

12:00 **8 Currie B** - A step into the unknown? Namibia's caution to mine marine phosphates

12:15 **9 Smith CR**, Amon DJ, Drazen J et al - Nodule mining and ocean stewardship in the CCZ: An overview of the ABYSSLINE project with results on macrofaunal diversity and community structure

12:30 **Lunch break**

14:00 **10 Ardron JA** - Deep-sea mining: not yet a done deal

14:15 **11 Boschen RE**, Rowden AA, Clark MR, Gardner JPA - Variation in megabenthic assemblage structure at seafloor massive sulfide deposits

14:30 **12 Zhou Y**, Ossorio PN - A study of the International Seabed Authority as a governance institution for deep seabed

14:45 **13 Gianni MG** - Managing the impacts of fishing and mining in the deep sea: political, policy and scientific challenges

15:00 **14 Trueman CN** - Carbon capture and storage roles of slope-depth demersal fish ecosystems: community function and policy relevance

15:15 **15 Clarke J**, Bailey DM, Neat FC - Drawing a line under deep-sea fishing: a scientific basis for regulation by depth

15:30 **Coffee break**

16:00 **16 Althaus F**, Williams A, Alderslade P, **Schlacher TA** - Conservation of marine biodiversity on deep continental margin: how representative are large offshore reserves

- for deep-water octocorals
- 16:15 **17 Harden-Davies H** - Governing marine genetic resources beyond national jurisdiction: what role for non-monetary benefit sharing?
- 16:30 **18 Ramirez-Llodra E**, Shimmield T, Baker MC et al - Environmental impacts of disposal of terrestrial mine tailings in the deep ocean: current knowledge and gaps
- 16:45 **19 Le JT**, Carson RT, Grupe BM, Levin LA - Ecosystem services: a framework for environmental management of the deep sea
- 17:00 **20 Juniper SK**, Baker M - Biological research as a deep-sea stakeholder
- 17:15 **21 Sink KJ**, McQuaid KA - Stakeholder participation to support offshore protection: Lessons from Africa
- 17:30 **22 Donaldson K**, Larkin K, Rogers A - Investment in deep-sea research: The European landscape

Pequeno Auditório

Biodiversity and ecosystem functioning – Trophic ecology

Chairpersons: Clara Rodrigues et al

- 11:30 **23 Durden JM**, Huffard CL, Bett BJ et al - The response to food inputs - temporal variation in megabenthic deposit feeding in the abyss
- 11:45 **24 Górska B**, Włodarska-Kowalczyk M, Soltwedel T - Benthic biomass size spectra in Arctic deep-sea (Haugarten observatory, Fram Strait)
- 12:00 **25 Vieira RP**, Chung M-T, Johnston G et al - Functional ecology of deep-sea fishes across a depth gradient elucidated by stable isotope analysis

- 12:15 **26 Nomaki H**, Chikaraishi Y, Nanako OO et al - Multiple food sources and trophic position of a bathyal benthic ecosystem as revealed by nitrogen isotopic composition of amino acids

12:30 **Lunch break**

Biodiversity and ecosystem functioning – Habitats and their assemblages

Chairpersons: Clara Rodrigues et al

- 14:00 **27 Kitazato H**, Fujikura K, Takai K et al - Quelle 2013 cruise: hi-light from deep-sea cruises at southern hemisphere
- 14:15 **28 Messing CG**, Reed JK, Dodge RE et al - Macrofaunal assemblages on the Miami Terrace: results of multiple ROV surveys
- 14:30 **29 Ramil F**, Sanz JL, Agudo LM, Ramos A - Ecosystems of the Mauritanian slope: an overview
- 14:45 **30 Buhl-Mortensen L**, Serigstad B, Buhl-Mortensen P et al - Structure and megafaunal community of a large *Lophelia* reef on the Ivorian-Ghanaian margin (the Gulf of Guinea)
- 15:00 **31 Molodtsova TN**, Britaeyev TA, Martin D, Budaeva NE - Deep-sea corals and their polychaete symbionts
- 15:15 **32 Grange LJ**, Smith CR, Lindsay DJ, Youngbluth MJ - High abundance of the epibenthic trachymedusa *Ptychogastris polaris* Allman, 1878 (Trachylida, Hydrozoa) in subpolar fjords along the West Antarctic Peninsula
- 15:30 **Coffee break**

Biodiversity and ecosystem functioning – Large-scale processes

Chairpersons: Clara Rodrigues et al

- 16:00 **33 Paterson GLJ**, Menot L, Colaço A et al - Rarity in the deep sea – just how much of a challenge is it?
- 16:15 **34 Baldrighi E**, Giovannelli D, d'Errico G, Manini E - Deep-sea ecosystem: a world of positive species interactions?
- 16:30 **35 Woolley SNC**, Tittensor DP, Guillera-Arroita G et al - Energy export drives unique global patterns of deep-sea biodiversity
- 16:45 **36 Ichino MC**, Barry JP, Bett BJ et al - Deep-sea benthic biomass: a model framework to account for surface productivity, topography and ocean currents in driving food availability for fauna at abyssal plains, hills, seamounts and trenches
- 17:00 **37 Billett DSM**, Gubili C, Kremenetskaia A et al - Deep sea connectivity in space and time (series)
- 17:15 **38 Lampadariou N**, Sevastou K, Tselepides A et al - Fertilization of the north Aegean Sea: response of benthic communities to the inflow of mesotrophic Black Sea waters
- 17:30 **39 Ziegler AF**, Smith CR - The influence of ice-rafted debris on megabenthic diversity and community structure in fjords of the west Antarctic Peninsula

Tuesday, September 1

Grande Auditório

Plenary session

- 8:30 **2 Rogers AD**, Boetius A, Brierley AS et al - European research needs to underpin the sustainable management of Blue Growth in the deep sea

Natural and anthropogenic disturbance

Chairpersons: Ann Vanreusel, Ana Colaço

- 9:15 **40 Clark MR**, Rowden AA, Bowden DA et al - Evaluating the vulnerability of benthos to anthropogenic disturbance in different deep-sea habitats
- 9:30 **41 Currie JC**, Sink KJ, Atkinson LJ et al - Trawling in South Africa: long-term change and potential impacts on benthic habitats
- 9:45 **42 vonThun S**, Brewer PG, Stout NJ et al - Trash on the deep ocean floor: Using advanced marine technologies to bring a hidden problem to light
- 10:00 **43 DeLeo DM**, Lengyel SD, Cordes EE - Transcriptomics as a tool to investigate the responses of cold-water corals to anthropogenic stressors
- 10:15 **Coffee break**
- 10:45 **44 Auguste M**, Mestre NC, Rocha TL et al - Accumulation of metals and biomarkers response in *Rimicaris exoculata* from TAG (Mid-Atlantic Ridge) vent field after copper exposure
- 11:00 **45 Cardoso C**, Gomes T, Osório H et al - A membranar subproteome approach to understand the relationship

- between the polychaete *Branchipolynoe seepensis* and the mussel *Bathymodiolys azoricus* from Lucky Strike hydrothermal vent field
- 11:15 **46** Verkaik K, Hamel J-F, **Mercier A** - Impact of ocean acidification on the reproductive output of the deep-sea annelid *Ophryotrocha* sp. (Polychaeta: Dorvilleidae)
- 11:30 **47** **Georgian SE**, Dupont S, Kurman M, Cordes EE- Biogeographic variability in the physiological response of the cold-water coral *Lophelia pertusa* to ocean acidification
- 11:45 **48** **Chu J**, Tunnicliffe V - Ecophysiological limits to aerobic metabolism structures epibenthic communities in the Northeast Pacific
- 12:00 **49** **Yasuhara M**, Danovaro R - Temperature impacts on deep-sea biodiversity
- 12:15 **50** **Yamakita T**, Oguri K, Yokooka H et al - Distribution and temporal dynamics of the brittle star population in the continental slope off Sanriku, Northeast Japan: before-after the earthquake and selection of important area
- 12:30 **Lunch break**
- 14:30 **51** **Fisher CF**, Girard F - Update on the status of deep-water coral communities impacted by the Deepwater Horizon oil spill
- 14:45 **52** **Gates AR**, Blake JA - Megabenthic abundance and diversity at oil and gas exploration sites in the western Indian Ocean
- 15:00 **53** **Witte U**, Ferguson R, Gontikaki E, Anderson J - Transport and degradation of oil hydrocarbons at subzero temperatures in deep Faroe Shetland Channel sediments
- 15:15 **54** **Jones DOB**, Kaiser S, Sweetman AK et al - A quantitative review of the existing experimental assessments of the biological effects of deep-water polymetallic nodule mining
- 15:30 **55** **Nakajima R**, Yamamoto H, Kawagucci S et al - Post-drilling changes in seabed landscape and megabenthos in a deep-sea hydrothermal system, the Iheya North field, Okinawa Trough
- 15:45 **Coffee break**
- 16:15 **56** **Narayanaswamy BE**, Cautain I, Lamont PA et al - The other "Station M", NE Atlantic: Preliminary results investigating response of the benthic community to variations in primary productivity and hence a changing climate
- 16:30 **57** **Dunlop KM**, Ruhl HA, van Oevelen D, Smith Jr KL - Modeling carbon flow at Station M: Predicting the effect of climate change on the deep-sea carbon cycle
- 16:45 **58** **Sato KN**, Schiff K, Luong S et al - Response of dominant echinoids to multiple climate-change variables in the Southern California Bight
- 17:00 **59** **Jeffreys RM**, Billett DSM, Wolff GA - Shifts in deep-sea food webs linked to climate and food supply
- 17:15 **60** **Netburn AN**, Tresguerres M - Metabolic enzyme activities of mesopelagic fishes in the California Current Ecosystem: indicators of hypoxic stress?
- 17:30 **61** **Soto EH**, Quiroga E, Ganga B - Macrobenthos response and sediment properties under hypoxia conditions at continental margin of central Chile

Pequeno Auditório

Biodiversity and ecosystem functioning – Pelagic systems

Chairperson: Steve Haddock

- 9:15 **62 Martini S**, Tamburini C - Effect of water masses on deep bioluminescence activity
- 9:30 **63 Lindsay DJ**, Grossmann MM, Hidaka-Umetsu M et al - Horizontal advection of mesopelagic communities: effects on biodiversity and niche partitioning
- 9:45 **64 Vereshchaka AL**, Abyzova GA, Lunina AA, Musaeva EI - The deep-sea zooplankton in the Central, South, and North Atlantic
- 10:00 **65 Robison BH**, Reisenbichler KR, Sherlock RE, Walz KR - The Wedge: Long-term effects of expanding oxygen minimum zones on mesopelagic communities
- 10:15 **Coffee break**
- 10:45 **66 Sutton TT, Cook AB**, Frank TM et al - What have we learned about the diversity of oceanic fauna of the Gulf of Mexico after Deepwater Horizon? Initial results of the NOAA Offshore Nekton Sampling and Analysis Program
- 11:00 **67 Thomas KN**, McClain CR, Johnsen S - Relationships between bioluminescence, body size, and depth in oceanic squids
- 11:15 **68 Osborn KJ**, Baldwin Fergus JL, Browne WE, Johnsen S - Evolution of the visual systems of hyperiid amphipods (Crustacea)
- 11:30 **69 Haddock SHD** - Advances in pelagic bioluminescence enabled by new technology

- 11:45 **70 Grossmann MM**, Nishikawa J, Lindsay DJ, Mitarai S - Diversity and community structure of pelagic cnidarians in the Celebes and Sulu Seas
- 12:00 **71 Choy CA**, Popp BN, Drazen JC et al - Trophic structure and food resources of North Pacific midwater communities inferred from nitrogen isotopic compositions
- 12:15 **72 Sutton TT**, Boswell K, Bracken-Grissom H et al - Understanding deep-pelagic ecosystem variability in an age of increasing deep-ocean commercial activity: A Gulf of Mexico case study and new research initiative (DEEPEND)
- 12:30 **Lunch break**

Autoecology

Chairperson: Jan-Henk Hoving

- 14:30 **73 Doya C**, Aguzzi J, Furushima Y et al - Activity rhythms of a whale-fall ecosystem in Japanese waters
- 14:45 **74 Whelpley JM**, Holland ND, Kuhn LA et al - Biology of deep-sea torquaratorid acorn worms
- 15:00 **75 Huffard CL**, Clary-Lemon L, Kuhn LA et al - Demographic indicators of recruitment in a guild of abyssal holothurians (Sta M, 4000m)
- 15:15 **76 Hendrickx ME**, Papiol V - Insights on the biology and ecology of the deep-water shrimp *Parapontophilus occidentalis* (Faxon, 1893) (Crustacea: Caridea: Crangonidae) in the eastern Pacific with notes on its morphology
- 15:30 **77 Finucci B**, Dunn MR - The reproductive biology of two deep-sea chimaeras, *Harriotta raleighana* and *Rhinochimaera pacifica*

- 15:45 **Coffee break**
- 16:15 **78** Orejas C, **Rakka M**, Sampaio I et al - Reproductive biology of key habitat-forming cold-water corals in the Azores Archipelago
- 16:30 **79** **Neves BM**, Edinger E - Can surface primary productivity explain colony growth rates in the deep-water gorgonians *Primnoa pacifica* and *Primnoa resedaeformis*?
- 16:45 **80** **De Clippele LH**, Orejas C, Lundälv T, Roberts JM - Health status assessment of cold-water coral reefs using a morphotype approach
- 17:00 **81** **Durkin A**, Cordes EE - Population dynamics of the long-lived tubeworm *Escarpia laminata* at Gulf of Mexico cold seeps
- 17:15 **82** **Chung M**, Shores D, Vieira RP, Trueman CN - Life history traits in deep-sea fishes revealed by otolith microchemistry
- 17:30 **83** **Baumiller TK**, Messing CG, Syverson VJP, Stanley K - Arm regeneration and rates of arm loss in the crinoids *Endoxocrinus carolinae* and *Holopus mikihe*: insights into functional morphology, behavior, and ecology

Wednesday, September 2

Grande Auditório

Plenary session

- 8:30 **3** **Jamieson A** - Beyond the abyss: progress in hadal exploration

Biodiversity and ecosystem functioning – Hadal systems

Chairperson: Alan Jamieson

- 9:15 **84** **Shank TM**, Drazen J, Yancey P et al - Hadal Ecosystems Studies 2014: Examining relationships of pressure, food supply, topography, and adaptive evolution in the Kermadec and Mariana Trenches
- 9:30 **85** **Brandt A**, Malyutina M et al - The German-Russian deep-sea expedition KuramBio (Kurile Kamchatka Biodiversity Studies) – results and perspectives
- 9:45 **86** **Guggolz T**, Brandt A - Hadal Polychaeta (Annelida) of the Puerto Rico Trench
- 10:00 **87** **Linley TD**, Stewart A, McMillan P et al - The loss of scavenging fish fauna at the abyssal/hadal transition and the implications of trench systems with atypical vertical zonation
- 10:15 **88** **Nunnally CC**, Drazen JC, Grammatopoulou E, Mayor DJ - Measurements of individual and community respiration rates using in situ respirometers in deep-sea trenches
- 10:30 **Coffee break**

- 11:00 **89 Gerringer ME**, Yancey PH, Davydov D, Drazen JC - Trends in metabolic enzyme activities and pressure-related changes in maximum reaction rate of lactase dehydrogenase in abyssal and hadal fishes
- 11:15 **90 Grammatopoulou E**, Thornton B, Robinson D et al - Distribution and origin(s) of organic matter and bacterial biomass in the Kermadec Trench: testing the resource accumulation depth hypothesis
- 11:30 **91 Bartlett DH**, Tarn J, Kwan T et al - Microbial diversity in the Mariana and Kermadec Trenches

Biodiversity and ecosystem functioning – Microbial processes

- 11:45 **92 Thurber AR**, Moats TB, Bik H et al - The Global Freezer Survey: biogeography of benthic deep-sea microbial communities
- 12:00 **93 (Pellizari VH)** Queiroz LL, Duarte RTD, Graças DA et al - Microbial community composition in deep-sea sediments influenced by asphalt seep from South Atlantic Ocean
- 12:15 **94 Szafranski KM**, Deschamps P, Cunha MR et al - Colonization experiments using plant substrates reveal symbiont-related bacteria at hydrothermal vents and cold seeps
- 12:30 **95 Bienhold C**, Zinger L, Boetius A, Ramette A - Diversity and biogeography of bathyal and abyssal seafloor bacteria
- 12:45 **Lunch (Grab & Go)**

Pequeno Auditório

Biodiversity and ecosystem functioning – Seamounts

Chairperson: Telmo Morato

- 9:15 **96 Morato T**, Kvile KØ, Taranto GH, Pitcher TJ - A global assessment of seamount ecosystems knowledge using an ecosystem evaluation framework
- 9:30 **97 Williams A**, Althaus F, **Schlacher TA** - Towed camera imagery and benthic sled catches provide different views of seamount benthic diversity
- 9:45 **98 Delavenne J**, Pante E, Cairns S et al - New Caledonia seamounts habitats' characterization and species associations' description
- 10:00 **99 Easton EE**, Morales N, Gaymer CF, Sellanes J - Biodiversity of the seamounts of Easter Island Ecoregion
- 10:15 **100 Payne RP**, Samaai T, Gibbons MG, Florence WK - Taxonomy and diversity of the sponge fauna from Walters Shoal; a shallow seamount in the Western Indian Ocean region
- 10:30 **Coffee break**
- 11:00 **101 Serpetti N**, Lamont PA, Rogers AD et al - Top-down and bottom-up controls: macrofauna community structure of the Southwest Indian Ocean Ridge ecosystem
- 11:15 **102 Kemp KM**, Boersch-Supan P, Rogers AD - Pelagic fish community composition of the South West Indian Ocean ridge
- 11:30 **103 Berning B**, Souto J, Reverter-Gil O et al - Bathyal bryozoans from NE Atlantic seamounts and islands: biogeography, ecology and evolution

- 11:45 **104 (Aguilar R)** Alvarez H, Marin P, Garcia S et al - Comparison among deep-sea benthic communities in Atlantic and Mediterranean seamounts
- 12:00 **105 Gomes-Pereira JN**, Tojeira I, Jesus D et al - Lusitanian seamounts upper bathyal habitats
- 12:15 **106 Carvalho FC**, Pomponi S, Cárdenas P et al - Diversity, distribution and phylogenetic relationships of bathyal lithistid sponges of the Macaronesian Islands and northeast Atlantic seamounts
- 12:30 **107 Victorero L**, Taylor M, Robinson L et al - Spatial patterns of biodiversity on Carter Seamount, Eastern Equatorial Atlantic ; scales and drivers
- 12:45 **Lunch (Grab & Go)**

Thursday, September 3

Grande Auditório

Plenary session

- 8:30 **4 Riehl T**, Brandt A - On the depth origins of the deep-sea benthos

Biodiversity and ecosystem functioning – Vents, seeps and organic falls

Chairpersons: Hiromi Watanabe, Ana Hilário, Luciana Génio

- 9:15 **108 McClain CR**, Barry JP, Ernisse D et al - Experimental tests of productivity-diversity relationships in deep-sea, wood-fall communities

- 9:30 **109 Cordes EE** - Deep sea ecological paradigms tested in coral and chemosynthetic communities
- 9:45 **110 Mullineaux LS**, Mills SW, Le Bris N et al - Resilience to eruptive disturbance in a deep-sea hydrothermal vent metacommunity
- 10:00 **111 Husson B**, Sarradin PM, Menesguen A, Sarrazin J - A first model to describe the functioning and dynamics of hydrothermal ecosystems
- 10:15 **Coffee break**
- 10:45 **112 Marlow J**, Steele J, Case D et al - Carbonate-hosted methanotrophy: an unrecognized methane sink in the deep sea
- 11:00 **113 Levin LA**, Orphan V, Marlow J et al - Animal-microbe interactions on methane seep carbonates: considering methane consumption as an ecosystem service
- 11:15 **114 Portail M**, Olu K, Escobar-Briones E et al - Comparative study of vent and seep macrofaunal communities in the Guaymas basin
- 11:30 **115 Sarrazin J**, Lelièvre Y, Cuvelier D et al - Temporal studies of macrofaunal communities' dynamics associated with a siboglinid assemblage using the NEPTUNE observatory
- 11:45 **116 Watanabe H**, Yamamoto M, Yahagi T et al - Habitat segregation in transition zones at hydrothermal vent fields in the Okinawa Trough, northwestern Pacific
- 12:00 **117 Sumida PYG**, Alfaro-Lucas JM, Shimabukuro M et al - Whale-fall community of the deepest natural carcass reported to date in the World's Oceans (Southwest Atlantic Ocean)
- 12:15 **118 Kalogeropoulou V**, Keklikoglou K, Faulwetter S,

		Lampadariou N - Functional distinctness of abyssal nematodes in the Eastern Mediterranean: a comparison between cold seeps and typical deep sea sediments						variability of bacterial-symbiont communities in deep-sea mussels: a multi-scale approach
			16:45	126	Laming SR , Gaudron SM, Cunha MR et al - Settled, symbiotic, then sexually mature: a comparative analysis of development, maturation, and nutritional flexibility across two diminutive deep-sea Bathymodiolinae (Mytilidae)			
12:30		Lunch break						
14:30	119	Johnson SB , Rouse GW, Lundsten L, Vrijenhoek RC - Any bone will do: the colonization of sunken bones by <i>Osedax</i> worms				17:00	127	(Qiu J-W) Sun J, Wong YH, Xu T et al - Biomineralization toolkit in deep-sea mussels: insights from the mantle transcriptome and shell matrix proteome of <i>Bathymodiolus platifrons</i>
14:45	120	Georgieva MN , Wiklund H, Bell JB et al - Bipolar tubeworms: <i>Sclerolinum contortum</i> from Antarctic hydrothermal vents and its affinity to northern hemisphere populations				17:15	128	Van Campenhout J, Vanreusel A - Differential gene expression of closely-related cryptic <i>Halomonhystera</i> species from intertidal and deep-sea habitats
15:00	121	Eilertsen MH , Kongsrud JA, Rapp HT - Evolutionary history of Ampharetinae (Ampharetidae, Annelida) adapted to chemosynthetic ecosystems				17:30	129	Shigeno S , Clark MR, Schnabel K et al - A hydrothermal vent fish reveals unique brain organization and adaptation to the extreme environment
15:15	122	Hernandez-Avila I , Cambon-Bonavita M-A, Pradillon F - Morphology of first zoeal stage of alvinocarid shrimps from hydrothermal vents and cold seeps				17:45	130	Chen C , Copley JT, Linse K et al - Dragon heart and dragon scales: anatomy of the 'scaly-foot gastropod' (Mollusca: Gastropoda: Neomphalina)
15:30	123	Yahagi T , Watanabe H, Kojima S, Kano Y - Do larvae of hydrothermal vent animals disperse in surface water? Early life-history traits and population genetic structure of <i>Shinkailepas myojinensis</i> (Gastropoda: Neritimorpha)						
15:45		Coffee break						
16:15	124	Le Bris N , Thubaut J, Kalenitchenko D et al - Chemosynthetic habitats: fast colonization dynamics of woods by deep-sea symbiotic mussels in relation to sulfide enrichment						
16:30	125	Duperron S , Laming SR, Szafranski KM et al - The						

Pequeno Auditório

Advances in taxonomy and phylogeny

Chairpersons: Ascensão Ravara et al

9:15	131	Williams ST - The impact of limited food resources on trophic shifts and rates of diversification in deep-sea
9:30	132	Hestetun JT , Vacelet J, Boury-Esnault N et al - Phylogenetic relationships of carnivorous sponges
9:45	133	Minin KV , Petrov NB, Vladychenskaya IP -

- Evolutionary history of the echinid sea urchins: an evidence from molecular phylogeny
- 10:00 **134 Rees DJ**, Byrkjedal I, Sutton TT - Pruning the pearlsides: reconciling morphology and molecules in mesopelagic fishes (*Maurolicus*: Sternoptychidae)
- 10:15 **Coffee break**
- 10:45 **135 Bakken T**, Oug E, Kongsrud JA, Alvestad T - Polychaetous annelids in the deep Nordic Seas: strong bathymetric gradients, low deep-sea diversity and underdeveloped taxonomy
- 11:00 **136 Coykendall DK**, Morrison CL, Sanders LR, Nizinski MS - A molecular perspective on Anomuran biodiversity in northwestern Atlantic Ocean
- 11:15 **137 Havermans C** - Insights into the phylogeny and phylogeography of deep-sea amphipods
- 11:30 **138 Lunina AA**, Vereshchaka AL - Phylogeny of deep-sea shrimps in the extreme and regular habitats
- 11:45 **139 Kim SJ**, Ju SJ - Mitogenomic phylogeny of the Thoracica (Crustacea, Cirripedia): evidences for the monophyly of hydrothermal vent barnacles
- 12:00 **140 Bergmeier FS**, Schwabe E, Brandt A, Jörger KM - Disparate curiosities: an integrative approach to the diversity of abyssal Solenogastres in the Kuril-Kamchatka region
- 12:15 **141 Scott-Murray A**, Linley TD, Jamieson AJ - Specimen archiving and illustration using 3D digital photogrammetry
- 12:30 **Lunch break**

Evolutionary history and fossil records

Chairpersons: Cris Little, Luciana Génio

- 14:30 **142 Little CTS**, Kiel S - Evolutionary history of cold seep communities
- 14:45 **143 Higgs ND**, Danise S - Fossil insights into the evolution of *Osedax* worms and the origin of the Siboglinidae (Annelida)
- 15:00 **144 Sigwart JD** - Deep sea, deep time, deep trees: The role of wood fauna in biodiversity dynamics in present and past oceans
- 15:15 **145 Priede MIG** - When was the deep-sea colonized by fishes?
- 15:30 **146 Thuy B**, Gale AS, Kiel S et al - Exploring the evolutionary history of the deep-sea fauna using direct fossil evidence
- 15:45 **Coffee break**

Connectivity and biogeography

Chairpersons: Ana Hilário, Eva Ramirez-Llodra

- 16:15 **147 Holland LP**, Rowden AA, Clark MR et al - Connectivity of corals in the New Zealand region: can genetic resources inform management of Vulnerable Marine Ecosystems?
- 16:30 **148 Zeng C**, Kelly M, Rowden AA et al - Incongruent genetic connectivity patterns for demosponges off New Zealand: implications for the management of vulnerable marine ecosystems
- 16:45 **149 Herrera S**, Shank TM - Comparative population structure patterns of deep-sea hydrothermal vent

- 17:00 **150 Dahlgren TG**, Wiklund H, Glover AG - Biogeography and connectivity of the Clarion-Clipperton Zone abyssal fauna: insights from recent cruises to the UK-1 claim area
- 17:15 **151 Janssen A**, Raschka U, Martínez Arbizu P - Regional and local macrofaunal distribution patterns and genetic connectivity in abyssal Pacific polymetallic nodule fields (Clarion-Clipperton Fracture Zone)
- 17:30 **152 Brasier MJ**, Wiklund H, Jeffreys RM et al - Genetic investigations of cryptic diversity and biogeography in deep-sea Antarctic polychaetes
- 17:45 **153 De Groot A**, Derycke S, Vanreusel A - Population genetic and morphometric characterization of the dominant *Sabatieria* species in Eastern Mediterranean and West African deep-sea cold seeps

Meeting Room

Special session on mining impact

Chairpersons: Adrian Glover, Craig Smith, Ana Colaço

- 9:15 **190 Martins I**, Goulart J, Marín S et al - Lucky Strike mussel *Bathymodiolus azoricus* exposed to Cu acute toxicity under pressurized conditions
- 9:30 **191 Mestre NC**, Cardoso C, Costa P et al - Deep-sea sediments toxicity assessment
- 9:45 **192 Phillips BT** - Deep-sea mining and its potential impact on the biology of hydrothermal and volcanic plumes
- 10:00 **193 Carreiro-Silva M**, Riou V, Reydet N et al - The effects of mining-generated sediment plumes on the physiology of the cold-water octocoral *Dentomuricea*

meteor

- 10:15 **Coffee break**
- 10:45 **194 Shulze CN**, Maillot B, Nielsen TN et al - Microbial diversity and metabolic potential of a polymetallic nodule field
- 11:00 **195 Sweetman AK, Smith CR**, Maillot B et al - Bacteria, not macrofauna, are key players in the short-term degradation of phytodetritus in abyssal
- 11:15 **196 Goineau A**, Gooday AJ - Evaluation of benthic foraminiferal assemblage characteristic in the abyssal eastern equatorial
- 11:30 **197 Gooday AJ**, Goineau A, Weber AAT - The biodiversity of xenophyophores (Rhizaria, Foraminifera) from the eastern Clarion Clipperton Zone (Equatorial Pacific)
- 11:45 **198 Glover AG**, Dahlgren TG, Wiklund H - Environmental stewardship of the central Pacific Clarion-Clipperton Zone mining frontier requires a vastly improved knowledge of species taxonomy and natural history
- 12:00 **199 Wiklund H**, Dahlgren TG, Glover AG - Phylogenetics of the Clarion-Clipperton Zone abyssal fauna: species concepts, diversity and origins
- 12:15 **200 Amon DJ**, Smith CR, Ziegler AF - Megafaunal community structure and biodiversity in the UK-1 claim area of the Clarion-Clipperton Zone
- 12:30 **201 Leitner AB**, Drazen JC, Nunnally CC - Analysis of scavenging megafauna of the Clarion-Clipperton Zone using a baited camera
- 12:45 **Discussion**

Friday, September 4

Grande Auditório

Plenary session

8:30 **5** **Ross RE**, Nimmo-Smith WAM, Howell KL- Lagrangian model wars: comparing predictions of deep sea larval dispersal

Connectivity and biogeography

Chairperson: Ana Hilário, Eva Ramirez-Llodra

9:15 **154** **Breusing C**, Biastoch A, Drews A et al - Population connectivity and dispersal of vent mussels from the Mid-Atlantic Ridge

9:30 **155** **Wagner JKS**, Ball B, LaBella A et al - SeepC: Mussel ("*Bathymodiolus childressi*") population connectivity at trans-Atlantic seeps

9:45 **156** **Bober S**, Riehl T, Brix S et al - Does the Mid Atlantic Ridge affect the distribution of benthic crustaceans across the Atlantic Ocean? A morphological and genetical approach on Macrostylidae (Crustacea, Isopoda)

10:00 **157** Baco AR, Etter R, **Ribeiro P** et al - A synthesis of dispersal distances in deep-sea fauna inferred from genetic data: Implications for connectivity and marine reserve design

10:15 **Coffee break**

10:45 **158** **Sánchez JA**, Ardila NE, Dueñas LF, Herrera S - Colonization and population expansion of two deep-sea octocorals (*Paragorgia arborea* and *Hemicorallium*

imperiale-lauuense) in the Pacific Ocean

11:00 **159** **Thistle D**, Easton EE - On the size of species' ranges in the sediment-covered deep sea

11:15 **160** **Henry L-A**, Ross SW, Messing CG, Roberts JM - Understanding extinction risk in the deep sea: Hydrozoan prospects

11:30 **161** **Xavier JR**, Marco J, Rapp HT, Davies AJ - Predicting suitable habitat for the bird's nest sponge *Pheronema carpenteri* (Porifera, Hexactinellida) in the Northeast Atlantic

11:45 **162** **Howell KL**, Allcock AL, Downie AL et al - The application of predictively modelled maps to deep-sea spatial planning: the influence of data resolution on predicted distribution of two vulnerable marine ecosystems

12:00 **163** **Ross SW**, Quattrini AM - Large scale patterns in community structure of continental slope fishes from the Gulf of Mexico to the US Middle Atlantic: effects of zoogeography, habitat, and oceanography

12:15 **164** **Bennecke S**, Metaxas A - Effectiveness of a coral conservation area in the Gulf of Maine: distribution along the boundaries and changes in abundance of two deep-water octocoral species over 13 years

12:30 **Lunch break**

14:00 **165** **Van Dover CL**, Kaiser C, Young CM et al - SeepC: Concept, design, and test of a high-resolution AUV Deep-Ocean Plankton Sampler (DOPS)

14:15 **166** **Young CM**, Maslakova SM, Hiebert T et al - Seep Connectivity (SEEP): vertical distributions of larval forms in the deep Inter-American Seas

- 14:30 **167 Tittensor DP**, Harfoot MBJ, Hilário A et al - Modelling large-scale dispersal patterns in the deep ocean
- 14:45 **168 Mitarai S**, Nakajima Y, Watanabe H et al - Quantifying hydrothermal vent connectivity in the Western Pacific
- 15:00 **169 McVeigh DM**, Eggleston DB, He R et al - Seep Connectivity (SEEPC): Larval dispersal in the Intra-American Seas
- 15:15 **170 Fernandez-Arcaya U**, Company JB, Aguzzi J et al - Where are the post larvae of deep-sea megafauna species? The NW Mediterranean case study
- 15:30 **171 Hardinge GE**, Lucas CH, Thatje S, Okamura B - The global biogeography and morphology of two cosmopolitan deep-sea jellyfish, *Atolla* spp. and *Periphylla periphylla* (Scyphozoa, Coronatae)
- 15:45 **Coffee break**

Pequeno Auditório

Biodiversity and ecosystem functioning – Drivers of biodiversity

Chairperson: Rui Vieira et al

- 9:15 **172 Ruhl HA**, Morris KJ, Durden JM et al - Landscape scale ecology at the Porcupine Abyssal Plain
- 9:30 **173 Stefanoudis PV**, Bett BJ, Gooday AJ - Hills and plains: the influence of topography on deep-sea benthic foraminiferal assemblages
- 9:45 **174 Ramos A**, Ramil, F, and EcoAfrik Team - Upwelling phenomena: the main driver of the latitudinal diversity pattern in Northwest Africa?

- 10:00 **175 Papiol V**, Hendrickx ME, Serrano D - Distribution of bathyal benthic decapod crustaceans off Eastern Pacific slopes in relationship with latitudinal changes in the oxygen minimum zone

10:15 **Coffee break**

Biodiversity and ecosystem functioning – Canyons

Chairperson: Ashley Rowden

- 10:45 **176 Amaro T**, Huvenne VAI, Allcock L et al - The Whittard Canyon – a key study example on canyon processes
- 11:00 **177 Bourque JR**, Demopoulos AWJ, Stamler KM et al - Meiofaunal community structure and function in relation to sediment biogeochemistry and canyon morphology in Baltimore Canyon, western Atlantic
- 11:15 **178 Robertson CM**, Bourque JR, Davies AJ et al - Unique macrofauna community dynamics in relation to sediment biogeochemistry and canyon morphology in Baltimore and Norfolk Canyons, western North Atlantic
- 11:30 **179 Román S**, Vanreusel A, Ingels J, Martín D - Spatial-temporal patterns of meiofaunal density in the Blanes submarine canyon (NW Mediterranean)
- 11:45 **180 Almeida M**, Company JB, Cunha MR - Spatial and temporal variability in suprabenthic assemblages in the Blanes canyon and adjacent open slope (Catalan sea, NW Mediterranean)
- 12:00 **181 Rosli N**, Leduc D, Rowden AA, Probert PK - Among-habitat differences in meiofaunal communities on the New Zealand continental margin: Do the small fauna exhibit the same patterns as larger fauna?
- 12:15 **182 Bowden DA**, Rowden AA, Leduc D et al -

Topographically-defined seabed habitats in the deep sea: do they really support distinct mega-epifaunal benthic communities and are such distinctions useful?

- 12:30 **Lunch break**
- 14:00 **183 Frutos I**, Sorbe JC - Suprabenthic assemblages from the Capbreton area (SE Bay of Biscay). Faunal recovery after a canyon turbiditic disturbance
- 14:15 **184 Brooke SD**, Watts MW, Heil AD et al - Distribution and habitat associations of deep water corals of the mid-Atlantic canyons
- 14:30 **185 Bargain A**, Foglini F, Pairaud I, Fabri M-C - Predictive habitat modeling of cold water coral distribution in two Mediterranean canyons
- 14:45 **186 Morrison CL**, Coykendall DK, Springmann MJ et al - A tale of four corals: patterns of genetic connectivity among submarine canyons in the northwestern Atlantic Ocean
- 15:00 **187 Nizinski MS**, Kinlan BP, Heyl TP, Shank TM - An integrated approach to predictive habitat suitability modeling and field surveys in Northwest Atlantic submarine canyons: model validation and habitat/faunal characterization
- 15:15 **188 Ingels J**, Allcock L, Bourque JR et al - The curious tale of *Astomonema* in the deep sea – a chemosynthetic worm feeling at home in submarine canyons
- 15:30 **189 Guardiola M**, Wangensteen OS, Taberlet P et al - Assessment of spatio-temporal community structure in submarine canyons using metabarcoding
- 15:45 **Coffee break**

Grande Auditório

Closing session

Chairpersons: Marina R Cunha, Ana Hilário

- 16:15 Brief overview of the Symposium, results of the voting for the next DSBS venue in 2018, awards and closing ceremony

Side events

Open meetings

Sunday, August 30

DAO (University Campus)

Open meeting of the Deep Ocean Stewardship Initiative (DOSI)

Organization: Lisa Levin, Maria Baker

Plenary session

- 9:00 Review the short history of DOSI to include an outline of the mission
- 9:30 Overview of DOSI activities to date
- 10:30 Coffee break
- 11:00 Overview of DOSI activities to date (continued)
- 11:45 Future planned activities
- 12:00 Open discussion
- 13:30 **Lunch break**
- 14:30 **Working Group breakout meetings**
 - Deep-sea mining
 - Oil and Gas

Deep-Sea Tailing Placement

Promote responsible and sustainable deep-sea fisheries

Deep-sea genetic resources

Transparency, compliance and industry engagement

17:00

Wrap up

The **Deep Ocean Stewardship Initiative (DOSI)** seeks to integrate science, technology, policy, law and economics to advise on ecosystem-based management of resource use in the deep ocean and strategies to maintain the integrity of deep-ocean ecosystems within and beyond national jurisdiction. Learn more at www.indeep-project.org/deep-ocean-stewardship-initiative.

This open meeting will provide updates and status information about human activities, impacts, governance, regulation and conservation in the deep sea. Buffet lunch will be provided.

DOSI encourages new participants and invites all who are interested to attend. Support for this meeting is provided by the **JM Kaplan Foundation** and **INDEEP**.

Monday, August 31

Pequeno Auditório

DOSI town meeting

Chairpersons: Maria Baker and Lisa Levin

12:30 Brief overview of past and planned DOSI Working Group activities presented by Dr Lisa Levin (DOSI Co-Lead).

This meeting will provide further opportunity for the deep-sea community to connect and engage with DOSI and to propose and lead further actions pertaining to the DOSI mission statement (DOSI seeks to integrate science, technology, policy, law and economics to advise on ecosystem-based management of resource use in the deep ocean and strategies to maintain the integrity of deep-ocean ecosystems within and beyond national jurisdiction).

Grande Auditório

Deep-Sea Biology Society plenary meeting

Chairperson: Craig McLain

18:00 Overview of the DSB Society activities presented by the President (Craig McLain); information on the services and communication media (Holly Bik). Presentations of the proposals for the next symposium venue (voting during the week)

Tuesday, September 1

Pequeno Auditório

InterRidge open meeting

Chairpersons: Anna Metaxas, Lauren Mullineaux

12:45 Activities of the WG on Ecological Connectivity and Resilience:

The ecological connectivity of vent communities, and their resilience in the face of disturbance, has been a hot topic of research ever since their discovery. Of late, this topic has become particularly timely and societally relevant as plans for deep-sea mining progress toward implementation. It is also directly relevant to management decisions under consideration for recently designated deep Marine Protected Areas (MPAs), such as those on the Endeavour Segment, in the Marianas region, on the mid-Atlantic Ridge off the Azores, and in the Guaymas Basin and Eastern Pacific Rise. This meeting will provide the opportunity to all those interested in hydrothermal vent studies to connect and engage with this working group

SOPHIA Studio

DGRM science-policy panel on the deep seas

Organization: Portuguese Directorate-General for Marine Resources

09:15 Tools and models available for the management of deep-sea

ecosystems: The role of Science, Governments and International Organizations

10:15 **Coffee break**

10:45 Marine Protected Areas and their role in the management of deep-sea ecosystems

12:30 **Lunch break**

A panel of managers from the Portuguese administration will meet around the table with invited scientists to share their perspectives on current and expected conservation problems in the deep-sea. The discussion will be mediated by the **Portuguese Directorate-General for Marine Resources, Environment and Maritime Affairs (DGRM)**. The panel is expected to contribute state-of-the art approaches to establishing MPAs in the deep-sea, and how they shall be managed to achieve their goal. Experience-based contributes to improve the effectiveness of MPA management will be most welcome.

The **DGRM** science-policy panel aims at discussing and improving current ideas on the functions and management of large MPAs in deep-water habitats. DGRM wishes to capitalize on the presence of invited guests and international researchers coming to Aveiro for the 14DSBS meeting.

DGRM is the department of the Portuguese administration entitled to plan and carry out policies to the preservation and science-based use of marine resources. Its functions include setting-up fishing policies and fish-farming, in connection to related processing industries. Control of shipping traffic, vessel inspections, port state control and management of harbour activities also fall in the scope of DGRM. There is one specific

working unit (DSAS) to delineate and promote conservation strategies for MPAs designated at national, EU or international level. This unit also coordinates the participation of Portugal in the OSPAR Convention for the Protection of the Marine Environment of the North-East Atlantic.

The ultimate goal of this exercise is building up a long-lasting contribution from Portugal to help the sustainability of Ocean ecosystems and ensure wise use of global marine resources.

Pequeno Auditório

Launching of EMB position paper

Organization: European Marine Board

18:00 **Launch event** of European Marine Board position 22 “**Delving Deeper: Critical challenges for 21st century deep-sea research**” - opening statements by MEP Ricardo Serrão Santos, Portuguese government representative (tbc) and a presentation of the position paper by EMB Working Group Chair Professor Alex Rogers

19:00 **Reception**

The position 22 “Delving Deeper: Critical challenges for 21st century deep-sea research [1] is an output of European Marine Board (EMB) Working Group “Deep Sea Research for Societal Challenges and Policy Needs [2]; it delivers eight high-level goals for deep-sea research in the context of expanding commercial activities, increasing human and natural pressures,

and the need for effective and practicable governance frameworks to underpin the management of deep-sea activities and resources.

The WG was set up in January 2014 and consists of 14 experts spanning natural sciences, socio-economics and marine law who have examined the key societal and environmental drivers confronting the deep sea, and the role of deep-sea research to deliver future knowledge needs for science and society. The WG also engaged throughout with wider stakeholders spanning the deep-sea research community, industry (deep sea mining, oil and gas, renewable energy, marine biotechnology and deep sea fisheries), civil society (NGO sector) and policy. Stakeholder workshops and online consultations were used to assess perspectives and trends on deep-sea research investments across Europe (see also oral presentation #22 by Donaldson et al.). A clear and consistent message from consultation with these non-science stakeholders was the need for fundamental deep-sea scientific knowledge as the evidence base for establishing baselines, informing Environmental Impact Assessments and monitoring long term impact of human activity on deep-sea ecosystems.

[1] Rogers AD, Boetius A, Brierley A, Croot P, Cunha MR, Danovaro R, Devey C, Hoel AH, Ruhl H, Sarradin P-M, Trevisanut S, van den Hove S, Vieira H, Visbeck M (2015) Delving Deeper: Critical challenges for 21st century deep-sea research. Larkin KE, Donaldson K, McDonough N (Eds) Position Paper 22 of the European Marine Board, Ostend, Belgium

[2] <http://www.marineboard.eu/deep-sea-research>

Thursday, September 3

Pequeno Auditório

DOSI WG5 marine genetic resources workshop

Organization: DOSI, Harriet Harden-Davies

12:45 Accessing and sharing benefits from marine genetic resources beyond national jurisdiction: What role for the scientific community?

Deep-sea marine genetic resources in areas beyond national jurisdiction have generated an intense international debate on access and benefit sharing. The expertise of the marine scientific community is of critical relevance to the resolution of this debate. This is both timely and important as the issue of marine genetic resources is at the core of a process that in 2015 is likely to trigger the start of international negotiations for a new legal instrument for the conservation and sustainable use of biodiversity beyond national jurisdiction. This workshop aims to invite and discuss scientific perspectives on the legal debate on deep-sea genetic resources, relevant drivers and barriers to conducting deep-sea research and challenges and opportunities at the science-policy interface. All delegates with an interest in ocean governance and deep-sea research are warmly invited to participate in this discussion on how the scientific community might 'reality-check' this international debate and develop ideas for how a new regime could facilitate research and innovation.

Friday, September 4

Pequeno Auditório

INDEEP town meeting

Chairperson: Maria Baker

12:30 The INDEEP PIs, Oversight Committee and Working Group leads will present a brief update on INDEEP Phase 2 activities and future plans.

The key aim of the gathering is to generate audience participation in discussions relating to the future of INDEEP and to identify new project ideas and leads for those projects within the realms of overarching INDEEP aims (i.e. to develop and synthesise our understanding of deep-sea global biodiversity and functioning and provide a framework to bridge the gap between scientific results and society to aid in the formation of sustainable management strategies). The membership of each working group is open and envisioned to evolve and change in response to ongoing research activities.

Restricted meetings

Wednesday, September 2

Meeting Room

SEAFOAM WG meeting

Chairperson: Robert George

14:30 WG meeting for SEAFOAM members and associate members

Friday, September 4

Pequeno Auditório

INDEEP committee meeting

Chairperson: Maria Baker

18:00 Committee meeting for INDEEP partners

Posters

Posters are on display during all week in:

Room 1 (Level 1, front side)

Stewardship of our deep oceans (DOSI), natural and anthropogenic disturbance

Room 2 (Level 1, east side)

Biodiversity and ecosystem functioning (pelagic and hadal systems, seamount, canyon and coral habitats, vents, seeps and organic falls)

Hall 1 (Level 1, front side) – Connectivity and biogeography

Hall 2 (Level 2) – Trophic ecology, autoecology, advances in taxonomy and systematics, evolutionary history and fossil records

Main poster session:

Thursday, September 3 from 18:00 to 19:30

Extended lunch breaks:

Tuesday, September 1 from 12:30 to 14:30

Thursday, September 3 from 12:30 to 14:30

Room 1

Stewardship of our deep oceans

- 202 Turner PJ**, Van Dover CL - Conservation of rare species in the deep-sea: understanding importance and methodology
- 203 Metaxas A**, Desilets K, Bennecke S, Lacharité M - Deep-water corals, biodiversity and conservation on the NW Atlantic continental margin: scientific collaboration informing conservation
- 204 García-Alegre A**, Sánchez F, Gómez-Ballesteros M, Rodríguez A- Habitat suitability model as a tool to optimize data and improve species distribution mapping on a deep-sea ecosystem: El Cachucho Marine Protected Area
- 205 Filander Z**, Sink K, Samaai T et al - Identifying and mapping sensitive deep-sea ecosystems in South Africa
- 206 Simon-Lledo E**, Vierod ADT, Davies AJ - Habitat suitability for deep-sea stony corals in the Mediterranean Sea
- 207 Copley AC**, Piechaud N, Howell KL - Predictive bioregionalisation modelling of the global deep-sea benthos by physio-chemical properties and its application to a Marine Protected Area (MPA) network design
- 208 Gougeon S**, Kemp K, **Yesson C** - Mapping and classifying the seabed of West Greenland
- 209 Hourigan TF**, **McGuinn RP**, Dornback M et al - Linking science to management: NOAA's Deep-Sea Coral and

Sponge Database and Map Portal

- 210 Baker M**, Ramirez-Llodra E, Menot L et al - INDEEP NOW!
- 211 Steeds O, Ross SW**, Wallace J - NEKTON launches Project Twilight
- 212 Afonso RM**, Laranja A, Morim S et al - Within sight, within the mind... How to mobilize the public to foster deep-sea conservation?

Anthropogenic disturbance

- 213 Danovaro R**, Gambi C, Corinaldesi C et al - Effects of anthropogenically-mediated disturbance events on benthic functioning and diversity: the case study of the Palinuro Seamount (Tyrrhenian Sea, Central Mediterranean)
- 214 Yesson C**, Kemp K - Benthic habitats of the West Greenland shelf: What is the impact of shrimp trawling?
- 215 Vieira RP**, Bett BJ, Morris K et al - Quantifying trawling impacts on benthic megafauna in the Porcupine Seabight (bathyal NE Atlantic)
- 216 Ramalho SP**, Lins L, Pape E et al - Impact of trawling on benthic diversity and functioning at the SW Portuguese continental slope
- 217 Bueno J**, García-Alegre A, Ramalho SP et al - Characterization of deepwater crustacean trawl fisheries in the Portuguese continental margin
- 218 Mytilineou C**, Gavra M, Anastasopoulou A et al - Trawling impact on the cold-water corals in the SE Ionian Sea

- 219 Atkinson LJ**, Attwood CG, von der Meden CEO, **Sink KJ** - Benthic trawl experimental closure: Can habitat recover?
- 220 (Bailey DM)** Milligan RJ, Bett BJ, Clarke J et al - Seasonal change in deep water fish abundance but not community structure off West Africa: results of the DELOS Industry-Academic partnership
- 221 Heyl TP**, Nizinski MS, Kinlan BP, Shank TM - Composition, distribution and abundance of anthropogenic marine debris in Northwest Atlantic submarine canyons
- 222 Cordes EE** - Deep ocean stewardship issues related to the oil & gas industry
- 223 Gobin JF**, Amon DJ - Methane seeps and oil exploration off the east coast of Trinidad and Tobago
- 224 Girard F**, Berlet SP, Fisher CR - Understanding the impact of the Deepwater Horizon oil spill on coral communities in the deep Gulf of Mexico: the importance of symbiosis
- 225 Bourque JR**, Demopoulos AWJ, Fisher CR - Temporal variability of deep-sea coral-associated macrofauna in the Gulf of Mexico after the Deepwater Horizon oil spill
- 226 Järnegren J, Brooke SD** - Impact of drill cuttings on the larval stages of the cold-water coral, *Lophelia pertusa*
- 227 Hoyt SP**, Smith S, Van Dover CL - Structuring environmental mitigation strategies for the emerging deep-sea mining industry

Mining impact - the Clarion-Clipperton Fracture Zone

- 228 Kersten O**, Smith CR, Vetter EW - Abyssal benthopelagic zooplankton in the Clarion Clipperton Zone
- 229 Goineau A**, Gooday AJ - Radiolarian tests as snug microhabitats for novel 'squatter' benthic foraminifera: observations from the abyssal eastern equatorial Pacific (Clarion-Clipperton Fracture Zone)
- 230 Kamenskaya OE**, Gooday AJ - Xenophyophorea and Komokiacea (Protista, ?Foraminifera) from the French claim area of the Clarion-Clipperton Fracture Zone
- 231 Macheriotou L**, Vanreusel A, Leliaert F - Diversity and biogeography of deep-sea nematodes in the Clarion-Clipperton Fracture Zone: integrating morphology and genetics
- 232 Kim D**, Min W, Rho H et al - Standing stocks and distributional patterns of meiobenthos on the deep seafloor of KODOS area in the Clarion-Clipperton Fracture Zone (NE Pacific)
- 233 Mohrbeck I**, Janssen A, Kaiser S et al - Isopod distribution patterns in polymetallic nodule fields: German vs UK License Area
- 234 Glover AG**, Dahlgren TG, Wiklund H, Smith CR - DNA taxonomy and population connectivity (macrofauna and megafauna) methods for work in the abyssal Clarion-Clipperton Zone (CCZ), central Pacific Ocean
- 235 Simon-Lledo E**, Solan M, Huvenne VAI, Jones DOB - Megafaunal biodiversity assessment of the APEI-4 zone of the CCFZ, North Pacific
- 236 Ziegler AF**, Amon DJ, Smith CR - A qualitative

assessment of megafaunal diversity and biogeography of the UK-1 mining claim area within the CCZ

- 237 Yu OH**, Kim D, Kim KH et al - An environmental baseline study of the macrobenthos from the KR5 block of the Korea Deep Ocean Study (KODOS) area, Northeastern Pacific
- 238 Radziejewska T**, Wawrzyniak-Wydrowska B, Rokicka-Praxmajer J - Twenty years later or follow-up research at an experimental disturbance test site in the Clarion-Clipperton Fracture Zone (CCFZ, sub-equatorial NE Pacific) nodule field: the IOM BIE case study
- 239 Sweetman AK**, **Smith CR** - First assessment of the importance of dark inorganic carbon fixation in abyssal sediments of the equatorial Pacific

Global change and natural disturbance

- 240 Smith CR**, Grange LJ, Honig D et al - Antarctic fjord biodiversity hotspots, ecosystem function, and response to climate change – the FjordEco Project
- 241 Lartaud F**, Peru E, Le Bris N - Impact of climatic events on deep-sea ecosystems: the response of cold-water corals to dense water shelf cascades
- 242 Milligan RJ**, Townsend S, Bett BJ et al - Boom-bust population dynamics of a deep-sea holothurian – understanding the '*Amperima* Event(s)'
- 243 Sperling EA**, Frieder CA, **Levin LA** - Natural gradients on continental margins reveal macrofaunal biodiversity response to multiple climate stressors
- 244 George RY** - Abuse of the abyss: anthropogenic threats

- to seamount biodiversity with focus on ocean acidification
- 245 Kitahashi T**, Jenkins RG, Kojima S, Shimanaga M - Meiofaunal assemblages along the landward slope of the Japan Trench after the 2011 Tohoku Earthquake
- 246 Plum C**, Fujiwara Y - Effects of the Tohoku tsunami and subsequent sunken debris on the benthic meiofauna off Tohoku coast
- 247 Cardoso C**, Gomes T, Blasco J et al - Antioxidant defense mechanisms against metal stressors in the commensal polychaete *Branchipolynoe seepensis* and the host mussel *Bathymodiolus azoricus* from the Mid-Atlantic-Ridge (MAR)
- 248 Neira C, Ingels J, Puritty C et al** - Meiofaunal community structure within and beneath the oxygen minimum zone at the Costa Rica continental margin
- 249 Tunnicliffe V**, Chu J, Soderberg N, Juanes F - Metabolic and growth responses to hypoxia in a highly tolerant flatfish in the Northeast Pacific
- 250 Mestre NC**, Cottin D, Bettencourt R et al - Is the deep-sea crab *Chaceon affinis* able to induce a thermal stress response?
- deep-sea fragmented ecosystems
- 252 LaBella AL**, Cunningham C, Van Dover CL - Using species histories to contextualize modern genetic connectivity in the vesicomid genera *Abyssogena* and *Calypdogena*
- 253 Van Dover CL**, Young CM, Maslakova S et al - Seep Connectivity (SeepC): Oceanographic and life-history processes underlying genetic structure in western Atlantic seep populations
- 254 Van Dover CL**, Fraser ME, Jacobsen K et al - SeepC: Shifting perspectives: artists in the ocean
- 255 Eggleston DB, McVeigh DM**, He R et al - Seep Connectivity (SEEP): Potential larval connectivity of deep-sea, methane seep invertebrates in the Intra-American Sea
- 256 Young CM**, Burgess A, Plowman C et al - Seep Connectivity (SEEP): Expensive deep-sea larval traps that don't catch larvae and an inexpensive alternative that works
- 257 Meyer KS, Young CM**, Sweetman AK et al - Deep-sea dropstone communities as a testing ground for classical island hypotheses
- 258 Matos FL**, Company JB, Cunha MR - Connecting dots across Western Mediterranean submarine canyons: seascape connectivity of *Lophelia pertusa*
- 259 Dueñas LF**, Tracey DM, Crawford AJ et al - Diversification of two deep-sea Primnoid octocorals across the Antarctic Circumpolar Current
- 260 Jang SJ**, Won YJ - Study of evolutionary relationship between hydrothermal vent tubeworm (*Ridgeia*

Hall 1

Connectivity and biogeography

- 251 Teixeira S**, Decker C, Fuchs S et al - Connectivity in

- piscesae*) and its chemosynthetic endosymbionts
- 261 Sun J**, Xu T, Watanabe H et al - A resource of draft genomic sequences and genome-wide single nucleotide polymorphisms/variants in deep-sea mussels
- 262 Lee WK**, Roterman CN, Won YJ - Phylogeography of *Kiwa* (Decapoda: Anomura) including *Kiwa* n. sp. from the Australian-Antarctic Ridge
- 263 Piechaud N**, Downie AL, Stewart HA, Howell KL - Predicting outside the box: can predictive species distribution models be transferred between sites?
- 264 Pradillon F**, Bignon L, Cotty C et al - SALSA : Serial Autonomous Larval Sampler
- 265 (Rakka M)** Orejas C, Jiménez C, Abu Alhaja R et al - The cold-water corals of Cyprus: Environmental settings and ecological features (CYprus Cold-corals Levantine SeA, Eastern MEditerranean: CYCLAMEN)
- 266 Krylova EM**, Ivanov DL, Mironov AN, Dilman AB - Arctic abyssal fauna of bivalve molluscs
- 267 Lejzerowicz F**, Pawlowski J - Sampling deep-sea sediment for sequencing the Foraminifera diversity: an example of patchiness from the Southern Ocean
- 268 Hernandez-Avila I** - Patterns of deep-water diversity in the Caribbean is repeated along taxa
- 269 Plaiti W**, Almeida M, Sardá F, Tselepidis A - Comparisons of deep water macrofauna assemblages from the East Ionian and Balearic Seas (Mediterranean)
- 270 Fadeeva NP**, Mordukhovich VV, Zograf JK - The diversity and biogeography of the free-living nematode (Nematoda: Desmodoridae) from the Northwestern

Pacific

- 271 Suarez Mozo NY, Hendrickx ME** - Deep-water chitons (Mollusca: Polyplacophora) from off the west coast of Baja California, Mexico

Room 2

Biodiversity and ecosystem functioning

Pelagic systems

- 272 Thuesen EV**, Wilson TM, Haddock SHD - Diversity of ecophysiological characteristics in the phylum Ctenophora in relation to body size and habitat depth
- 273 Mayor DJ**, Sanders R, Giering SLC, Anderson TR - Microbial gardening in the ocean's twilight zone: detritivorous metazoans benefit from fragmenting, rather than ingesting, sinking detritus
- 274 (Giongo A)** Oliveira RR, Simão TLL, Valdez FP et al - Bacterial diversity in epipelagic, mesopelagic and bathypelagic zones in the southwestern Atlantic Ocean
- 275 Sutton TT**, Clark MR, Dunn DC et al - A global biogeographic classification of the mesopelagic zone: an aid for marine conservation planning
- 276 Sutton TT, Cook AB**, Boswell K et al - DEEPEND: Deep-Pelagic Nekton Dynamics of the Gulf of Mexico
- 277 Fernández-Álamo MA**, Dominguez Tavera AI, García Sánchez MG, Lucas Doroteo V - Preliminary analysis of the vertical distribution and density of the holoplanktonic

chaetognaths (Chaetognatha) in the Campeche Canyon, Gulf of Mexico in January, 2013

- 278 Fernández-Álamo MA**, Flores Coto C - Mesopelagic capture of *Bathothena lyromma* Chun, 1906 (Mollusca: Cephalopoda: Oegopsida: Cranchiidae) in the Campeche Canyon, of the Gulf of Mexico in June 2014
- 279 Hoving HJT**, Czudaj S, Fock H, Piatkowski U - Diversity, distribution and abundance of epi-and mesopelagic Cephalopoda from the eastern tropical Atlantic
- 280 Hoving HJT**, Robison BH - In situ observations of predator and prey associations reveal high occurrence of cannibalism in gonatid squid
- 281 Matsumoto GI**, Robison BH, Sherlock RE, Reisenbichler KR - A new coronate species (*Atolla* sp. nov.) in Monterey Bay, California
- 282 Reisenbichler KR**, Chaffey MR, Cazenave F et al - From ROV to AUV: Automating MBARI's midwater time-series video surveys

Hadal systems

- 283 Molodtsova TN**, Shvov DA - Black corals in the abyss: species diversity, biogeography and adaptations
- 284 Jamieson AJ**, Linley TD, Ritchie H et al - Bathymetric trends in fish and amphipods across bathyal, abyssal, and hadal depths in multiple trenches
- 285 Brandt A**, Bober S, Brix S et al - Macrofaunal composition of the Vema-TRANSIT expedition with the new RV Sonne – preliminary results
- 286 (Błażewicz-Paszkowycz M)** Brix S, Meißner K,

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- 287 Schmidt C**, Martínez-Arbizu P - Meiofauna in the Kuril–Kamchatka and Puerto Rico trenches and in the adjacent abyssal plains
- 288 Józwiak P**, Pabis K, Błażewicz-Paszkowycz M - Epibenthic sled vs giant boxcorer - what is a better tool for tanaidacean species richness assessment in the deep-sea benthic ecosystem
- 289 Malyutina MV**, Brandt A - Comparison of the Munnopsidae fauna (Crustacea, Isopoda) of the Kuril-Kamchatka Trench area with other deep-sea areas
- 290 Downing AB**, Wallace GT, Weinstock CL, Yancey PH - Trimethylamine oxide, scyllo-inositol and other potential piezolytes (pressure counteractants) correlating with depth in hadal fishes and amphipods

Seamounts, canyons and coral habitats

- 291 Leitner AB**, Neuheimer A, Drazen JC - Seamount induced primary productivity hotspots
- 292 Morales N**, Easton EE, Gaymer CF - Top predators of seamounts in the Easter Island Ecoregion
- 293 (Xavier JR)** Pereira R, Gomes Pereira JN, Tempera F et al - Sponge assemblages of the Condor seamount (Azores) characterized from underwater imagery
- 294 Xavier JR**, Torkildsen M, Tangen S et al - Sponge assemblages of the Schultz seamount – Arctic Mid-Ocean Ridge

- 295 (Aguilar R)** Alvarez H, Marin P, Garcia S et al - Preliminary data on deep-sea benthic habitats in four Macaronesian seamounts
- 296 Gil M**, Rodríguez I, Pereira E, Ramil F - Benthic hydroids from Northeast Atlantic seamounts
- 297** Quattrini AM, Chaytor JD, **Cordes EE** et al - Initial assessments of biodiversity and geology on Caribbean seamounts in the Greater-Lesser Antilles Transition Zone
- 298 Hestetun JT**, Xavier JR, Rapp HT - Carnivorous sponges from the Southwestern Indian Ocean Ridge seamounts
- 299 Serigstad B**, Ostrowski M, Olsen MN et al - Discovery and first observations from a large cold-water coral reef along the Ivorian-Ghanaian margin (the Gulf of Guinea)
- 300 Buhl-Mortensen L**, Olafsdottir SH, Buhl-Mortensen P et al - Distribution of nine cold-water coral species (Scleractinia and Gorgonacea) in the cold temperate North Atlantic: effects of bathymetry and hydrography
- 301** Buhl-Mortensen P, Gonzalez Mirelis G, **Buhl-Mortensen L** et al - Defining deep-water megafauna habitats based on species composition and abundance
- 302** Casais J, **Rodrigues CF**, Almeida M et al - Macrofaunal biodiversity of bathyal habitats at the Moroccan Carbonate Province (Gulf of Cadiz, NE Atlantic)
- 303 Neves PM**, Génio L, Ravara A et al - Benthic macrofauna associated with *Dendrophyllia cornigera* (Cnidaria, Scleractinia) in Capbreton Canyon, Bay of Biscay (NE Atlantic)
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- 305** Hogan RI, Heesch S, Oppelt A, **Allcock AL** - Northeast Atlantic deep-sea corals
- 306 Miles LL**, Edinger E, Piper DJW - Investigating the relationship between cold-water corals distribution and surficial geology
- 307 Narayanaswamy BE**, Rea T, Serpetti N, Lamont PA - Hidden diversity: Coral/carbonate - faunal associations
- 308 Mytilineou C**, Smith CJ, Chondromatidou V et al - Deep-water coral ROV observations in the E Ionian Sea
- 309 Cardone F**, Angeletti L, Canese S et al - Taxonomic composition and distribution of hard substrate sponge communities from Mediterranean deep sea habitats with particular focus on submarine canyons
- 310 Gunton LM**, Gooday AJ, Glover AG, Bett BJ - Polychaetes vs. nematodes; a comparison of macrofaunal worm assemblages inside a submarine canyon
- 311 Chiesa IL**, Martínez A, Doti BL - Amphipods from the Mar del Plata submarine canyon, southwest Atlantic Ocean
- 312 Elasar M**, Kerem C, Angel D et al - Akhziv submarine canyon: an oasis in the deep sea?
- 313 Mecho A**, Fernandez-Arcaya U, Ramirez-Llodra E et al - Community composition and distribution of non-crustacean invertebrates in bathyal areas of the north-western Mediterranean Sea

314 (Mecho A) Ayma A, Aguzzi J, Canals M et al - Fauna of submarine canyons from the Northwestern Mediterranean Sea: results from ROV dives and Agassiz dredging

Vents, seeps and organic falls

315 (Sarrazin J) Sarradin PM, Cannat M, Blandin J et al - Latest highlights from the EMSO-Açores deep sea observatory

316 (Lartaud F) Nedoncelle K, Le Bris N, de Rafélis M et al - Non-equilibrium fractionation of stable carbon isotopes in chemosynthetic mussels

317 Molodtsova TN, Galkin SV, Gebruk AV et al - Preliminary data on fauna of inactive hydrothermal sulfide fields in the Russian Exploration Area on the Mid-Atlantic Ridge

318 Portail M, Pernet F, Cathalot C et al - Species trophic diet variability along three hydrothermal fields of the North Mid- Atlantic Ridge

319 Yang JS, Liu XL, Li HW et al - The hydrothermal vent shrimp *Rimicaris exoculata* and its symbionts: analyses by next generation sequencing

320 Apremont V, Cueff-Gauchard V, Cambon-Bonavita M, **Zbinden M** - Preliminary data on the investigation of hydrothermal shrimp *Chorocaris chacei* symbiosis

321 Zbinden M, Machon J, Lucas P et al - Comparative study of sensory abilities (chemo- and thermoreception) in hydrothermal Alvinocarid and coastal Palaemonid shrimp

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- 331 Ramalho SP**, Ribeiro C, Hensen C et al - Benthic nematodes assemblages of three new mud volcanoes along the SWIM deep-reaching transform fault in the Horseshoe Abyssal Plain (NE Atlantic)
- 332 Esquete P**, Cunha MR - Spatial distribution of the Tanaidaceans (Crustacea, Peracarida) in the mud volcanoes of the Gulf of Cadiz
- 333 Guedes IF**, Ravara A, Rodrigues CF et al - Dorvilleidae (Polychaeta) from mammal carcasses in the deep-Atlantic: species composition, trophic ecology and functional morphology
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- 336 Halanych KM** - Comparative analysis of endosymbiont genomes from siboglinids
- 337 Ball B**, Cunningham CW, Van Dover CL - SeepC: Genetic connectivity between seep populations of the brittle star *Ophioctenella acies*
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- 341 (Shimabukuro M)** Correa LB, Bernardino AF, Smith CR et al - Deep-sea wood-fall lander experiments at SE Brazilian continental margin: preliminary results
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- 348 Campaña-Llovet N**, Snelgrove PVR - Barkley methane hydrate patch mosaics and drivers of infaunal patterns
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- 355 Bell JB**, Woulds C, Brown LE et al - Ecology of diffuse hydrothermal vents in the Bransfield Strait, Antarctica
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- 357 Krylova EM**, Sahling H, Svavilnaya AA - Siphonal structure in the Pliocardiinae (Bivalvia, Vesicomysidae): adaptive significance and application for systematics
- 358 Whelpley JM**, Bright C, Osborn KJ et al - The Smithsonian Deep-sea Hydrothermal Vent Collection
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- 361 Messing CG**, Syverson VJ, Stanley K, Baumiller TK - Time-series observations of crinoid assemblages on a deep tropical island slope, Isla Roatán, Honduras
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- 372 Rocha F**, Fernández-Gago R, Raul Alonso, **Ramil F** - Deep sea benthic octopuses from Mauritanian waters: bring to light the *Muusoctopus* and *Bathypolypus* species
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- 374 Calero B**, Ramil F, Ramos A - First records of dense aggregations of suspension-feeder brittle-stars in Northwest Africa: Could they be directly linked to upwelling phenomena?
- 375 Calero B**, Ramil F, Ramos A - Echinoderm assemblages of Mauritanian slope
- 376 Sampaio Í**, Carreiro-Silva M, Menezes G et al – A new deep-water biotope dominated by the octocoral *Swiftia* on the coral mound complex off Mauritania (NE Atlantic)
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- 378 Pabis K**, Serigstad B, Siciński J et al - Distribution patterns and abundance of benthic macrofaunal communities in the Gulf of Guinea (West Africa)
- 379 Frutos I**, Malyutina M, Brix S et al – Abyssal Peracarida crustaceans collected during the SO-237 cruise from the Vema Fracture Zone: the importance of isopods – preliminary results
- 380 Bik HM** - Biodiversity and biogeography of microbial eukaryotes on the Mid-Atlantic Ridge – insights from environmental sequencing
- 381 Castelo-Branco R**, Silva FS, Carvalhal-Gomes SBV et al - Characterization of bacterial community from a Brazilian Coastal Region Influenced by an upwelling system
- 382 Wang Y**, Gao Z-M, Qian P-Y - Draft genome of a bacterium in the phylum Aerophobetes (CD12) reveals a glucose-dependent acetogenic lifestyle in deep-sea anaerobic sediments
- 383 Min W**, Kim D, Rho H et al – Community structures and distributional patterns of meiobenthos on the Deep seafloor and continental slope of East Sea (Sea of Japan)
- 384 De Leo FC**, Duguid WDP, Fleury A, **Juniper SK** – A sea of crabs in Barkley Canyon: an example of how cable observatories may help researchers to unveil previously unseen Deep-sea animal behavior
- 385 Juniper SK**, De Leo F - Cabled ocean observatory technologies as tools for studying biodiversity change
- 386 Narayanaswamy BE**, Jamieson AJ, Neat FC et al - MASTS-Deep-Sea Forum: Deep water Research undertaken by Scottish Research Institutes

387 Gates AR, Benfield MC, Skropeta D et al - Recent highlights from the SERPENT Project

Mediterranean slope (to 2300 m) based on morphological and molecular analyses

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- 388 Alves A**, Ramos S, Nomaki H et al - Feeding preferences of abyssal macrofauna inferred from in situ pulse chase experiments in the West Pacific
- 389 He L-S**, Li J, Gao Z-M et al - A molecular study of the stomach content of the *Bathynomus giganteus* from the South China Sea
- 390 Lopez-Lopez L**, **Preciado I** - Influence of upwelling conditions on feeding habits and trophic position of planktophagous fish
- 391 Preciado I**, Cartes JE, Punzón A et al - Food web functioning of the benthopelagic community in a deep-sea seamount based on diet and stable isotope analyses
- 392 Papiol V**, Fanelli E, Cartes JE, López-Pérez C - Effects of lipid extraction on the isotopic composition of deep-sea megafauna tissues
- 393 Fanelli E**, Cartes JE, **Papiol V** et al - Long-term decline in the trophic level of megafauna in the deep Mediterranean Sea: a stable isotopes approach
- 394 Cartes JE**, Soler-Membrives A, Carrasson M et al - Contribution of food falls, external inputs of food, in the diet of top predator fish over the northwest

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- 395 Kulagin DN**, **Vereshchaka A**, Lunina A, Neretina T - Population structure of the most abundant chaetognath *Eukrohnia hamata* (Möbius, 1875) in the Atlantic Sector of the Southern Ocean, as revealed by length-frequency (morphometric) and molecular analysis
- 396 Janussen D**, Downey R - Carnivorous sponges (Cladorhizidae): new research and sampling strategies reveal key information about their presence, abundance and diversity in deep-sea communities
- 397 Chu J**, Reiswig H - On some aspects of carnivorous sponge life history
- 398 Durden JM**, Bett BJ, Ruhl HA - The hemisessile lifestyle and feeding strategies of *Iosactis vagabunda* (Actiniaria, Iosactiidae), the dominant megafaunal species of the Porcupine Abyssal Plain
- 399 Hamel J-F**, Baillon S, Mercier A - Biology of a deep-water sea anemone (Anthozoa: Actiniidae) from eastern Canada: spawning, development and growth
- 400 Neves BM**, Edinger E, Wareham VE - Characterization of the internal axis in two morphologically contrasting deep-water sea pens (Cnidaria: Octocorallia)
- 401 Brooke SD**, Järnegren J, Pedersen SA - Effect of temperature on early life-history stages of the cold-water coral, *Lophelia pertusa*
- 402 (Rakka M)** Pérez-Pujol J, Orejas C, Grau A et al -

- Reproductive ecology of *Lophelia pertusa* in Mingulay Reef and the Logachev mounds (North East Atlantic): a multi-scale comparison
- 403 Durán Suja L**, Henry L-A, Roberts JM - The tunicate *Polycarpa pomaria*, a possible contributor to cold-water coral reef architecture
- 404 Queirós JP**, Ravara A, Hilário A - The reproductive biology of a new species of Ampharetidae (Annelida, Polychaeta) from mammal bones in the deep-Atlantic Ocean
- 405 (Ingels J)** Sapir A, Dillman AR, Grupe B et al - On methane seeps, worms, and parasitic fungi: microsporidia-infected nematodes reveal another secret of the deep sea
- 406 Kapiris K**, Klaoudatos D, Maravelias C et al - Morphometric study of *Plesionika edwardsii* in the S Aegean Sea (E Mediterranean Sea)
- 407 Mercier A**, Baillon S, Hamel J-F - Life history and feeding biology of the deep-sea pycnogonid *Nymphon hirtipes*
- 408 van der Grient JMA**, Rogers AD - Regional and taxonomic variation in body size in deep-sea macrofauna
- 409 Finucci B**, Dunn MR - The biology of a deepsea elasmobranch, the prickly dogfish (*Oxynotus bruniensis*)
- 410 Gomes-Pereira JN**; Carmo V, Catarino D et al - Cold-water corals and hydroids as essential fish habitat for *Lappanella fasciata* and *Benthocometes robustus*
- 411 Paitio J**, Vieira RP, Cunha MR - Light in the deep: how do visual specializations reflect behavioural and ecological patterns in lanternfishes (Myctophiformes,

Myctophidae)?

- 412 Fischer LG**, Haimovici M - Trophic ecology of Macrouridae from southwestern Atlantic (Brazil)
- 413 Fischer LG**, Haimovici M - Bioecology of grenadiers (Macrouridae) from southwestern Atlantic
- 414 Fischer LG**, Haimovici M - Biomass of Grenadiers (Macrouridae) from Southwestern Atlantic (Southern Brazil): Relations with Oceanographic Processes

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- 416 Kongshavn K**, Kongsrud JA, Tandberg AHS, Willassen E - A DNA-barcoding approach to explore biodiversity and biogeography of benthic invertebrates in the Norwegian Sea with special focus on deep-sea fauna
- 417 Ardila NE**, Arteaga C, Morales C et al - Deep sea meiofauna from the Colombian Caribbean: assemblages, new records, and taxonomic challenges
- 418 Alvizu A**, Tendal OS, Rapp HT - Deep-water calcareous sponges (Calcarea: Porifera) from the Norwegian, Greenland and Iceland Seas (GIN) – from abyssal plains to mid-ocean ridges and hydrothermal vents
- 419 Maduray S**, Samaai T, Gibbons MJ - Skeletons in the deep
- 420 Herrera S**, Shank TM - Unprecedented phylogenetic resolution and objective species delimitation in recalcitrant deep-sea coral taxa

- 421 Serpetti N**, Taylor ME, Rogers AD et al - Ecological adaptations and commensal evolution of the Polynoidae (Polychaeta) on the Southwest Indian Ocean Ridge: a phylogenetic approach
- 422 Ramos D, Ravara A, Cunha MR** - Taxonomy, distribution and ecology of the order Phyllodocida (Annelida, Polychaeta) in deep-sea habitats around the Iberian margin
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- 424 Sherlock RE**, Walz KR, Schlining KL, Robison BH - Species diversity in the genus *Bathochordaeus*: more giant larvaceans than expected
- 425 Voight JR**, Kurth J, Strauss RE et al - Clinal descent into the deep sea by octopuses of *Graneledone*
- 426 Frutos I**, Brandt A, Sorbe JC - A new suprabenthic *Munnopsurus* (Crustacea: Isopoda: Munnopsidae) from bathyal soft-bottoms of the NE Atlantic Ocean
- 427 Bober S**, Riehl T - Adding depth to line-artwork by digital stippling – A step-by-step guide to the method
- 428 Horton T**, Thurston MH - The Discovery Collections: Cataloguing without a Curator
- 429 Horton T**, Glover AG, Higgs ND - The World Register of Deep-Sea Species
- 430 Glover AG**, Higgs ND, Horton T, Porrer A - Deep Sea ID: a field guide to the marine life of the deep sea
- 431 Schlining B**, Jacobsen Stout N, Kuhn L et al - Exploring data with MBARI's Deep-Sea Guide

- 432 Sumner-Rooney LH**, Sigwart JD - How do deep-sea invertebrates see their world? New sensory organs discovered in marine molluscs

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- 433 Sumner-Rooney LH**, Sigwart JD, Williams ST - Eye reduction in the deep sea: lessons from a family of vetigastropods
- 434 O'Hara TD**, Hugall AF - The evolutionary relationship between the shallow and deep-sea Ophiuroidea fauna
- 435 Little CTS**, Amano K, Campbell KA et al - 110 million year record of catshark egg capsules from methane seeps
- 436 Matos L**, Frank N, Mienis F et al - NW Atlantic scleractinian cold-water coral occurrence in the last 250,000 years
- 437 Georgieva MN**, Little CTS, Ball AD, Glover AG - Mineralisation of polychaete worm tubes at modern hydrothermal vents: implications for a 430 million-year-old hydrothermal vent community
- 438 Miyajima Y**, Watanabe Y, Jenkins RG et al - Difference of macrofaunal compositions among physically and geochemically different cold seeps in the Neogene Japan Sea region