

Deep-Links



Gulf of Cadiz
October 24 – November 12, 2015

Jens Carlsson **AREA 52**, ATLAS Kick-off, 2016

The Team

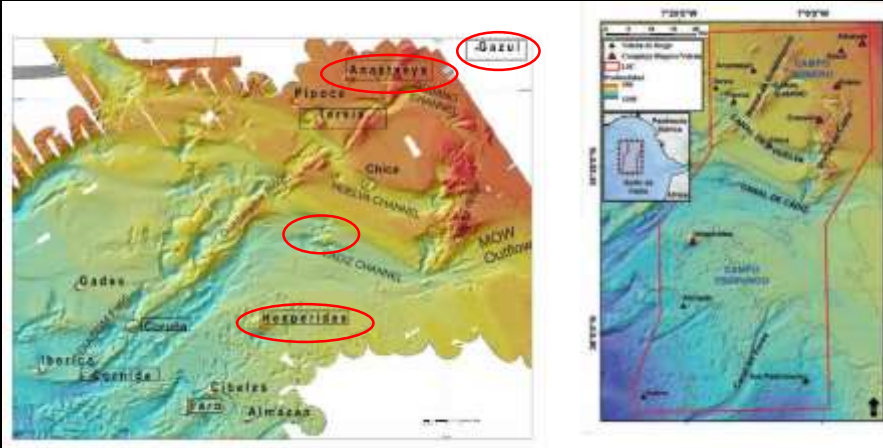
A vertical strip of flags on the left side of the slide, including the flags of Ireland, the United Kingdom, Spain, the United States, Italy, Sweden, and Brazil.

Logos of partner institutions on the right side of the slide:

- UCD DUBLIN
- NUF College of Galway
- GMIT
- UNIVERSITY OF Southampton
- GSI
- Duke UNIVERSITY
- Universität zu Köln
- Instituto Geológico y Minero de España

Logo of Foras na Mara Marine Institute at the bottom center.

Location



Objectives

I. A multidisciplinary characterisation of sponge gardens, cold-water coral reefs, mud-volcanoes and associated fauna within the Gulf of Cadiz



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III. Identify biotope linkage mechanisms for the distribution of chemosynthetically derived labile organic carbon



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IV. To advance understanding of cold-water coral reef and sponge garden development



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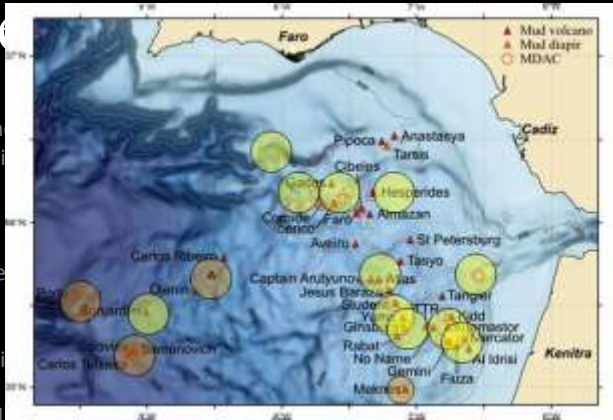
IV. To advance understanding of

V. Assess the role of linked ecosystems for carbon sequestration and climate regulation



Objective

- I. A multidisciplinary characterisation of the seafloor and associated fauna within the study area
- II. Describe the ecosystem services provided by the seafloor
- III. Identify biotope linkages and the role of the seafloor in the labile organic carbon cycle
- IV. To advance understanding of the role of the seafloor in the carbon cycle
- V. Assess the role of linked ecosystems for carbon sequestration and climate regulation



- VI. To establish the genetic connectivity among the biological communities

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- I. A multidisciplinary characterisation of the seafloor and associated fauna within the study area
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- III. Identify biotope linkages and the role of the seafloor in the labile organic carbon cycle
- IV. To advance understanding of the role of the seafloor in the carbon cycle
- V. Assess the role of linked ecosystems for carbon sequestration and climate regulation
- VI. To establish the genetic connectivity among the biological communities



- VII. Appraise the effect of localised seawater acidity on biomineralisation

Objectives

I. A multidisciplinary characterisation of the geology and associated fauna within the study area

II. Describe the ecosystem services provided by the study area

III. Identify biotope linkage to the surrounding environment and labile organic carbon

IV. To advance understanding of the role of the study area in the wider ecosystem

V. Assess the role of linked biotopes in the wider ecosystem

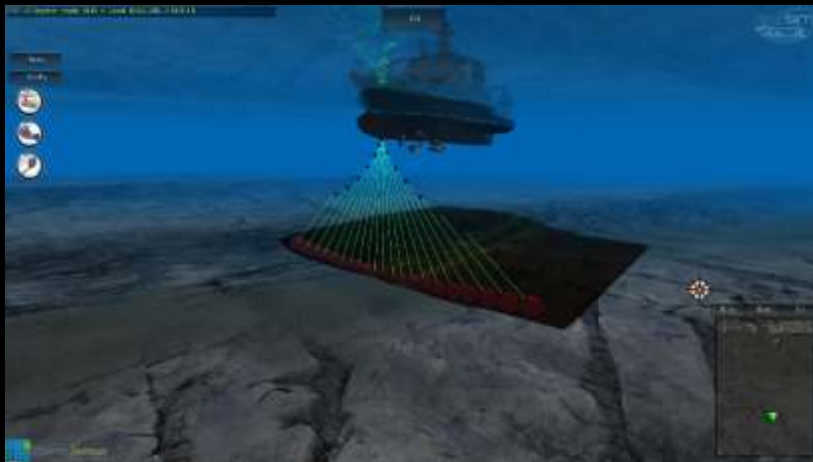
VI. To establish the genetic diversity of the study area

VII. Appraise the effect of localised seawater acidity on biomineralisation

VIII. To understand the effects of seafloor fluid flow on geothermal activity and mass and energy are transferred from the interior of the earth to the exterior



Sampling methods



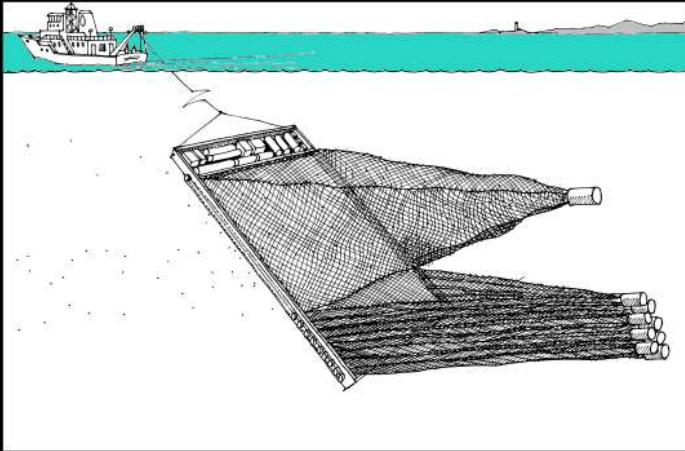
Multi-beam - mapping

Sampling methods



CTD – water samples for eDNA and isotope work

Sampling methods



Multinet – plankton samples for eDNA and isotope work (day/night mesopelagic)

Sampling methods



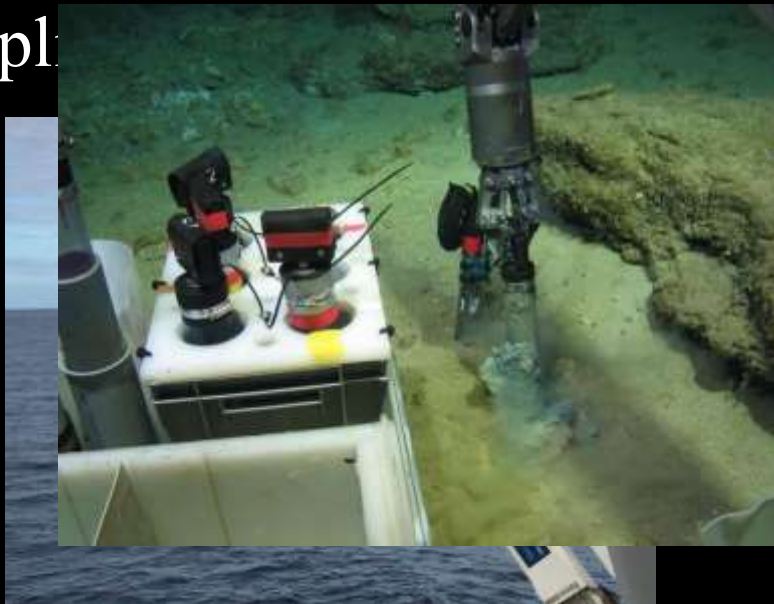
Gravity corer – chemistry work

Sampling methods



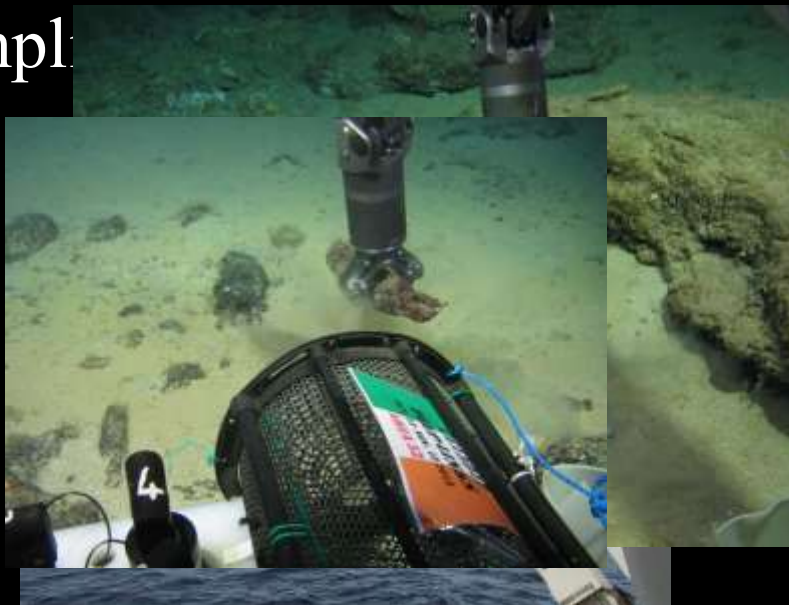
Holland I

Sampl



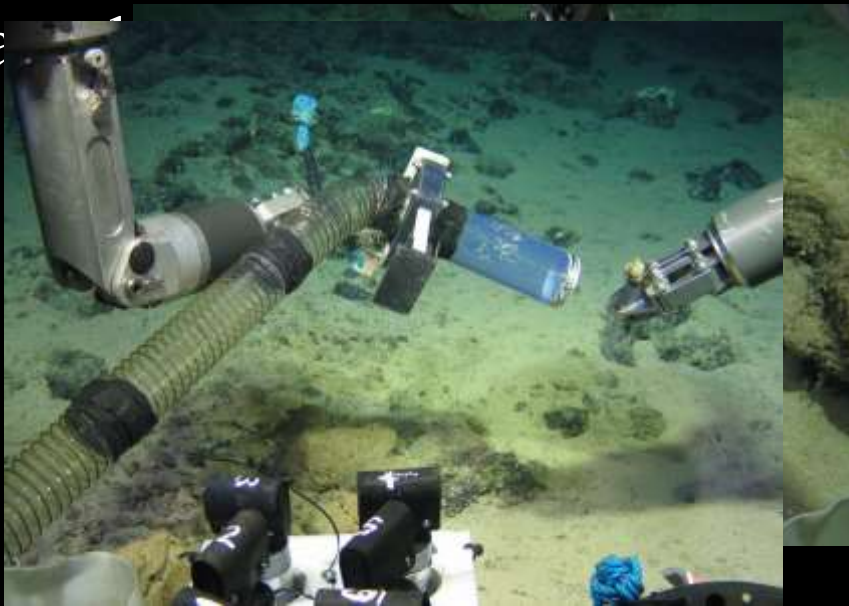
Holland I - cores and temperature probe

Sampl



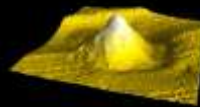
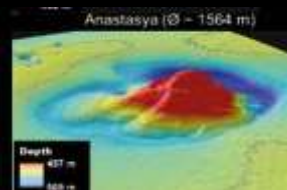
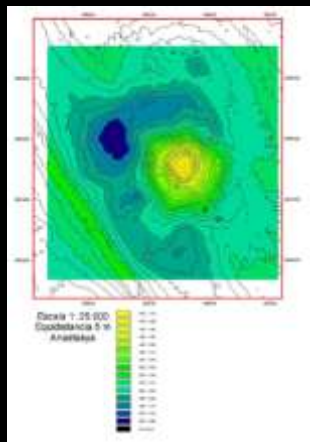
Holland I – hard samples and crab pot

Sa

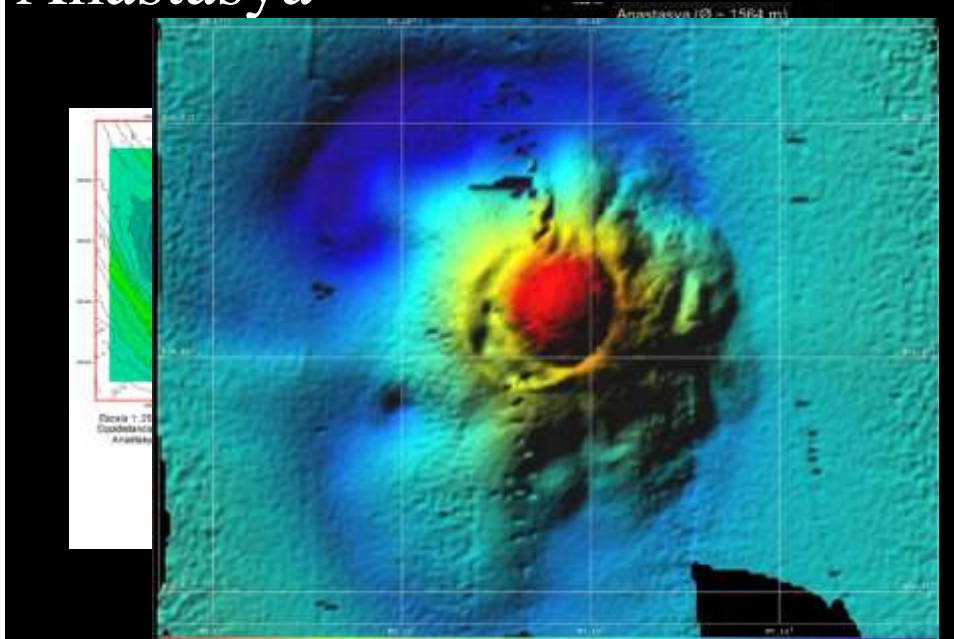


Holland I – slurp gun

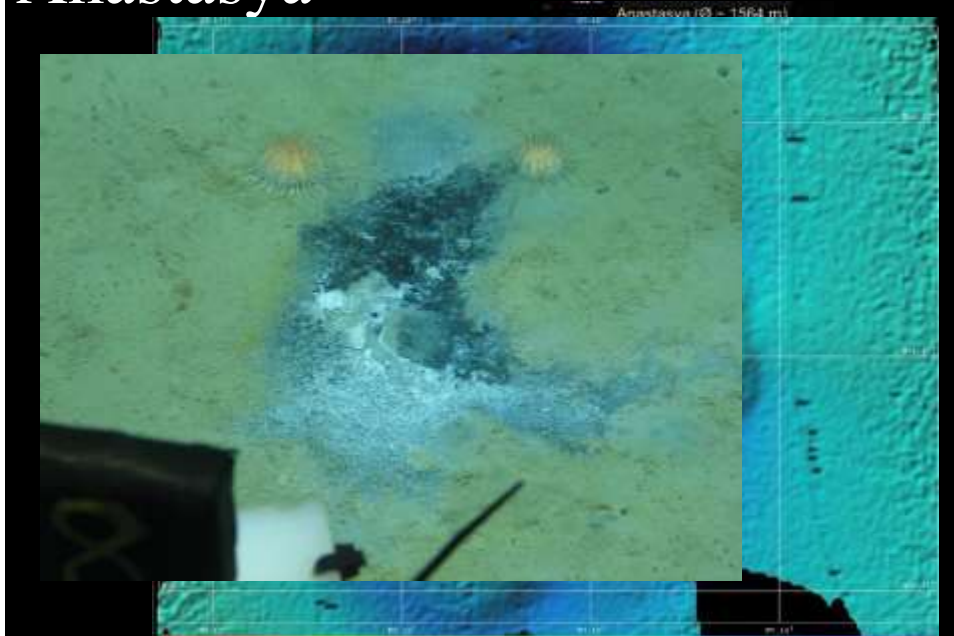
Anastasya



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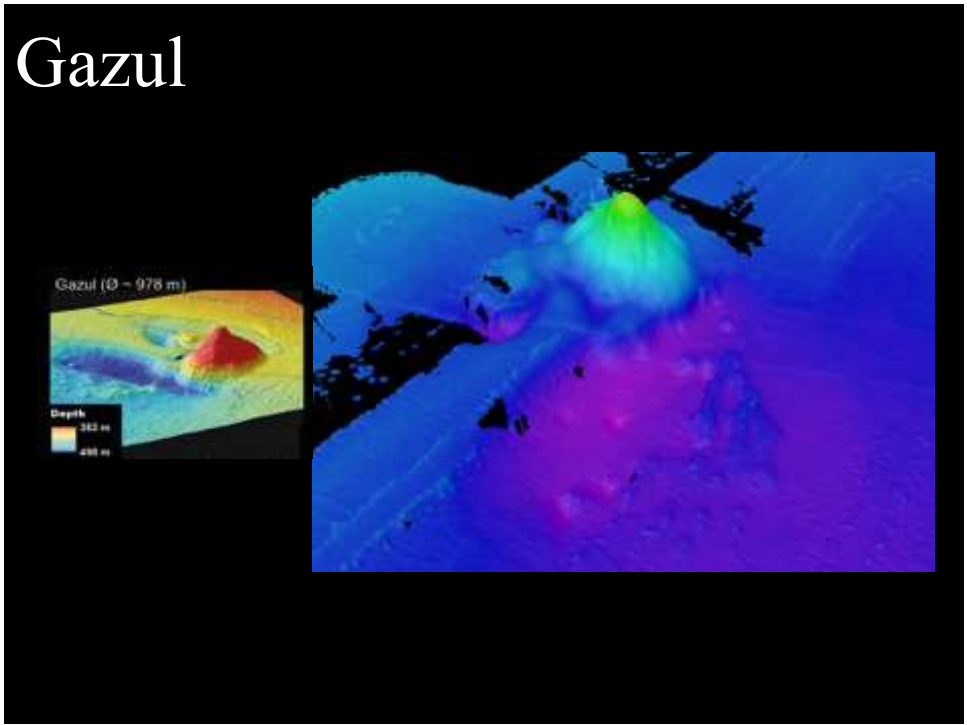
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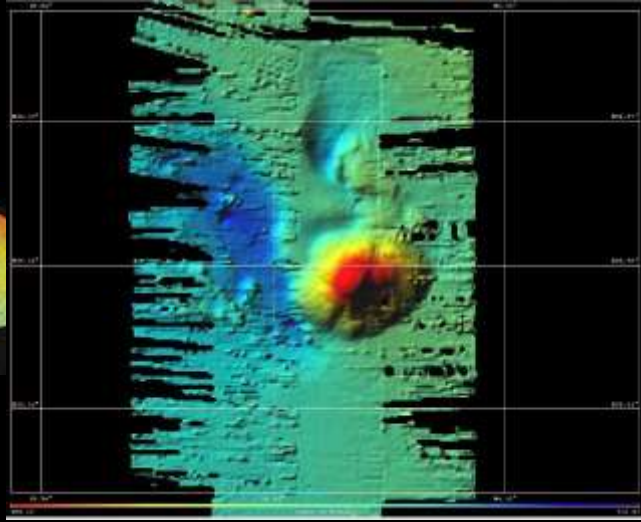
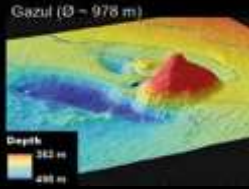
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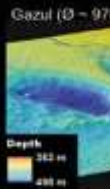
Gazul



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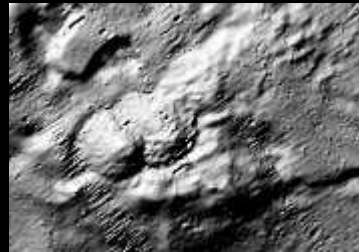
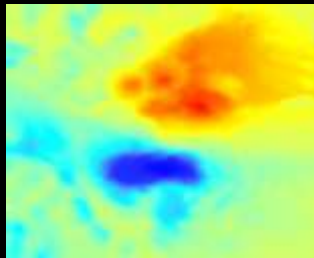
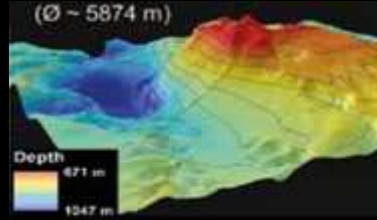
Gazul



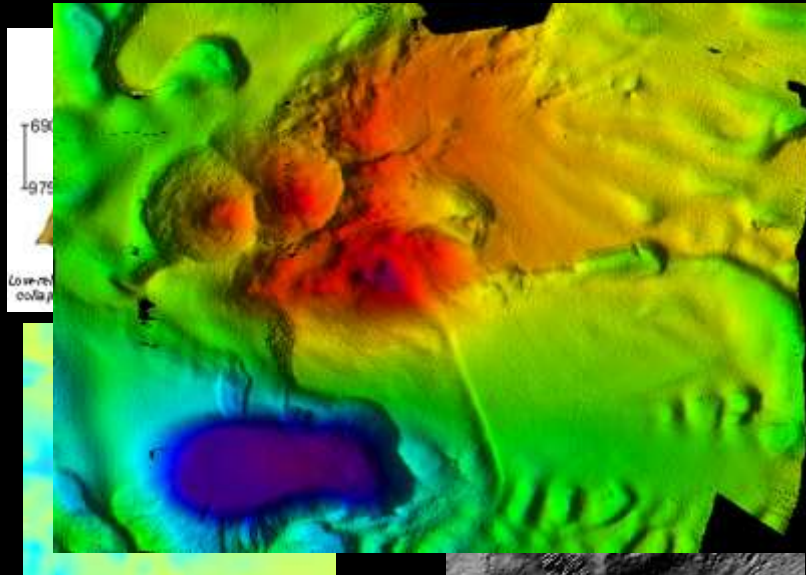
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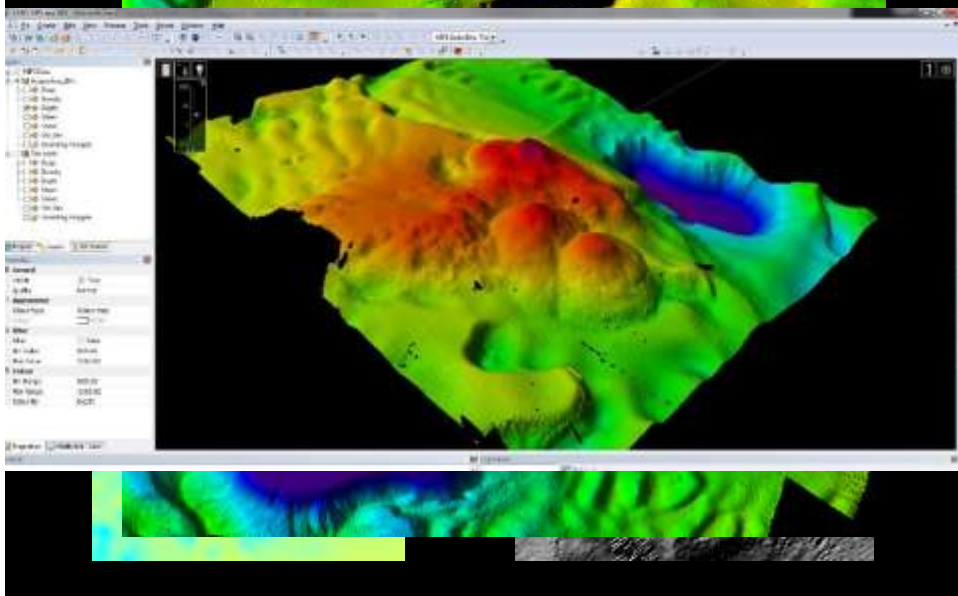
Hesperides



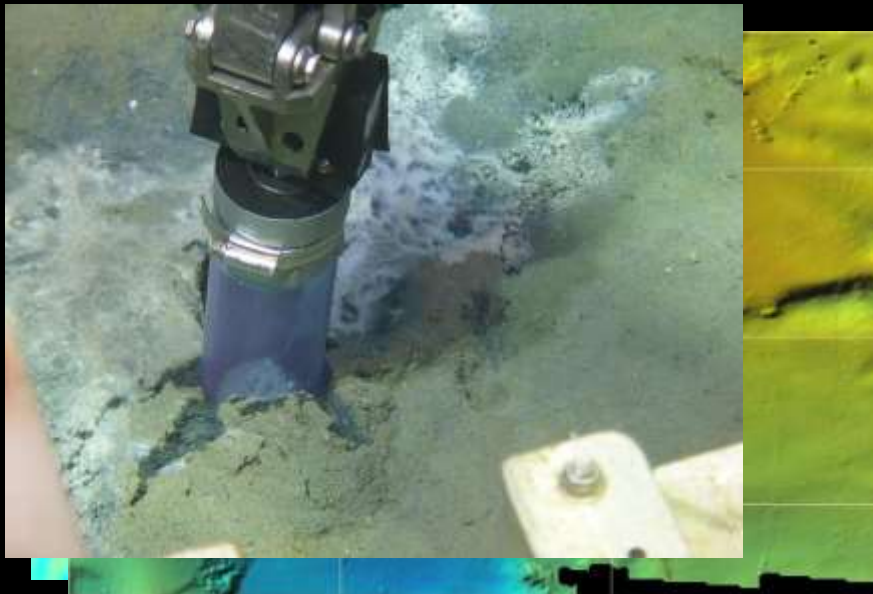
Hesperides



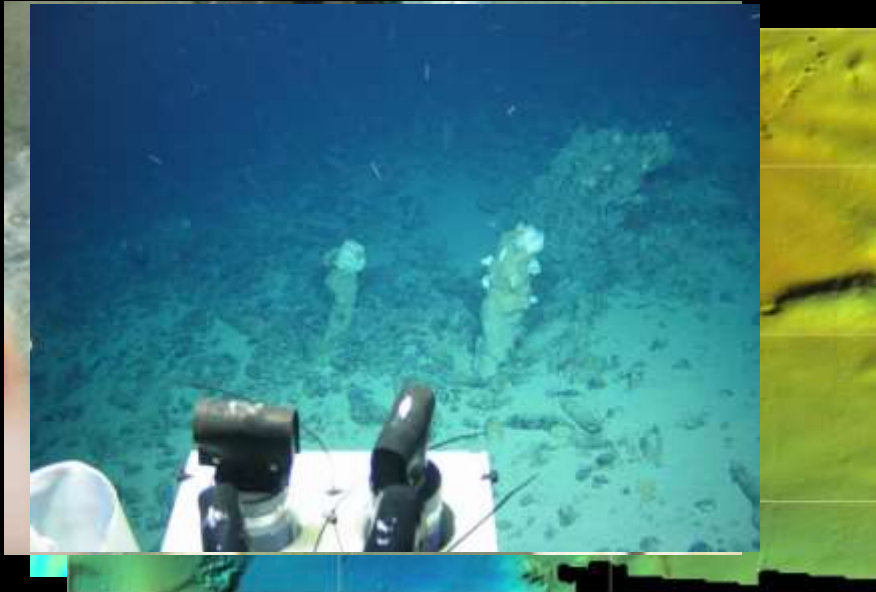
Hespérides



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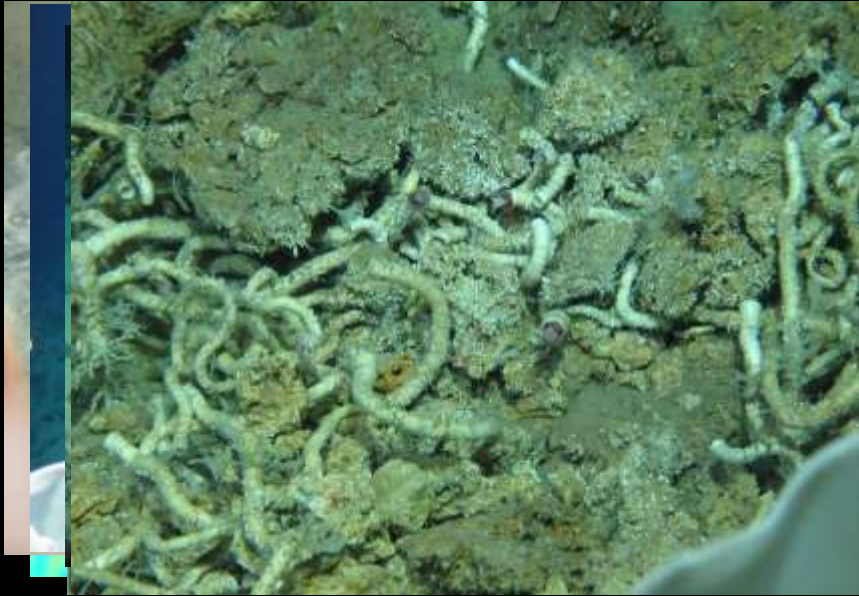
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