

Two new records of sponges from NW Atlantic: *Iotroata acanthostylifera* (Stephens, 1916) and *Janulum spinispiculum* (Carter, 1876)

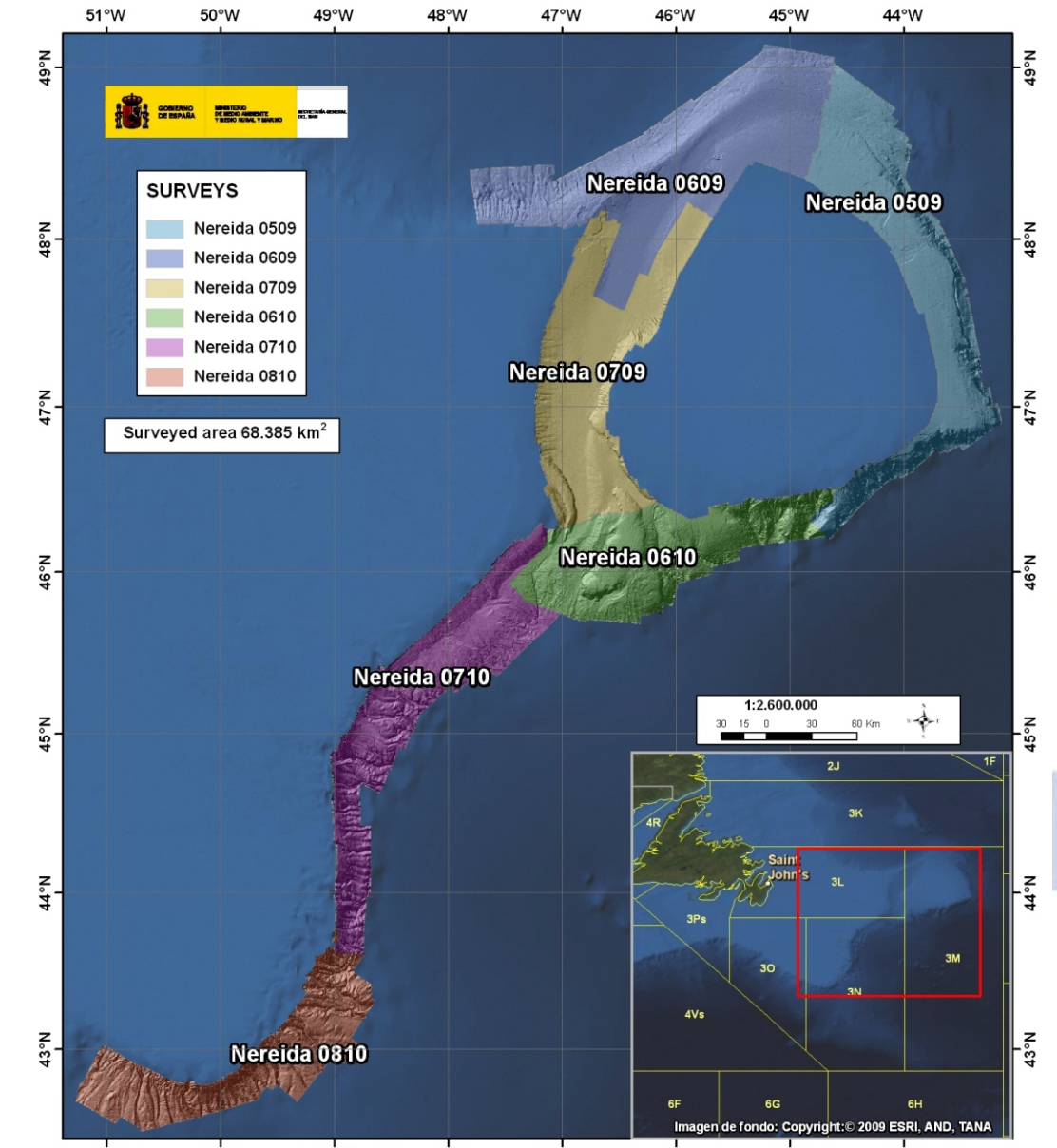
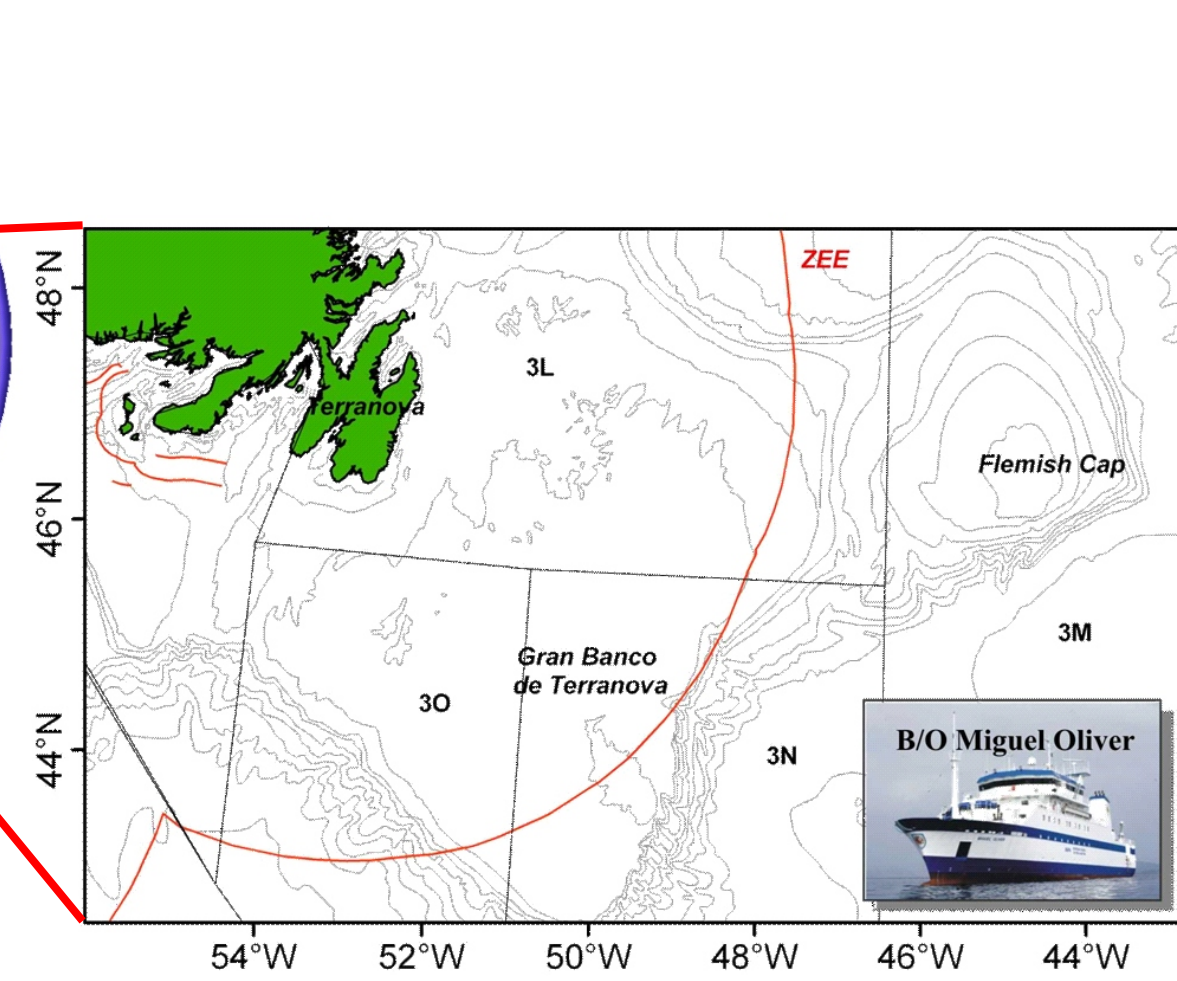
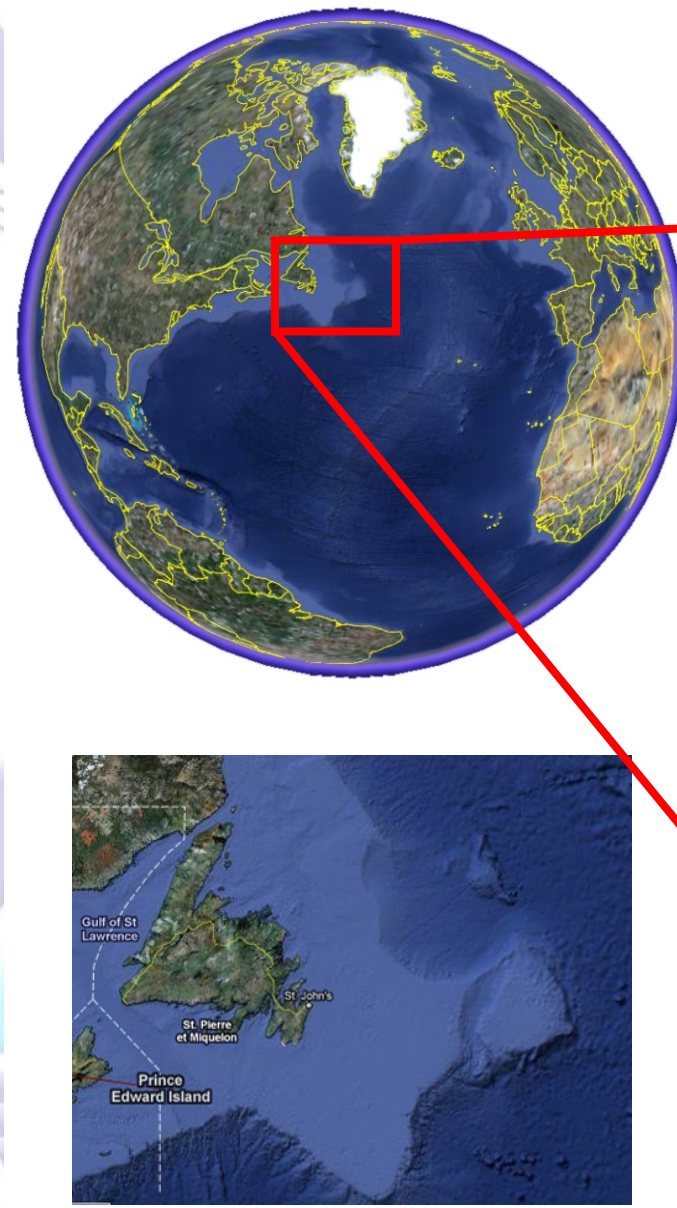
NEREIDA
NAFO POTENTIAL VULNERABLE MARINE ECOSYSTEMS
IMPACTS OF DEEP-SEA FISHERIES

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NEREIDA, a Spanish-led multidisciplinary and international project with contribution from various NAFO contracting parties such as Canada, the UK, and Russia, was initiated in response to the UNGA Resolution 61/105.

The main objective of the NEREIDA project is to gather information for the identification and delineation of VMEs in the NAFO Regulatory Area with special focus on those dominated by deep-water corals and sponges. This demarcation is a necessary step in the decision making process for the protection of these areas.



CARTOGRAPHY

**MULTIBEAM
TOPAS
ECHOSOUNDER**

BENTHOS STUDY

Rock dredge
Hard substract

Box corer
Soft substract

HYDROLOGY

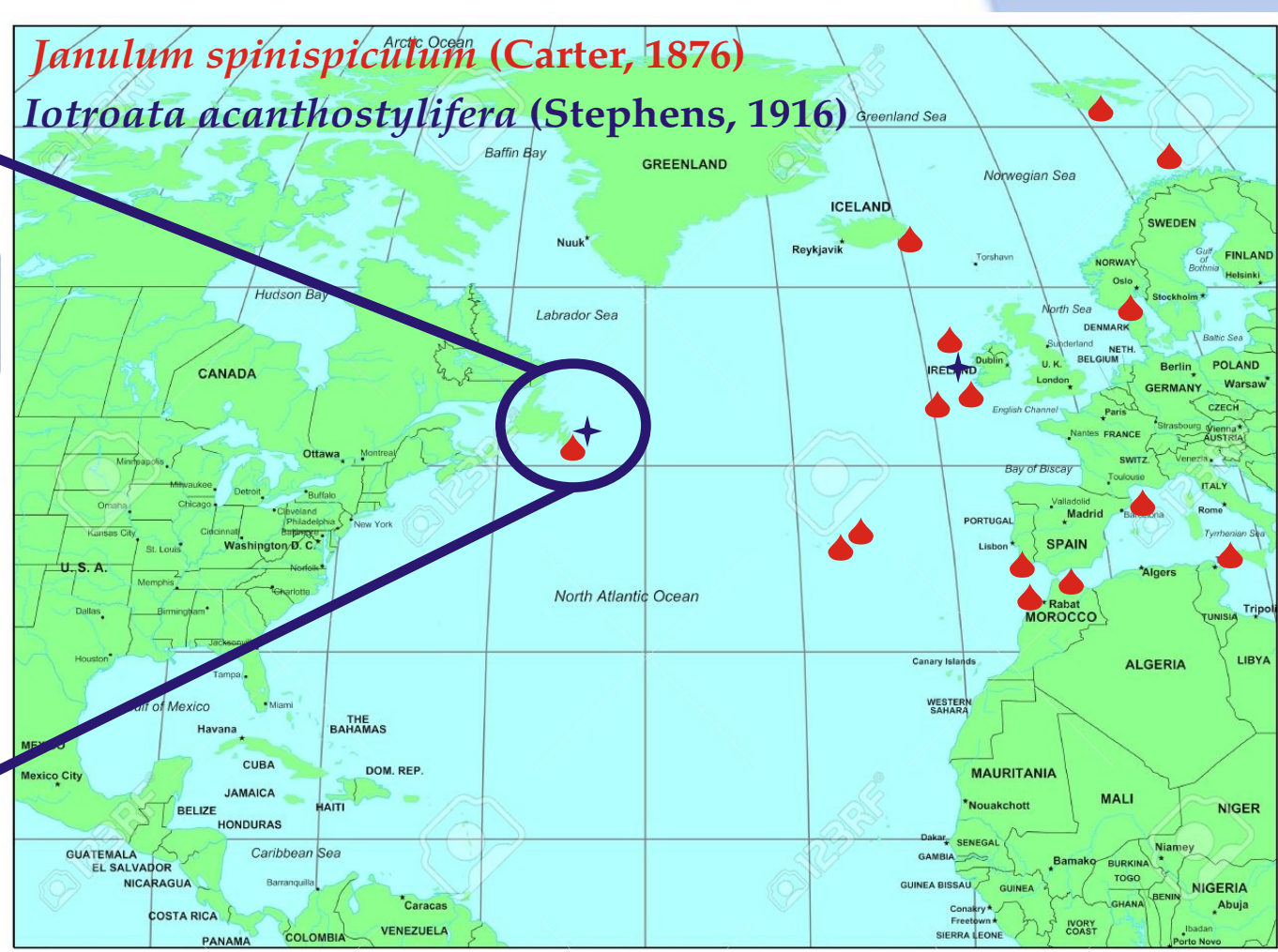
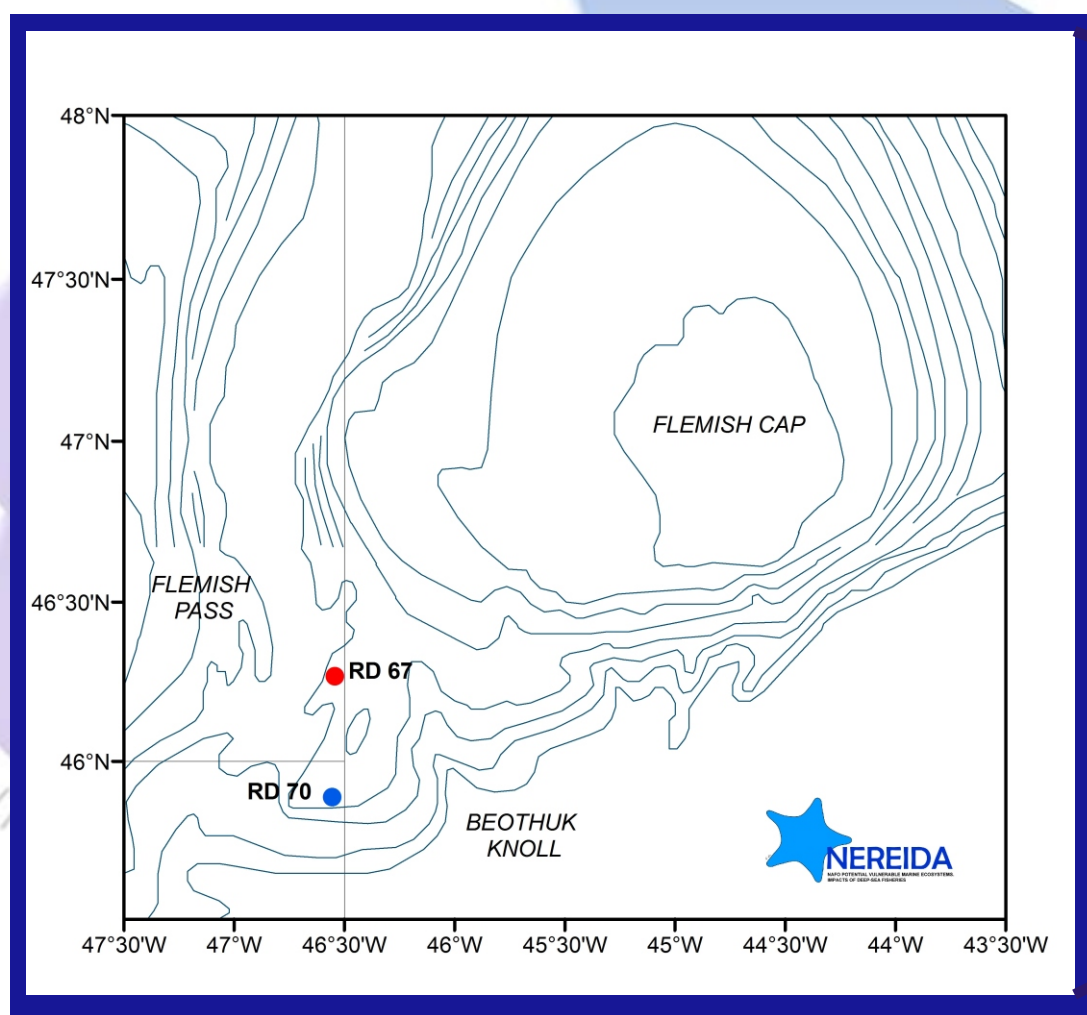
CTD

The NEREIDA data collection programme comprised six research cruises conducted between May and July of 2009 and June and August 2010, aboard the Spanish R/V Miguel Oliver. In 2009, surveys were conducted to the east, north and west of the Flemish Cap and Flemish Pass, whereas in 2010, surveys covered the area south of the Flemish Cap and along the slope of the Tail of the Grand Bank of Newfoundland.

Several sampling and data collection methods were employed during the NEREIDA cruises, including 100% coverage multibeam bathymetry, seismic sub-bottom profile boomer, regular CTD dips (to measure chlorophyll, temperature and salinity at all depths throughout the water column), and rock-dredge and box-core deployments (to collect epifauna, infauna and sediment samples).

Some 105 rock dredge samples have been collected which target hard bottom seabed types. These samples are rich in potential VME indicator species.

In this work we present some results from the analysis of sponges samples collected by rock dredge during the NEREIDA survey programme (2009-2010). There are two new records in the NW Atlantic region: *Janulum spinispiculum* (Carter, 1876) with distribution in the Northeast Atlantic region: southern Portugal, Azores, Rockall Bank; Mediterranean Sea: Alboran and Ionian Seas, Canyon de la Cassidaigne; North Atlantic: Iceland; Arctic Ocean: Barents Sea, northern Norway and Spitzbergen and (Kelly *et al.*, 2015) and *Iotroata acanthostylifera* (Stephens, 1916) cited only of Celtics Seas (van Soest, 2007).



Four specimens of this species were previously cited for Stephens (1920) from W coast of Ireland between 457.25 and 1331.51 m. Mud and sand were the substratum. Encrusting hard substrates like the corals *Madrepora oculata* and *Lophelia pertusa* or ephibionts of *Arca nodulosa* (bivalve) or the hexactinellid *Aphocallistres beatrix*.

Our specimen was dredged at 916 m depth. In the same station were found Tetractinellid sponges of Genus *Geodia* and *Stelletta*, Spirophides of Genus *Craniella* and others sponges as *Rhizaxinella* sp., *Thenea* sp, Axinellidae indet. and Halichondrida indet.

NR0610_30bDR67 *Janulum spinispiculum* (Carter, 1876)

(Acantho)strongyles: 180.16 (222.97) 258.62 x 9.5 (12.34) 16 μm

NR0610_31b DR70 *Iotroata acanthostylifera* (Stephens, 1916)

Spicule dimensions (μm) of <i>Iotroata acanthostylifera</i> . Given as length [min (mean) max] x width [min (mean) max]	
Acanthostyles	253.95 (386.64) 471.81 x 5.1 (12.51) 17.23
Tylotes	319.51 (352) 391.46 x 3.81 (4.92) 6.56
Isanchoras	37.26 (42.73) 48.46 x 8.02 (10.33) 11.97
Biotula	15.51 (17.65) 20.19 x 3.46 (4.27) 5.22

The Genus *Janulum* was revised by Kelly *et al.* (2015) and *J. spinispiculum* was recorded from Northeast Atlantic (Iceland more of N and Azores Southern) between 136-1469 m depth; Arctic Ocean (Svalbard Archipelago) at 192 m depth and in Mediterranean Sea (Canyon de la Cassidaigne, Alborán Sea and Strait of Sicily) between 235-639 m depth. Our specimen was dredged at 613 m depth, in a station with a very few sponges of Genus *Mycale*, *Rhizaxinella*, *Melonanchora*, *Phakellia*, *Tentorium*, *Geodia*, *Stylocordyla* and *Polymastia*.

Kelly, M.; Erpenbeck, D.; Morrow, C.; Van Soest, R. (2015). First record of a living species of the genus *Janulum* (Class Demospongiae) in the Southern Hemisphere. *Zootaxa*. 3980 (2): 255-266.
 Stephens, J. 1921 [1920]. Sponges of the Coasts of Ireland. II. The Tetraxonida (concluded). Scientific Investigations of the Fisheries Branch. Department of Agriculture for Ireland 1920(2): 1-75. pls I-VI
 van Soest, R. (2007) *Iotroata acanthostylifera* (Stephens, 1916). In: Van Soest, R.W.M.; Boury-Esnault, N.; Hooper, J.N.A.; Rützler, K.; de Voogd, N.J.; Alvarez de Glasby, B.; Hajdu, E.; Pisera, A.B.; Manconi, R.; Schoenberg, C.; Janussen, D.; Tabachnick, K.R.; Klautau, M.; Picton, B.; Kelly, M.; Vacelet, J.; Dohrmann, M.; Diaz, M.-C.; Cardenas, P.; Carballo, J.L. (2016). World Porifera database. Accessed at <http://www.marinespecies.org/porifera/porifera.php?p=taxdetails&id=133838> on 2016-05-29.