Benthic hydroids from Northeast Atlantic seamounts

Gil M[1,2*],Rodríguez I[1], Pereira E[1] & Ramil F[1]

[1]ECIMAT & Facultade de Ciencias do Mar, Universidade de Vigo, Spain.
[2]Instituto Español de Oceanografía, Vigo, Spain.

***Correspondence:** martag_g@hotmail.com

INTRODUCTION

Seamounts are defined, in a biological approach, as "*any topographically distinct seafloor feature that is greater than 100 m but which does not break the sea surface to become an island*" (Pitcher et al., 2007). Due to its geographical isolations from continental masses and its particular communities, seamounts were traditionally interpreted as island habitats with highly diverse and endemic faunas. In fact, previous works on NE Atlantic seamounts reported a significant degree of endemism for Porifera and Bryozoa. However this paradigm is not currently well supported and other studies showed contradictory results.

In this work we compare the hydroid fauna from the close-land Lusitanian seamounts with those of the more oceanic Great Meteor bank, located nearby to Mid Atlantic ridge.

MATERIAL Y METHODS

SURVEY	'Seamount-1'	'Meteor 42/3'
ZONE	Galice, Gorringe, Josephine, Ampère, Lion, and Seine banks	Great Meteor bank
DEPTH	54-2075 m	300-500 m
STATIONS	51	12
DATE	September-October 1987	September 1998
GEARS	Beam-trawl, rock dredge, epibenthic sledge	Agassiz-trawl and epibenthic sledge
RESEARCH VESSEL	Le Noirot	Meteor

RESULTS

- A total of 67 species were identified belonging to 15 families. The most diverse families were Lafoeidae (12 species), followed by Campanulariidae, Plumulariidae and Sertulariidae (9 species).
- The highest species richness was recorded in Ampère and Gorringe seamounts, intermediate values at Great Meteor bank and the lowest ones at Josephine, Galice and Seine seamounts.
- Sixteen of the 22 species collected in the Great Meteor bank (73%) were shared with those found in Lusitanian seamounts
- Most of species are widely distributed in Eastern Atlantic and were also reported from European and/or African continental margins.
- Only three species, *Pseudoplumaria sabinae*, *Nemertesia belini* and *Halecium* sp shows a restricted geographical distribution.

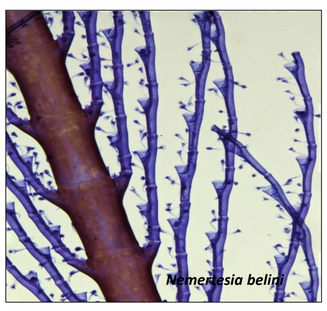

Obelia bidentata

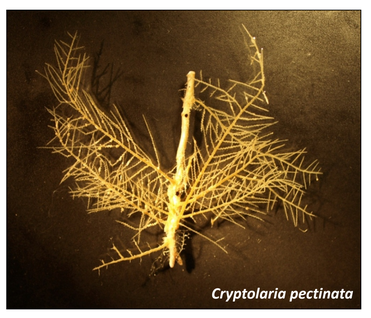

Diphasia Margareta

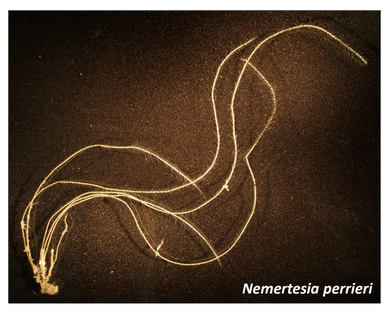

Campanularia hincksii


Pseudoplumaria sabinae


Pseudoplumaria sabinae

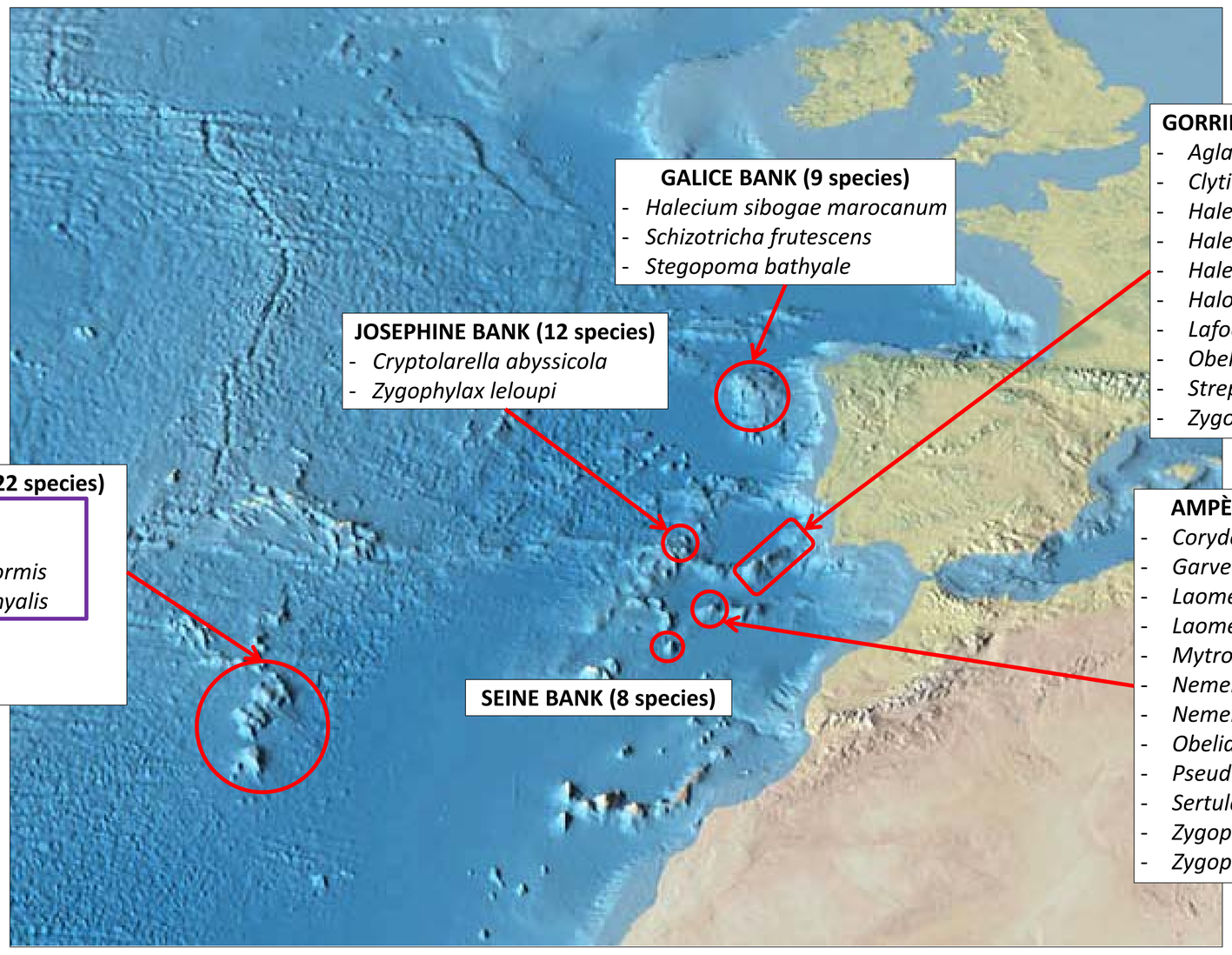

Nemertesia belini


Cryptolaria pectinata


Nemertesia perrieri


Nemertesia belini

SPECIES RICHNESS



Endemic species:

- ***Pseudoplumaria sabinae***: Gorringe and Josephine seamounts
- ***Halecium* sp** (Calder & Vervoort, 1998): Meteor and Mid-Atlantic ridge

Not collected at Lusitanian banks but reported from Eastern Atlantic

Azores and Cape Verde Islands

Lucky Strike (Mid-Atlantic ridge)

CONCLUSIONS

Despite the Great Meteor bank is more oceanic (1500 – 2000 km from mainland), the hydroid fauna is not significantly different from those reported from Lusitanian seamounts.
All seamounts are colonized by species with wide distribution (circumglobal and cosmopolitan) or widely distributed in the Eastern Atlantic.
Withing hydroids, endemic species seems virtually absents in these seamounts.

ACKNOWLEDGEMENTS

Consellería de Educación e Ordenación Universitaria Xunta de Galicia (Galicia Regional Government), cofounding from the European Regional Development Fund (ERDF).
Project cofunding by the MAVA fondation pour la Nature (Contract 12/87 AO C4/2012).
"SEAMOUNT Project" (France) and "Seamount Ecology Project, SEAMEC" (Germany).