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Sponges (Porifera: Demospongiae) recorded at the South Shetland Islands and near the Antarctic Peninsula during the Argentinian Summer Antarctic Expedition in 2012

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Introduction

Sponges are one of the most important components of the marine benthic Antarctic communities, specially in particular regions. They offer shelter and protection to a great variety of small organisms, from prokaryotic and eukaryotic unicellular organisms to small fish, polychaetes, mollusks, and crustaceans. Comprising more than 8553 species, Demospongiae Class is by far the largest within the phylum Porifera. From Antarctic and adjacent seas, currently, more than 352 species were reported and this number is expected to be even larger due to other recent discoveries. Since the 19th century, several scientific expeditions have been developed in different regions of Antarctica , nevertheless there are still some areas unsatisfactory sampled that will probably add further data in regards to biodiversity, abundance and distribution of antarctic sponges.

For the mentioned reasons, the aim of this work is to contribute to the knowledge on the distribution and biodiversity of sponge species in areas of the Antarctic Peninsula and neighbouring islands.

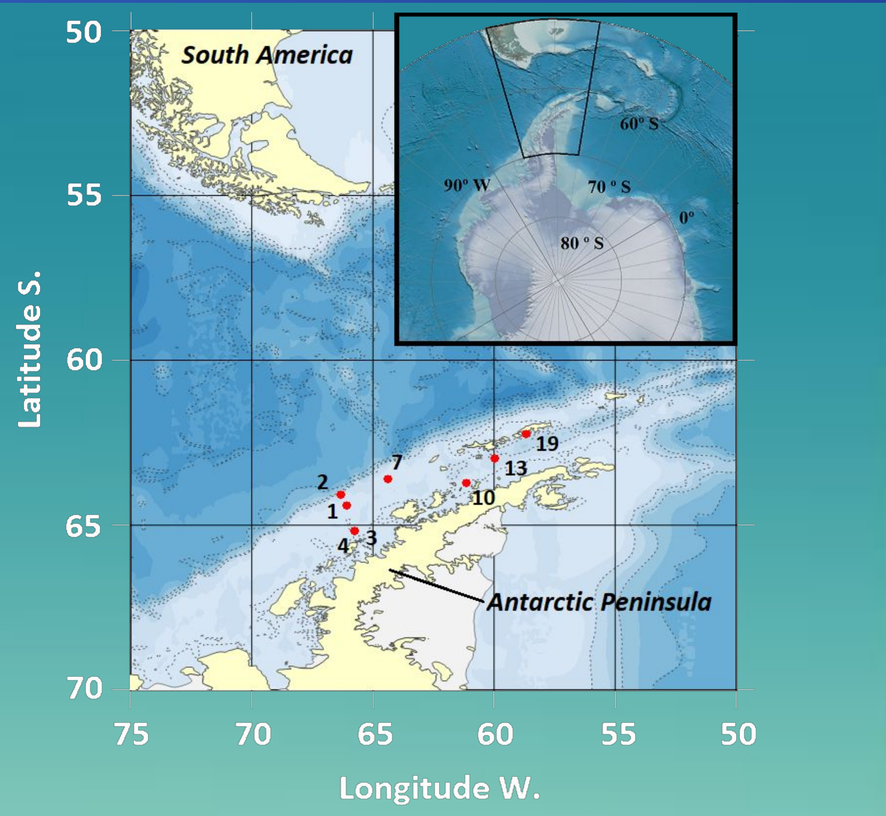

Figure Reference: Area of study and sampling stations.

Table References: Location of the sampling sites and sponge species recorded during the present study.

Station	LAT (S)	LONG (W)	Depth (m)	Recorded Taxa
1	64º 24.740’	66º 05.420’	327	*Calyx* cf. *arcuarius*
2	64º 53.639’	66º 20.000’	404	*Raspailia (Hymeraphiopsis) hentscheli, Haliclona* sp.
3	65º 10.297’	65º 44.207’	187	*Mycale (Oxymycale) acerata, Haliclonissa verrucosa*
4	65º 11.134’	65º 45.827’	196	*Hemigellius* cf. *pilosus, Lissodendoryx (Ectyodoryx) anacantha, Microxina charcoti, Clathria (Axosuberites) nidificata, Mycale (Oxymycale) acerata, Lissodendoryx (Ectyodoryx) ramilobosa*
7	63º 36.182’	64º 21.809’	355	*Isodictya* cf. *verrucosa, Lissodendoryx (Ectyodoryx) anacantha*
10	63º 43.092’	61º 07.402’	142	*Kirkpatrickia* aff. *coulmani, Mycale (Oxymycale) acerata, Isodictya lankesteri, Tedania charcoti, Myxodoryx hanitschi, Phorbas acantochela, Lissodendoryx (Lissodendoryx) flabellata, Artemisina apollinis, Phorbas glaberrimus, Myxilla mollis, Iophon unicorne*
13	62º 59.310’	59º 57.246’	989	*Mycale (Mycale)* cf. *tridens, Iophon* cf. *aceratum, Iophon unicorne*
19	62º 13.873’	58º 39.919’	43	*Isodictya erinacea, Mycale (Oxymycale) acerata*

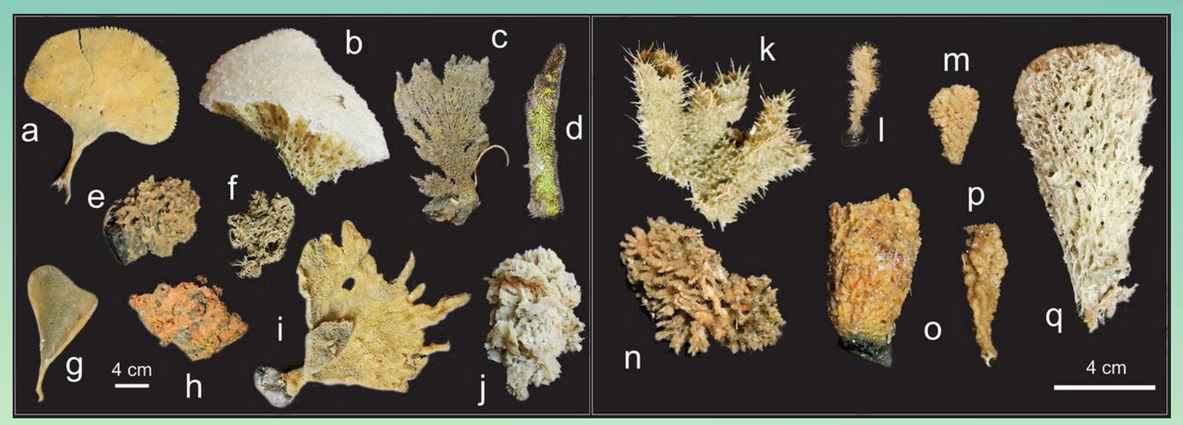

Figure References: Photographs of some of the several sampled species. a) *Isodictya lankesteri;* b) *Mycale (O.) acerata*; c) *Kirkpatrickia* aff. *coulmani*; d) *Isodictya erinacea*; e) *Tedania charcoti*; f) *Mycale (M.)* cf. *tridens*; g) *Calyx* cf. *arcuarius*; h) *Artemisina apollinis*; i) *Lissodendoryx (L.) flabellata*; j) *Haliclonissa verrucosa*; k) *Microxina charcoti;* l) *Raspailia (H.) hentscheli*; m) *Lissodendoryx (E.) anacantha*; n) *Clathria (A.) nidificata*; o) *Myxodoryx hanitschi*; p) L*issodendoryx (E.) ramilobosa*; q) *Hemigellius* cf. *pilosus*.

General conclusions

A total of 34 samples were collected and at least 24 species were identified. The most represented Order was Poecilosclerida with 18 species, followed by Haplosclerida with 5 species. The most frequently recorded species was *Mycale (Oxymycale) acerata* reported in 50% of the sampled sites followed by species of the genus *Isodictya* and *Lissodendoryx*. Furthermore, stations 4 and 10 presented the highest richness sponge fauna compare to others.

Some of the recorded species such as *Phorbas glaberrimus, Myxodoryx hanitschi, Phorbas* cf. *acanthochela*, *Raspailia (Hymeraphiopsis) hentscheli* have only scarce records in this region and the species *Kirkpatrickia* aff. *coulmani* was not reported previously in our study area. The results of this study greatly contribute to the knowledge on the distribution and biodiversity of Antarctic sponges, a very important component of the benthic communities.