

# The Bellingshausen Sea epibenthos: A desert in the High Antarctic?

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In contrast to the Weddell and Ross seas, where a lot of surveys have been carried out, the marine benthic fauna of the third large Antarctic sea, the Bellingshausen sea, have remained virtually unknown until nowadays. Thanks to two Spanish research programmes named 'BENTART-2003' and 'BENTART-2006', it has been finally observed that the epibenthos along the Bellingshausen sea is scarce and its composition different to those of other High Antarctic marine areas.

Only 64 kg wet weight and 14,500 individuals of benthic invertebrates were collected on the Bellingshausen sea and also on the seafloor around Peter I island by using 34 Agassiz trawls at depths between 86 and 3,310 m.

The results showed low biomasses around 5–6 kg by station.

## FAUNISTIC COMPOSITION

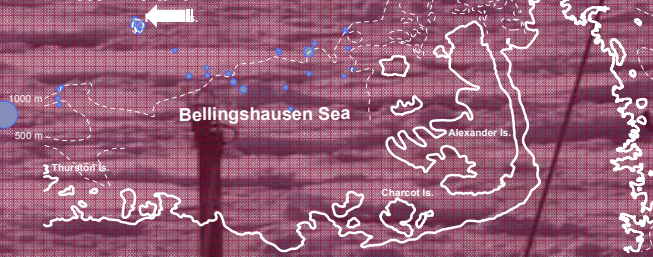
Vagile megabenthos, mainly demersal fishes (35,1%), asteroids (27,2%) and holothuroids (10,3%), dominate the biomass, while the sea urchin *Sterechinus spp.* (21%) and other incrustant bryozoans, *Aspericreta crassatina* and *Exochella hymanae* (40%) (López-Fé, 2005), are numerically dominant.

**ONLY 64 kg at 34 stations!!!**

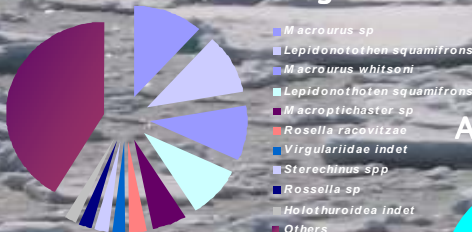
**Biomass (gr/st)**



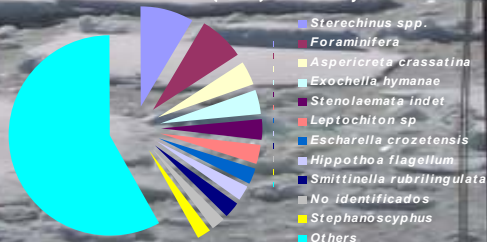
Peter I Island



**Biomass = 64 kg**

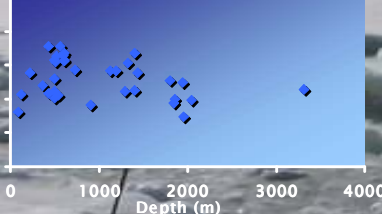


**Abundances (Nb) = 14,500 ind.**

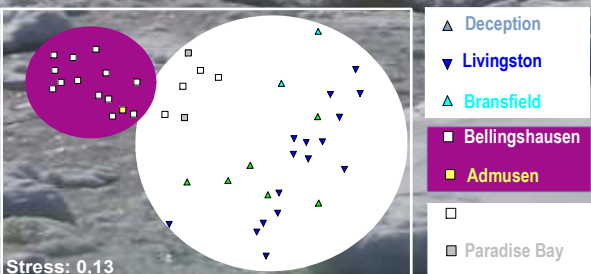
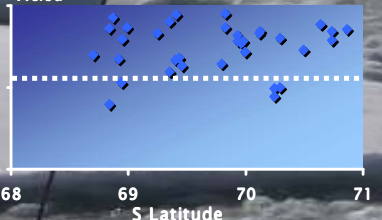


Nevertheless, the macrobenthos seems constituted by more than 600 species and Shannon (1,48–3,88) and Pielou (>0,5) indexes are quite high, indicating an equilibrated abundances distribution.

**Shannon**



**Pielou**



MDS plot (stress=0.13) showing similarities among the macrobenthic fauna from Deception Is., Livingston Is., Bransfield Strait, Peter I Is., Paradise Bay and Antarctic Peninsula (right st, white) and Bellingshausen and Admussen Seas (left st, purple) (Ramos *et al.*, 2003).

Environmental conditions in West Antarctic sea, are characterized by soft bottoms, high sedimentation rates and low primary production (excepting in coastal zones <100 m, (Sáiz-Salinas *et al.*, 1997; Arnaud *et al.*, 1998). This benthic situation is different to those reported from the Weddell and Ross seas, where dense tridimensional communities of long-lived filter-feeders have been described.

## REFERENCES

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