**TITLE: AtlantECO [WP2] – UVP5 casts dataset –** **Zooplankton major groups (abundance, biovolume and biomass; Imaging)**

**1.- INTRODUCTION**

This dataset is based on UVP casts performed at 37sampling stations around the Vitória Trindade Seamount Chain (Brazil), during “Ilhas” cruise. Data on abundance, biovolume and biomass of zooplankton are provided, and images obtained in the casts can be accessed in EcoTaxa platform (Project “Uvp5\_sn200\_ilhas\_2017\_filtered\_vignettes”).

**2.- METHODOLOGY USED**

The Ilhas cruise took place onboard the RV Alpha Crucis in the summer of 2017 (from January 27 to February 16). Zooplankton images were recorded *in situ* in vertical profiles performed in different depths, using a UVP5 (Picheral et al., 2010). The maximum sampling depth varied from 45 and 2894 m. A total of 197803 images (> 600 µm) were acquired, uploaded to EcoTaxa (<https://ecotaxa.obs-vlfr.fr/>; Lombard et al., 2019; Picheral et al., 2017) and sorted into zooplankton major groups. The number of occurrences of zooplankton major groups (Rhizaria, Cnidaria, Polychaeta, Copepoda, Eumalacostraca, Ostracoda, Echinodermata, Chaetognatha and Ctenophora) was recorded by 5-m depth to calculate the abundance (ind.m-3). The individual biovolume of organisms was measured based on the cross-sectional area of images (Drago et al., 2022):

with

The individual biomass of organisms was calculated based on specific allometric equations that also used the cross-sectional area and biovolume of zooplankton (Beers et al., 1970; Michaels et al., 1995; Marcolin et al. 2015 (a compiled from Beers (1966), Hernández‐León and Montero, (2006), Davis and Wiebe (1985)). The biovolume (mm3.m-3) and biomass (µg C m-3) were estimated per taxa by 5-m depth for each sampling station. Figures with the most abundant groups can be find below.

**3.- DATASET DESCRIPTION**

**Data type:** abundance (ind.m-3), biovolume (mm3.m-3) and biomass (µg C m-3) of zooplankton.

**Latitude/Longitude format:** WGS 84 (-180°E/+180°E).

**Geographic area covered by the dataset:** Western South Atlantic (19°- 21°S and 28°- 38°W).

**Depth range covered by the dataset:** From 0 to 2894 m.

**Time period covered by the datase t:** From 27-01-2017 to 16-02-2017.

**Dataset format:** .xlsx file.

**Date of dataset creation:** 14-09-2022.

**Raw dataset repository:** Zenodo.

**4.- MAIN VARIABLE DESCRIPTION**

MeasurementTypeID: Has not been defined within AtlantECO.

MeasurementValue: abundance (ind.m-3), biovolume (mm3.m-3) and biomass (µg C m-3).

MeasurementID: Has not been defined within AtlantECO

occurrenceID: Combination of decimalLatitude, decimalLongitude, Day, Month, Year, Depth, MinDepth, MaxDepth, ScientificName, MeasurementValue.

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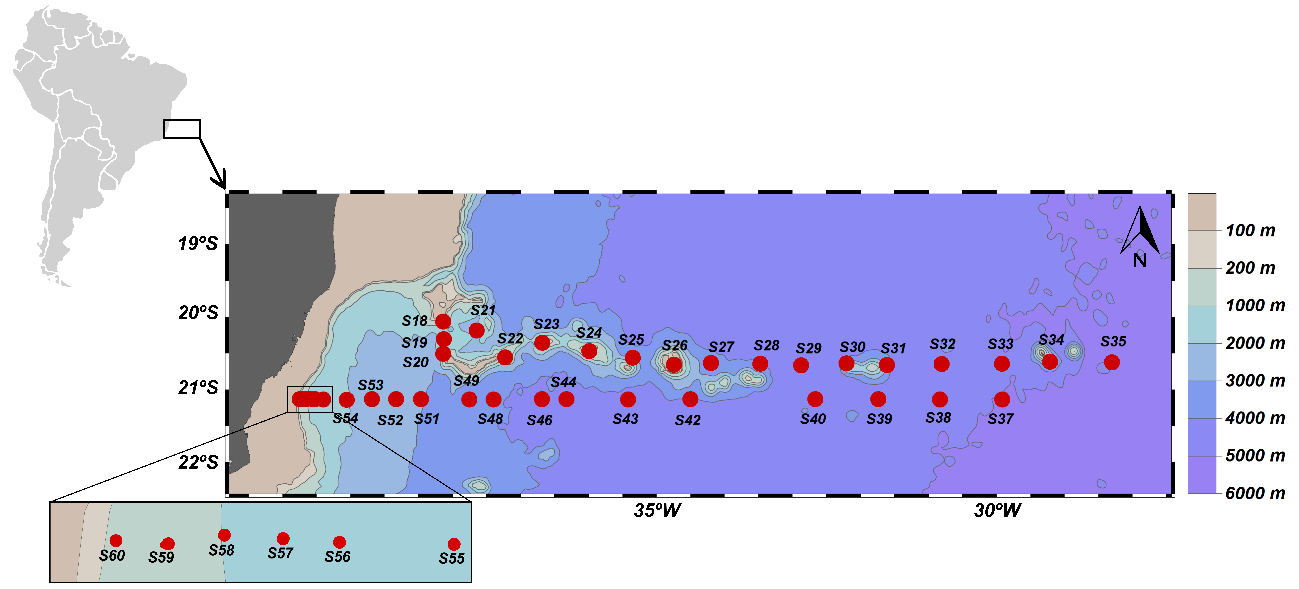


Figure 1 - Sampling stations along the Vitória Trindade Seamount Chain (Western South Atlantic).

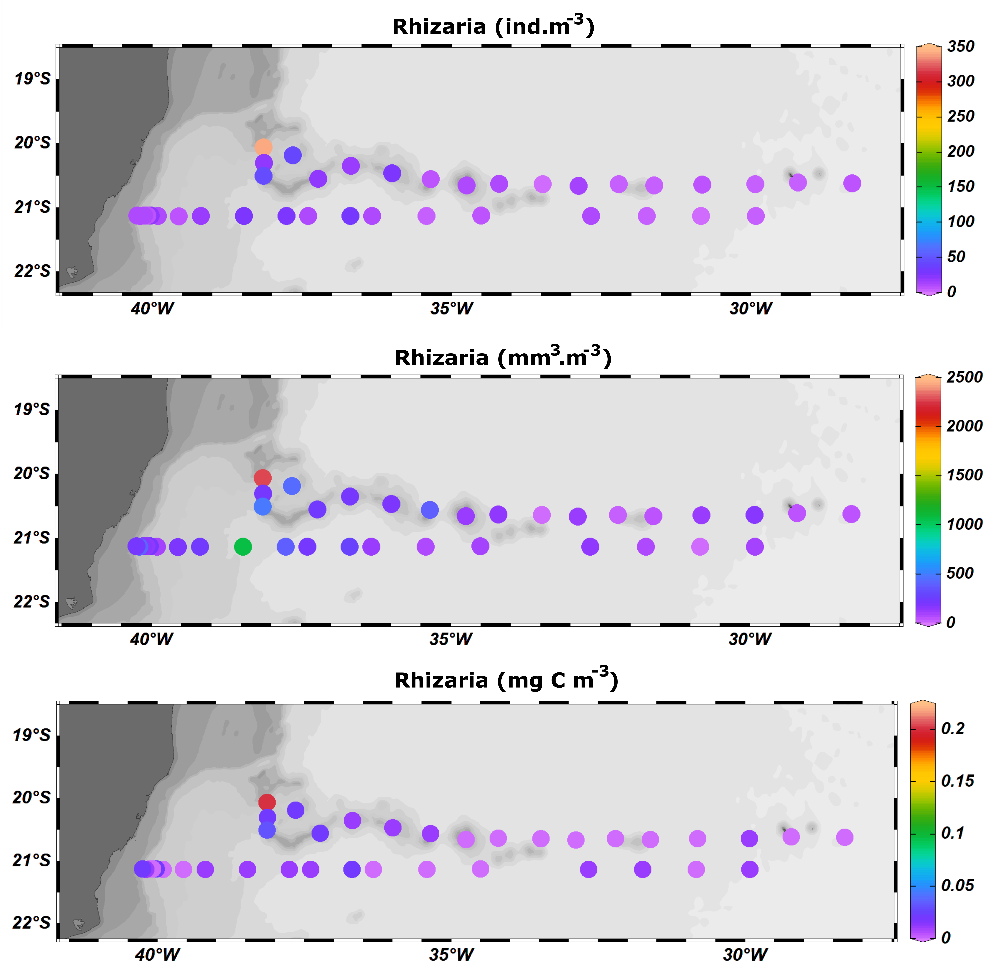


Figure 2 – Means of abundance, biovolume and biomass of Rhizaria in the first 150 m of depth.

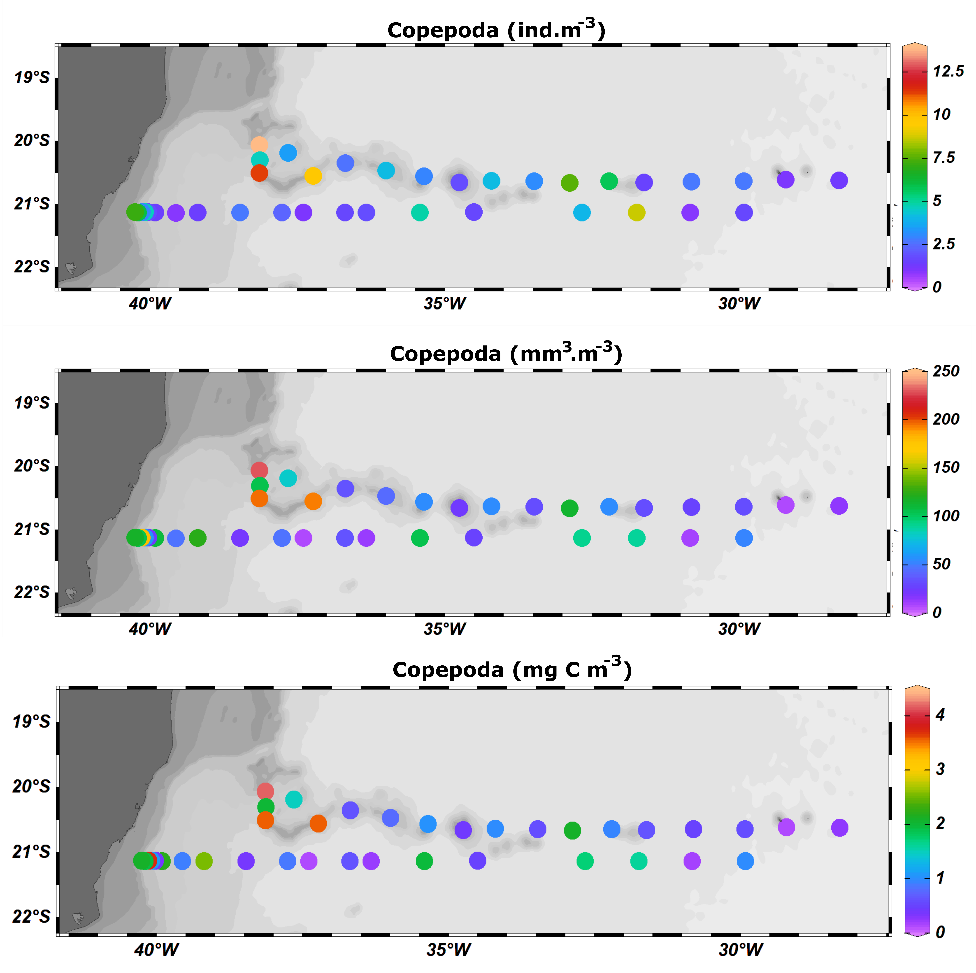


Figure 3 – Means of abundance, biovolume and biomass of Copepoda in the first 150 m of.

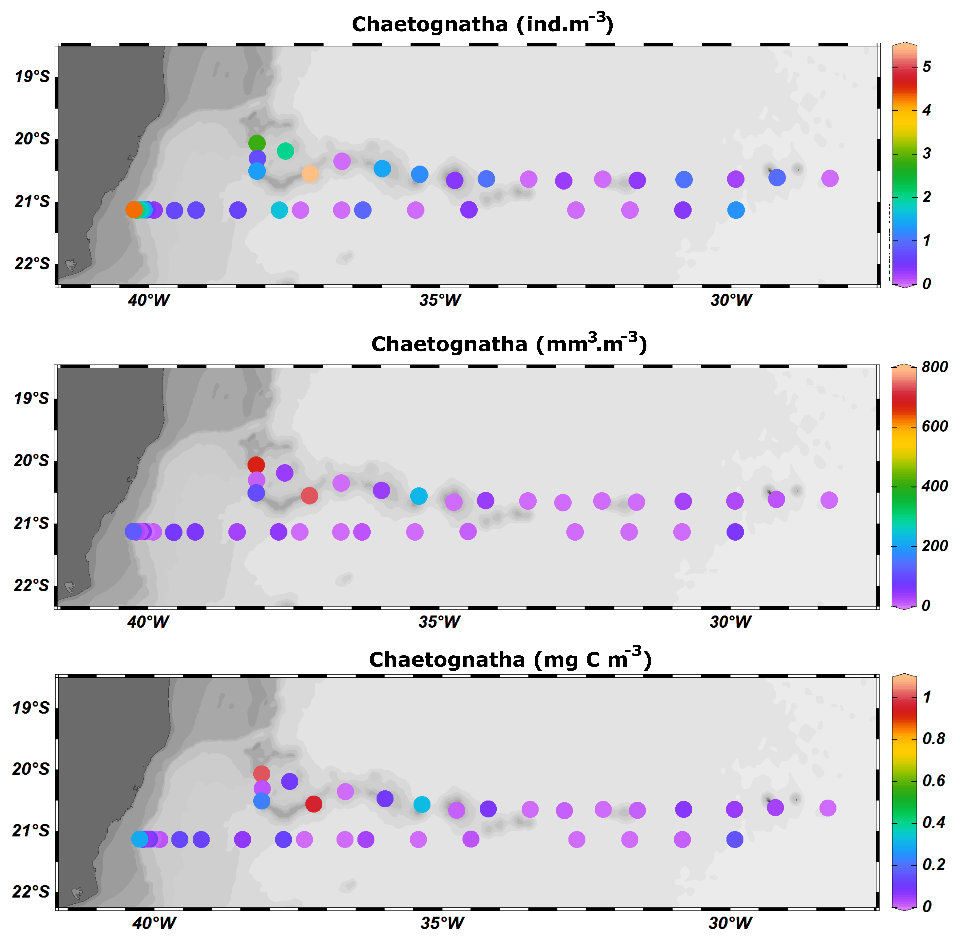


Figure 4 – Means of abundance, biovolume and biomass of Chaetegnatha in the first 150 m of depth.

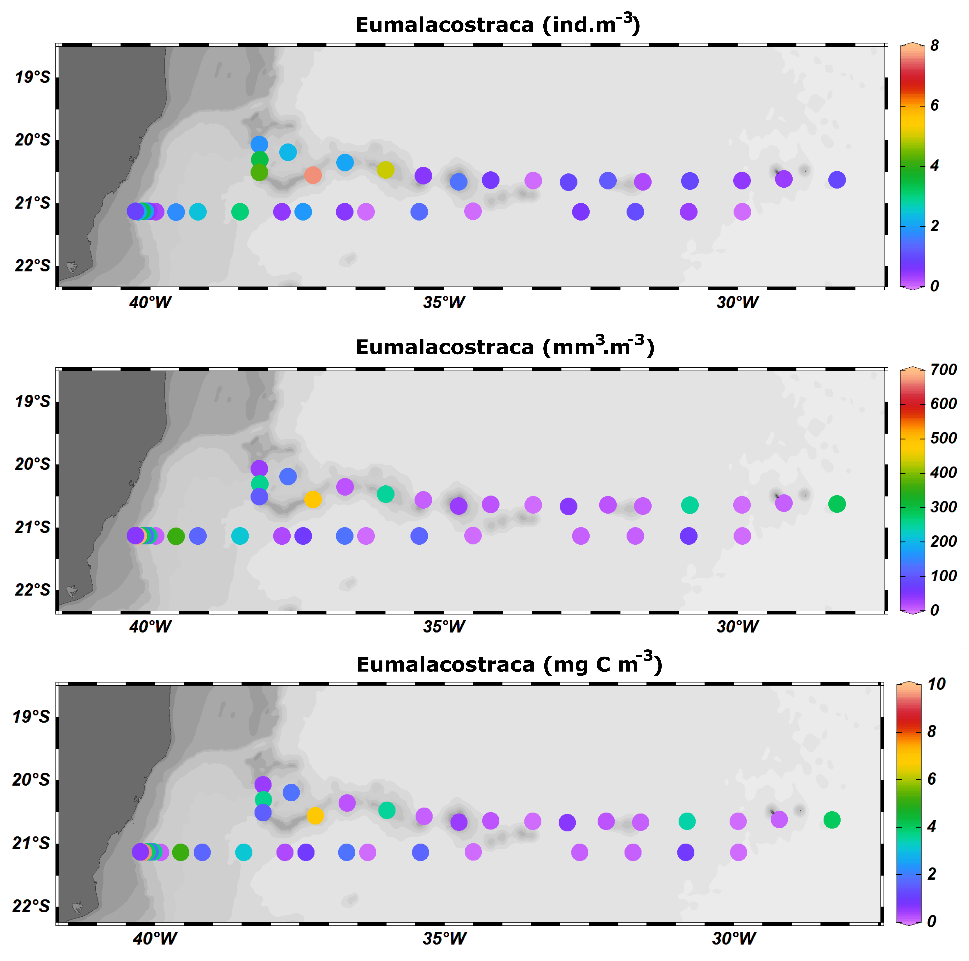


Figure 5 – Means of abundance, biovolume and biomass of Eumalacostraca in the first 150 m of depth.

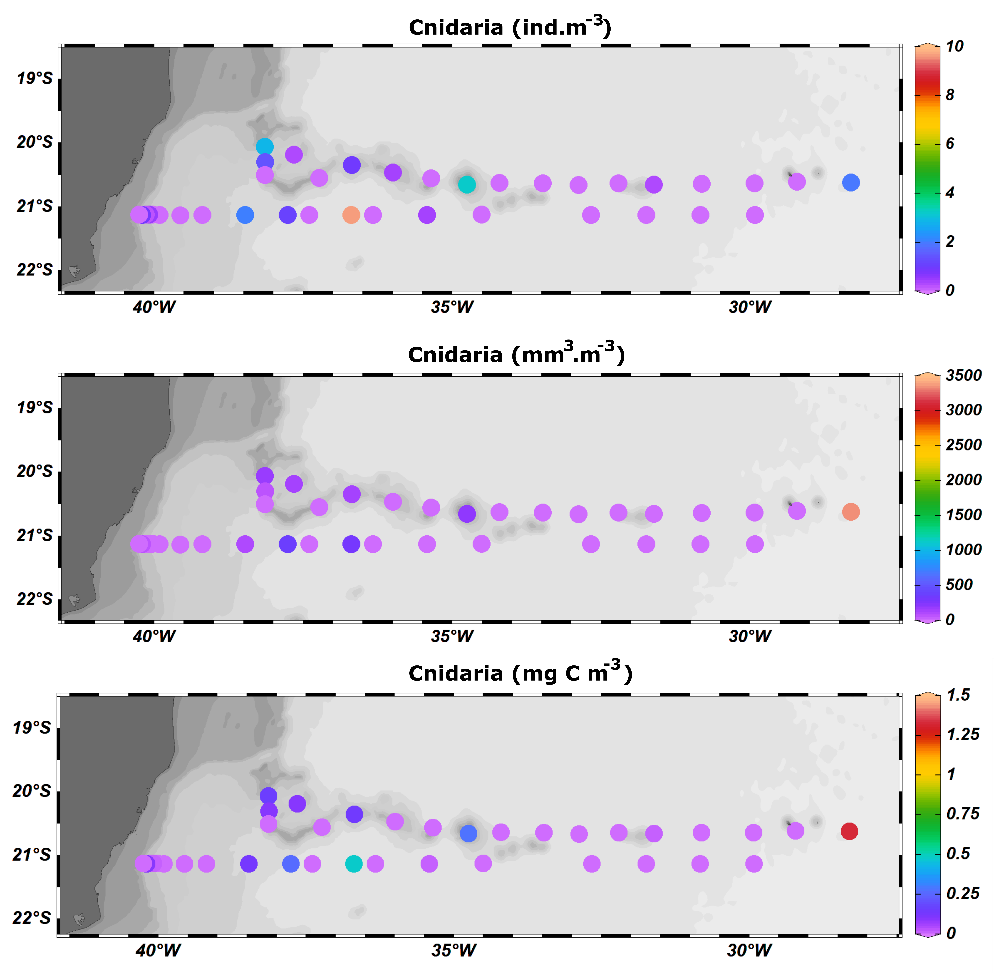


Figure 6 – Means of abundance, biovolume and biomass of Cnidaria in the first 150 m of depth.

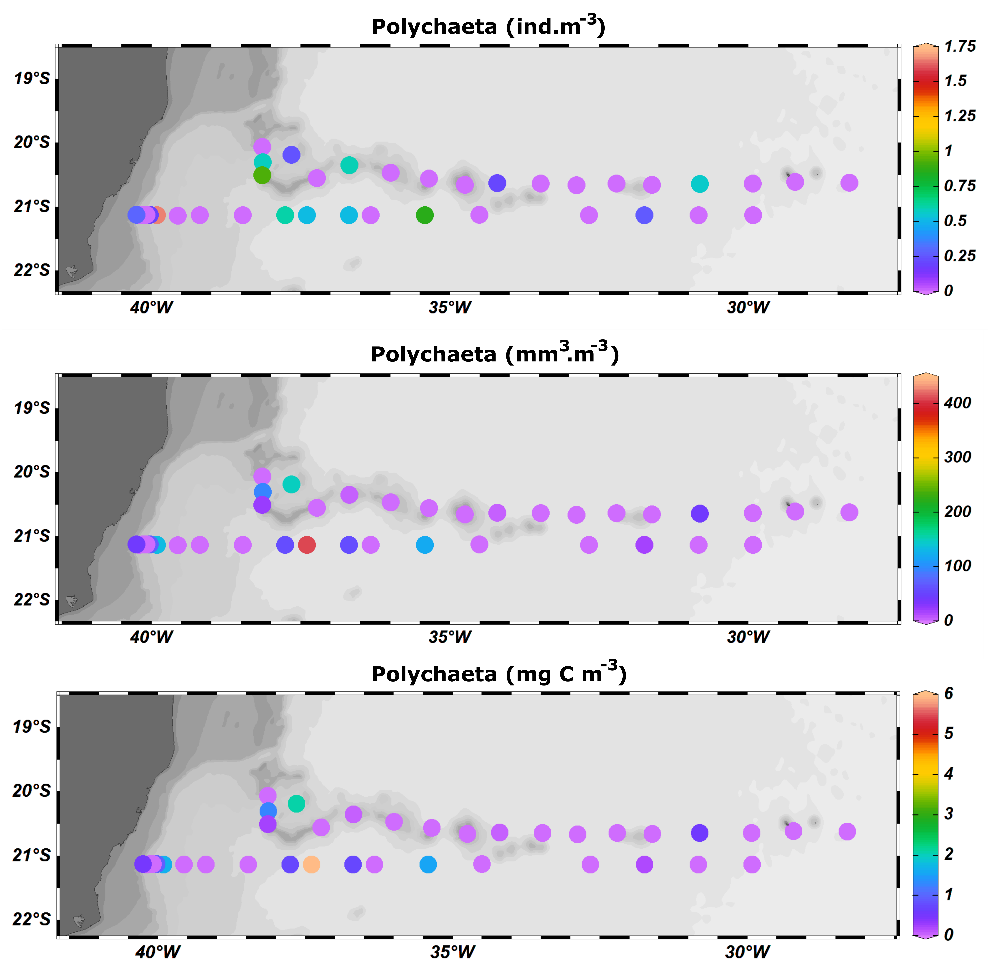


Figure 7 – Means of abundance, biovolume and biomass of Polychaeta in the first 150 m of depth.

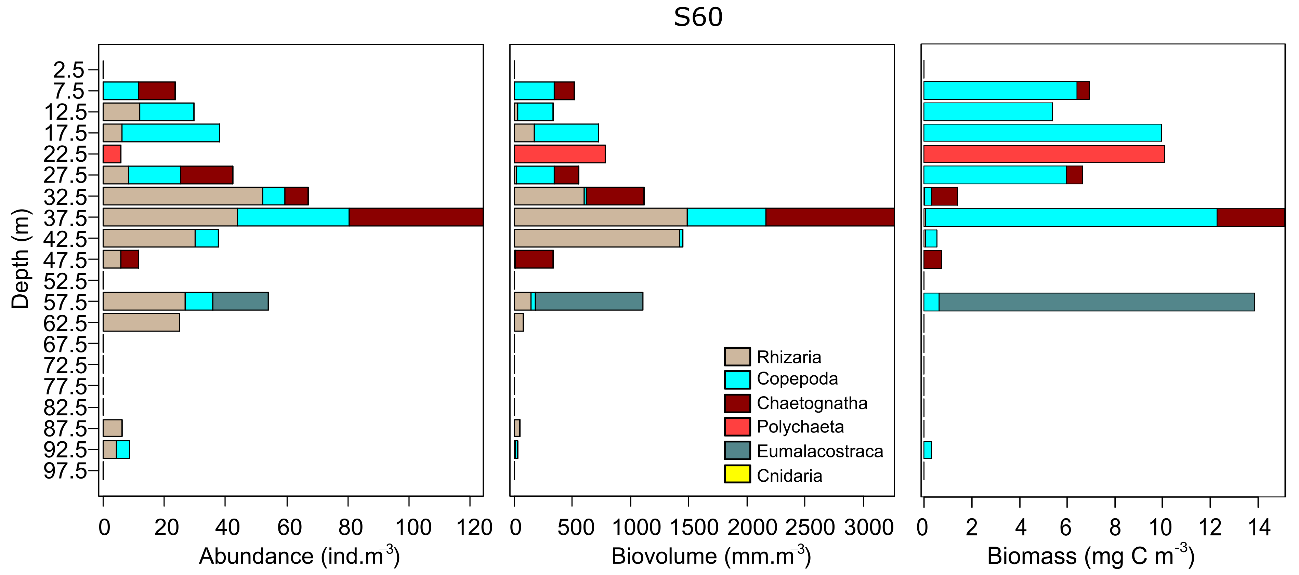
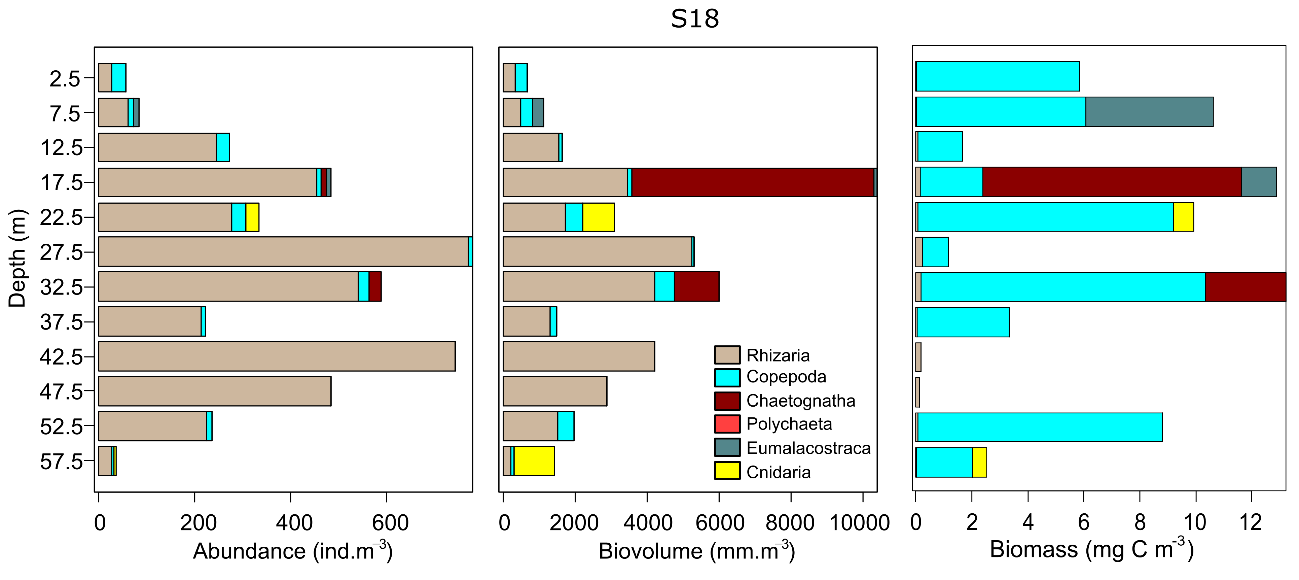


Figure 8 – Vertical profiles of abundance, biovolume and biomass of zooplankton major groups at the station S60.

Figure 9 – Vertical profiles of abundance, biovolume and biomass of zooplankton major groups at the station S18.

**6.-REFERENCES**

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