

**BDEE**  
**2021**

# The 1st International Electronic Conference on Biological Diversity, Ecology and Evolution

15–31 MARCH 2021 | ONLINE

Chaired by **PROF. DR. MICHAEL WINK**



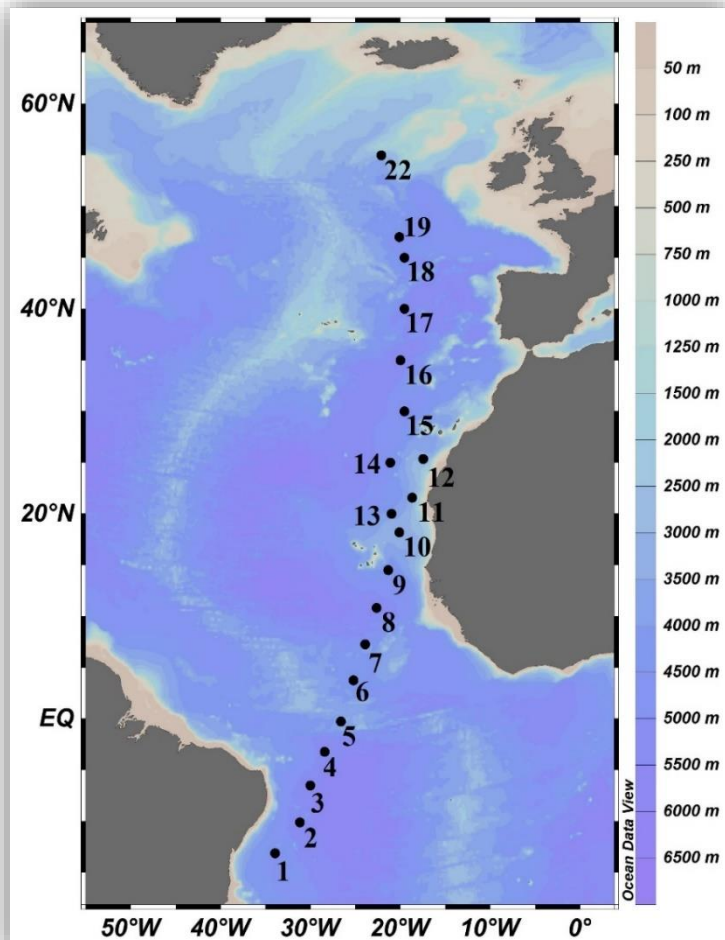
**Javier Díaz Pérez**

Universidad de Las Palmas de Gran Canaria

[javierdiazperez.96@gmail.com](mailto:javierdiazperez.96@gmail.com)



# Variability of micronektonic crustacean community along a latitudinal Atlantic transect: implications for carbon export



Study area

## Material and methods

### Mesopelagos net

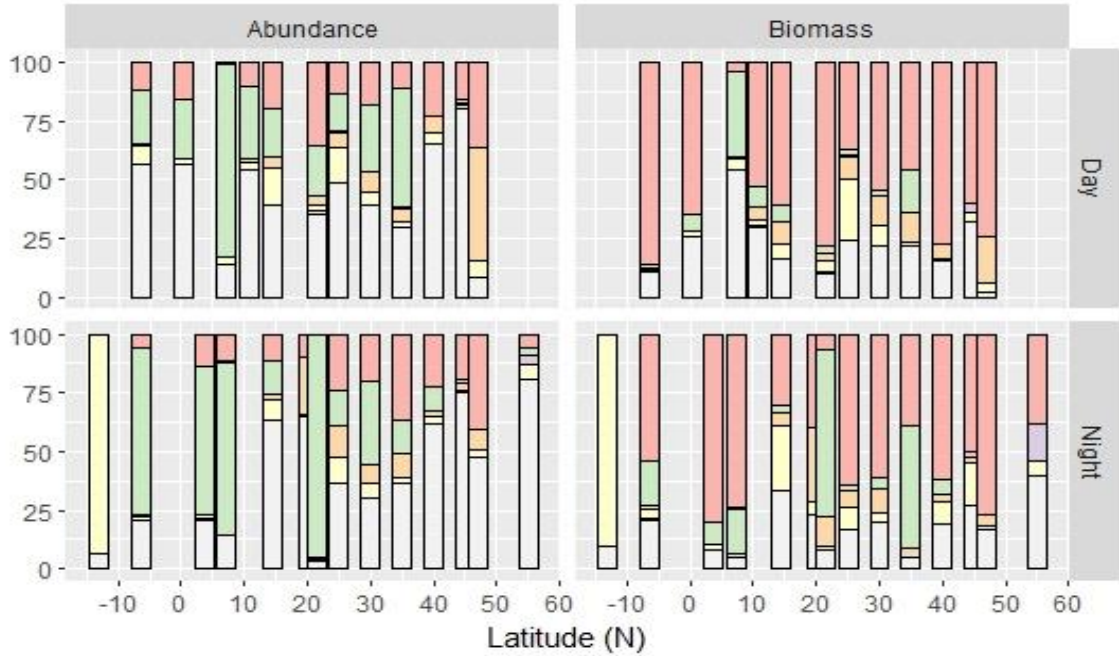
Day/night samples

Different depth layers

### CTD

- $T_{\theta}$
- Conductivity
- Pressure
- Dissolved Oxygen
- Fluorescence

# Results and discussion



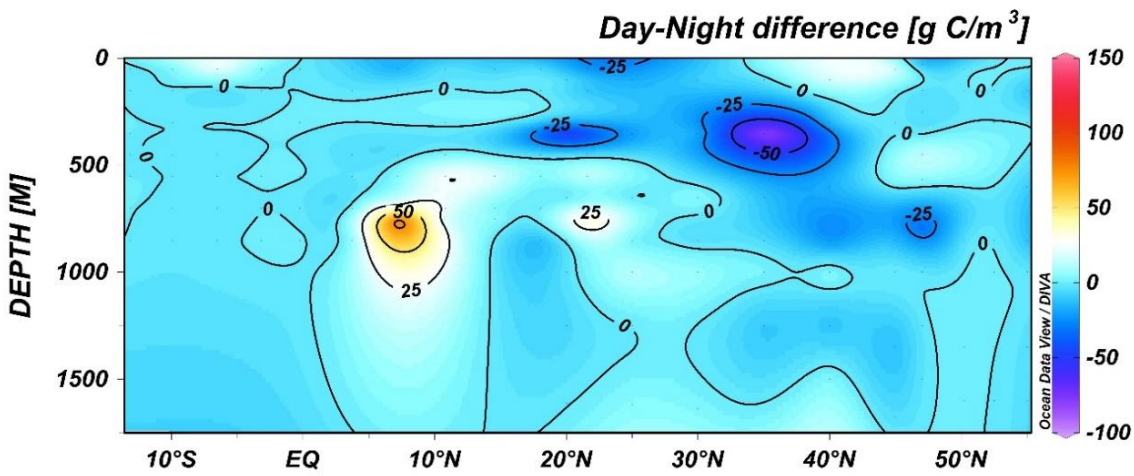
- Acanthephyridae, Euphausiacea and Sergestidae represent more than 90% of abundance in all stations

- Acanthephyridae represent the majority of the biomass.

- Benthescymidae, Pandalidae and Gnathophausiidae were only present in some stations.



158 million tC  
(133.6 millions tC belong to decapods)



# Conclusions

- Abundance and biomass was distributed following the chlorophyll pattern. The hydrological structure and productivity have an important effect on the community structure observed.
- Overall, Euphausiidae and Sergestidae were the most abundant micronektonic crustaceans, and they were observed in all stations, also showing higher values in productive areas. Acanthephyridae was the family with the highest biomass values, due to the higher body weight.
- Regarding vertical distribution, we identified the diel vertical migration pattern, where organisms are segregate along the water column related with the organism size. We identified one OMZ, where there was a maximum of biomass.
- We estimated a total of 158 million tC of decapods, lophogastrids and euphausiids, of which 133.6 million tC belong to decapods biomass, in the Atlantic Ocean. This estimation indicated that the total biomass of shrimps has been grossly underestimated, and therefore their role as key element of the biological pump.



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