Poster Session 01: Ciguatera and Benthic HABs
P-046

Hotspots and hideouts: Comparative study of the annual cycle of *Ostreopsis* spp. blooms in NW Mediterranean and in El Hierro (Canary islands)

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The biogeographic expansion of the genus *Ostreopsis* in the 21st century raises questions about the environmental and ecological factors supporting its proliferation. To explore them, we conducted a comprehensive year-round study (starting in February 2024) in three contrasting environments: i) the hot spot of Sant Andreu de Llavaneres, in the NW Mediterranean Sea, where recurrent high biomass blooms occur; ii) La Restinga Harbour (semiconfined and anthropogenically affected harbor) and iii) the Charco Manso (a pristine, wave exposed rocky area), these last two being in the NE subtropical Atlantic Ocean Island of El Hierro.
In El Hierro Island, *Ostreopsis ovata, O. fattorussoi,* and *O. lenticularis* were nearly absent in the pristine site, with well-structured and highly diverse macroalgal communities that exhibited clear spatial organization and strong seasonality.
In contrast, *Ostreopsis* spp bloomed at intervals in La Restinga in June 2024 and from February to April 2025, with maximum concentrations of $3x10^6$ cell gFW^{-1}, within the same range attained in the NW Mediterranean site.
Unlike the summer-restricted blooms of *O. ovata* in the Mediterranean, no direct link with temperature was observed in La Restinga. In these two sites, *Ostreopsis* spp. were epiphytes of turf and disrupted macroalgal communities, dominated by a few opportunistic and ephemeral groups.
At microbial community level, we are analyzing the diatom species (by metabarcoding), cyanobacteria and bacteria potentially involved in biofilm formation, as well as the capacity of the whole microbenthos to act as a carbon source or sink by measuring the respiratory activity.

Keywords: *Ostreopsis*, bHABs, ecology

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