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( $p < 0.0001$ ). 88 *M. galloprovincialis* showed no sign of predation. No preference for prey size was observed. Our results suggest that, in its natural habitat, large *H. trunculus* can handle all sizes of *M. galloprovincialis*. In the lab, *H. trunculus* can feed without interruption or exposure to its own predators, and may choose a slower but safer mode of attack (drilling). In situ, however, *H. trunculus* prefers a faster, albeit more dangerous mode of attack (chipping), perhaps as a behavioural defence against susceptibility to its own predators.

P3.37

### Impact of temperature and salinity on *Mnemiopsis leidyi* respiration and excretion rates

Sommer F

Following its first record in autumn 2006, the invasive combjelly *Mnemiopsis leidyi* has spread throughout the entire Baltic Sea. One reason for this rapid range expansion may be its physiological tolerance to environmental variations in salinity and temperature which are characteristic of both its indigenous habitat along the Atlantic West coasts and the Baltic Sea. I determined the respiration and excretion rates of field-collected, laboratory-acclimated individuals under a wide range of experimental conditions (T: 5 to 20°C; S: 10 to 30 psu). I found a strong positive effect of temperature with Q10 values similar to prior findings of *M. leidyi* populations in their indigenous Atlantic West coast habitats. This allows this species to reduce metabolic demand during winter and proliferate in warm summer conditions. However, I found no impact of salinity which demonstrates that, at least after an initial acclimation phase, *M. leidyi* suffers no salinity stress within the tested salinity range.

P3.38

### The algal flora of the Azores - a historical and biogeographical approach

Terra MR, Wallenstein FM, Nogueira EM, Neto AI, Tittley I

Studies on macroalgal communities of the Azores have only started in the beginning of the 20th century and were sparse until the creation of a marine phycology group within the University of the Azores ca. 15 years ago. Since then, ecological studies have focused on macroalgal communities of the Azores, and gradually improved knowledge on this subject. After the first phycological qualitative studies, prior to 1931 the algal flora of the Azores started off with a record of a total of 138 species and has reached now a total of 478 species, of which 11 are cyanobacteria, 78 greens, 83 browns and 306 reds. Geographically the Azores present a great affinity with the floras of the other Macaronesian archipelagos (Madeira, Canary Islands and Cape Verde). Nevertheless, there is also some geographical affinity with northern temperate floras and southern tropical ones, and also with remote places such as Australia. In the latter case introduced and invasive species play a major role. The present study reports the evolution in the flora over the years, and its affinity with other floras.

P3.39

### Effect of exposure time on the bioaccumulation of Cd, Mg, Mn and Zn in *Cystoseira abies-marina* samples subject to shallow water hydrothermal activity in São Miguel (Azores)

Torrão DF, Wallenstein FM, Neto AI, Wilkinson M, Rodrigues AR

Shallow water hydrothermal vents can be compared to polluted places due to high concentrations of heavy metals, and are thus good models for bioaccumulation studies. The present study intended to estimate the time of exposure required for the accumulation of certain elements to stabilize in specimens of *Cystoseira abies-marina*, to be used as reference in future work. *Cystoseira abies-marina* intertidal specimens were transplanted from Mosteiros (a non-hydrothermal and pristine site) to Ferraria (with hydrothermal activity) and left there. Transplanted samples were collected after 1, 2, 4 and 8 weeks and the concentration of Cd, Mg, Mn and Zn were measured through Flame Atomic Absorption Spectrophotometry. Although further studies with increased periods of exposure are needed because the concentration of these elements never stabilized in the collected samples, there is strong evidence that increased time of exposure lead to increased concentration of Cd, Mg, Mn, but not for Zn. These results are consistent with the assumption that *Cystoseira abies-marina* is bioaccumulating some of the heavy metals and can thus be a good indicator for polluted waters.

P3.40

### Macroalgal turfs in the Azores

Wallenstein FM, Terra MR, Pombo JT, Neto AI

Plenty of studies on macroalgae communities from the Azores report algal turfs as one of the most conspicuous ecological entities occurring on the rocky shores of these islands. Turfs are generally described as mats of algae covering rocky surfaces. However, their composition and structure are highly variable and reflect the height on the shore at which they occur and the type of substratum that they cover. The present study was implemented to analyse the influence of shore height and substratum on turf composition. Macroalgal turf samples were collected on three islands (Santa Maria, São Miguel and Graciosa). Sites were selected to cover the three main substratum categories that occur on these islands (cobbles, boulders and bedrock). At each site samples of different types of turf were collected at high, mid and low shore. Samples were brought to the laboratory for species identification, and a semi-quantitative scale (DAFOR) used to define the abundances of the constituent species. Differences between turfs collected at different shore height and/or substratum categories were tested with the software PRIMER.

P3.41

### Floristic composition of Azorean littoral rock-pools

Xavier ED, Neto AI

The islands of the Azorean archipelago are of volcanic origin (mainly basalt) usually presenting a very irregular profile, thus the coastal region rarely presents gentle slopes