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Benthic foraminiferal preferences for macroalgal habitats: implications for coastal warming

Sneha Manda¹, Danna Titelboim⁵, Sarit Ashckenazi-Polivoda², Ahuva Almogi-Labin³, Barak Herut⁴, and Sigal Abramovich¹

¹Ben Gurion University of the Negev, Faculty of Natural Sciences, Earth and Environmental Sciences, Be'er Sheva, India (manda@post.bgu.ac.il)

²Dead Sea and Arava Science Centre, Masada National Park, Israel

³Geological Survey of Israel, Jerusalem, Israel

⁴Israel Oceanographic and Limnological Research, Haifa, Israel

⁵Department of Earth Sciences, University of Oxford, UK

Considering the thermal limits of coastal macroalgae habitats in the Eastern Mediterranean, it is important to study the response of the associated meiofauna in order to better understand the expected feedback of ecosystems to future warming. In this study, we characterized the benthic foraminiferal assemblages of two common types of macroalgae habitats (Turf and Coralline algae) along the Mediterranean coast of Israel. Our study is based on a one-year ecological monitoring of a thermally polluted station, representing near future warming, and an undisturbed environment.

Our results show that most foraminifera species show a preference for specific macroalgal habitat. The existence of the common foraminifera species is not threatened by the expected disappearance of Coralline algae habitats. However, their community structure will be impacted. Interestingly, the species that exhibited high abundances on Coralline algae are highly thermally tolerant, thus this association might reduce their proliferation with warming.