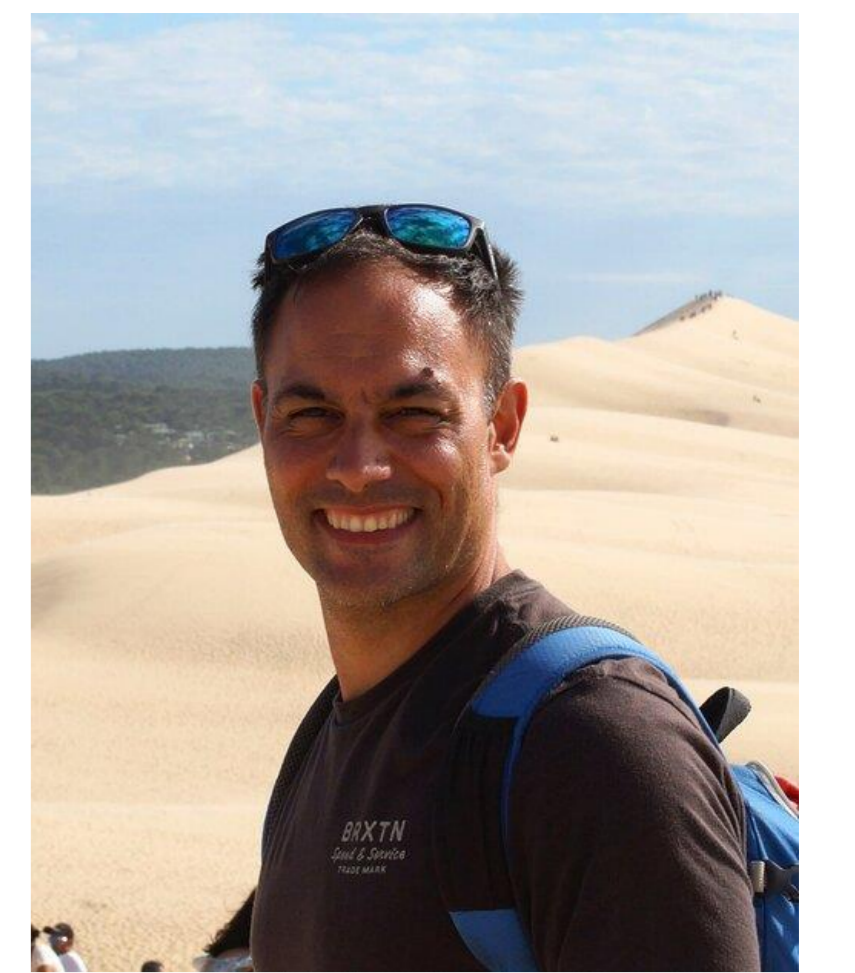


Long term zooplankton community redistribution in response to ocean warming across the North Atlantic and Mediterranean Sea



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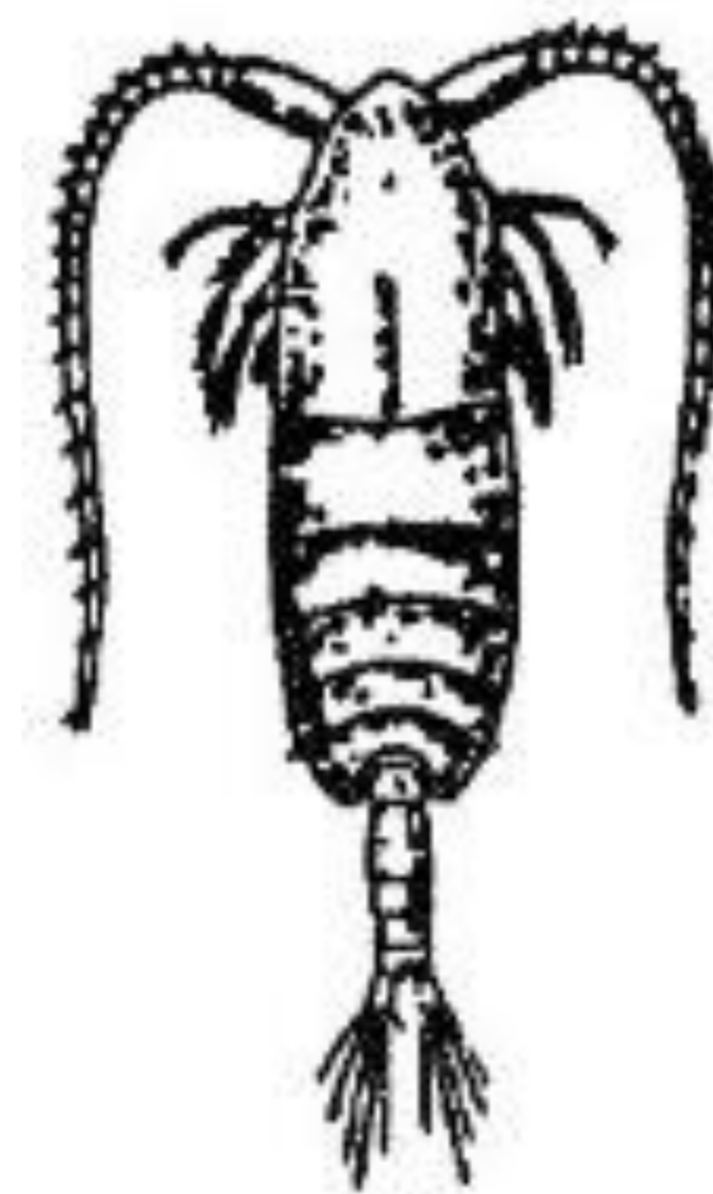
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1. Background



As ocean warms, species are shifting poleward and subtropical and tropical species are colonizing temperate environments.

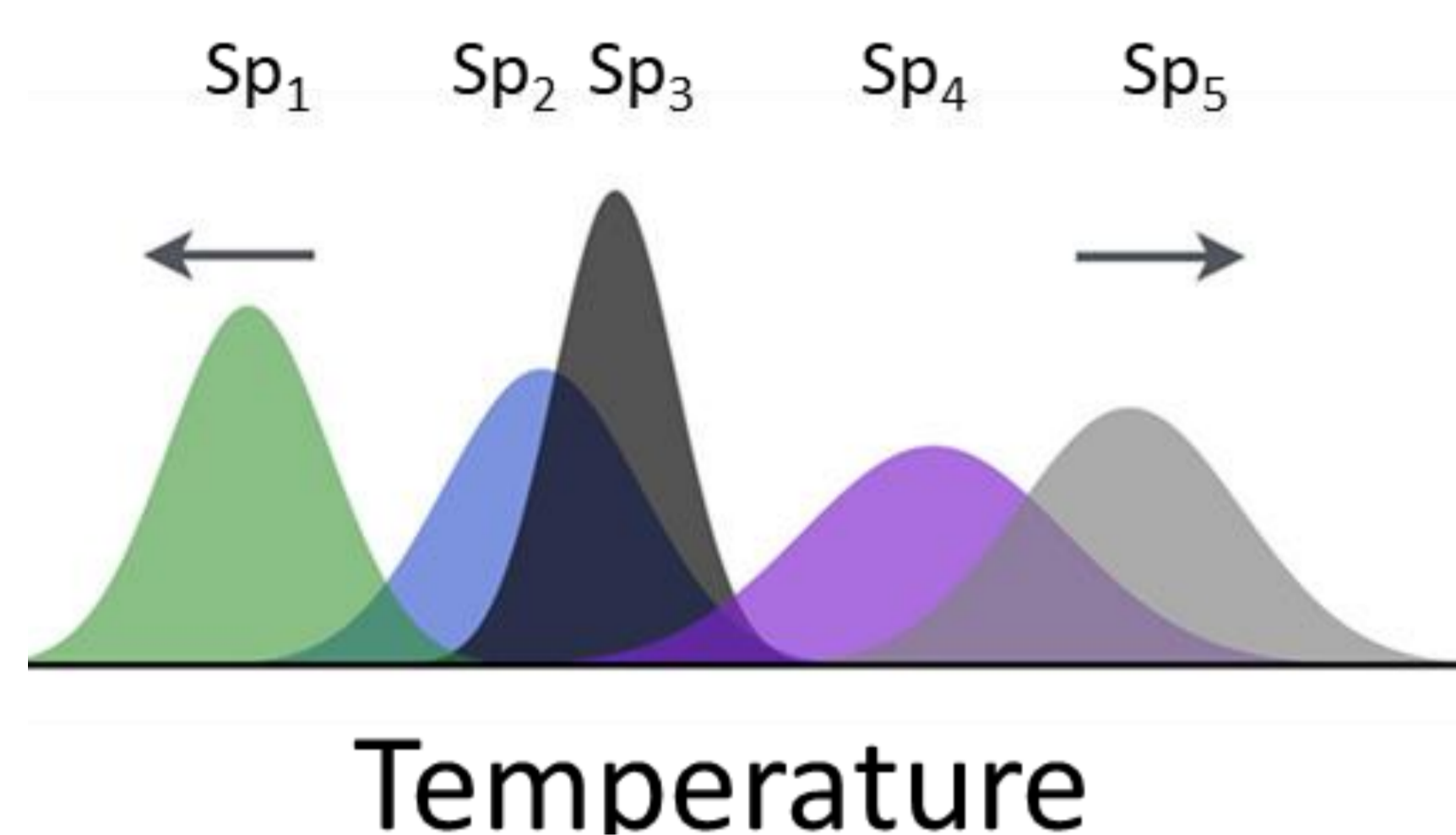
2. Aim



- Analyze if the temporal shifts in zooplankton composition correspond to **community thermal preferences**.
- Investigate the **underlying ecological processes underpinning CTI variations** over time: tropicalization, deborealization, borealization and detropicalization.

McLean et al. 2021

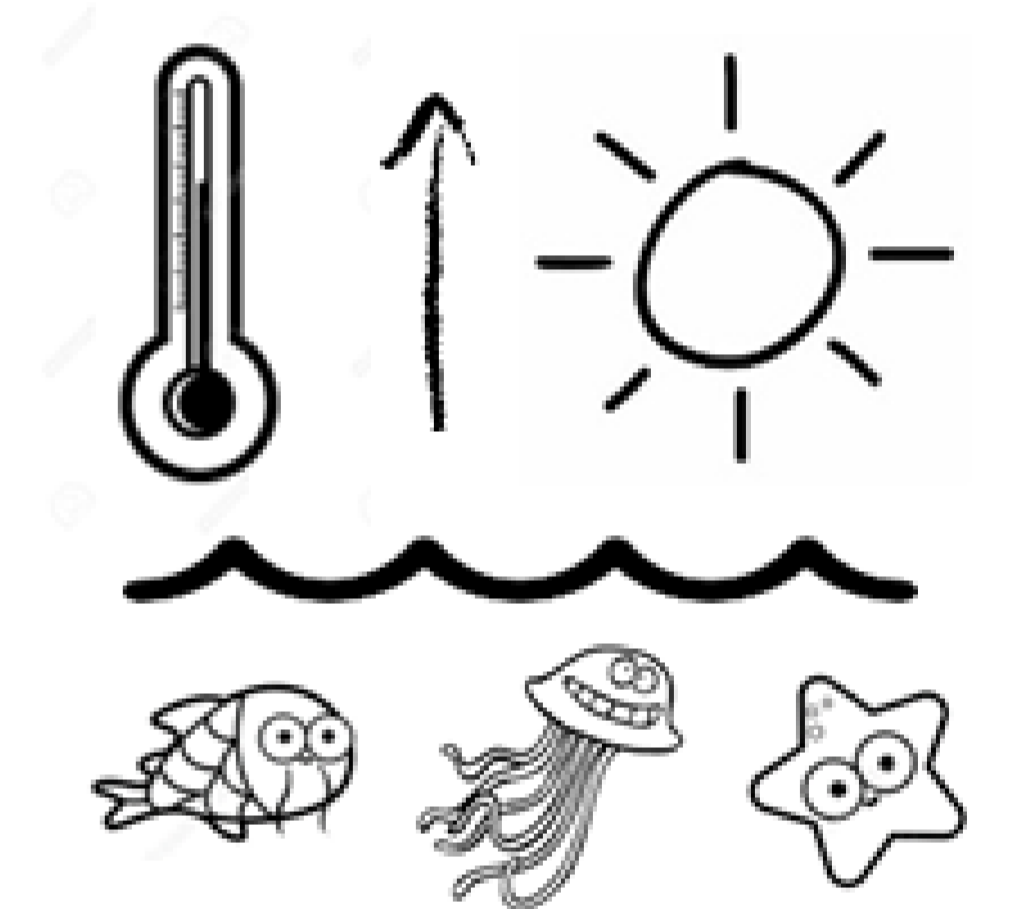
3. Methods



Community Temperature Index (CTI)

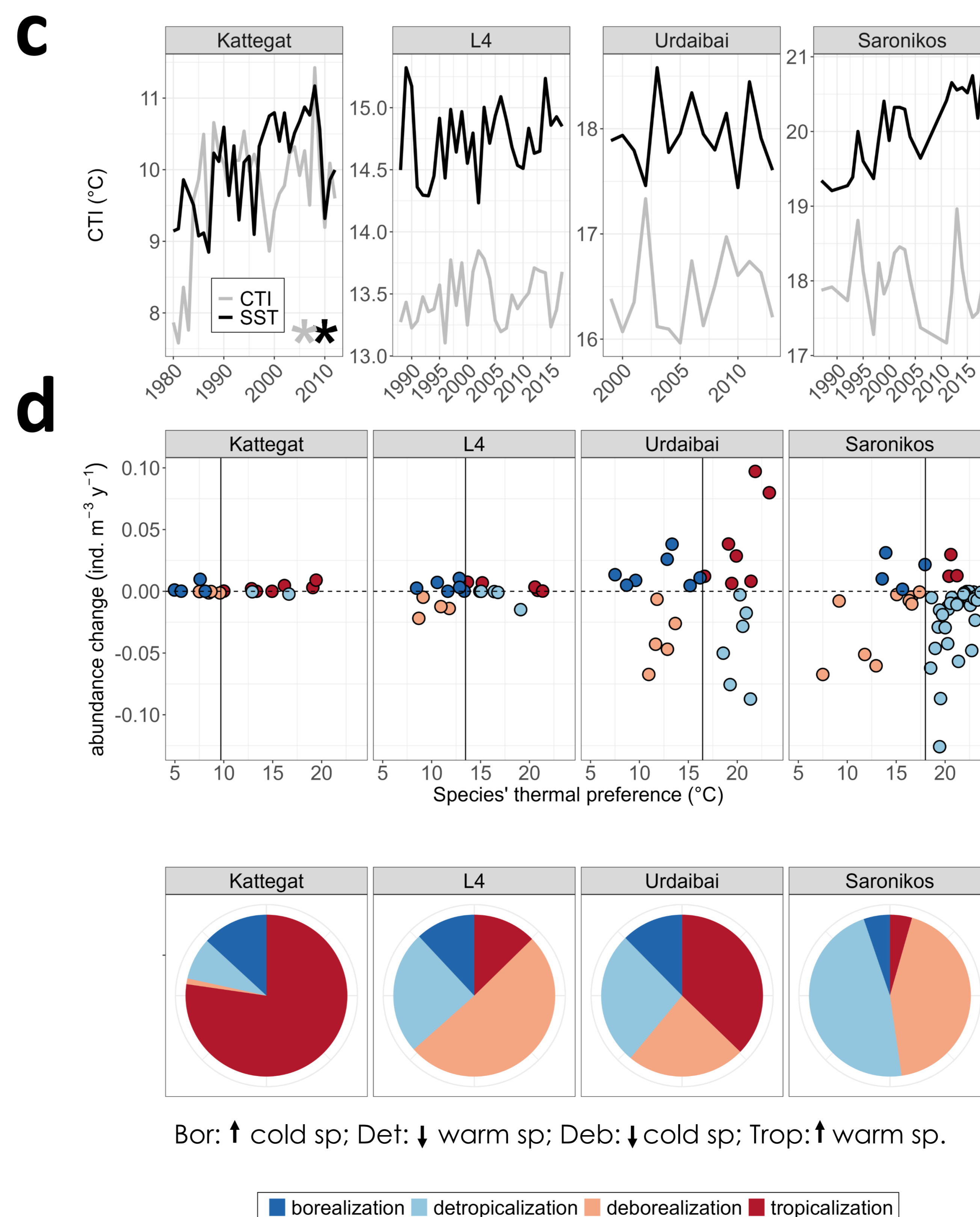
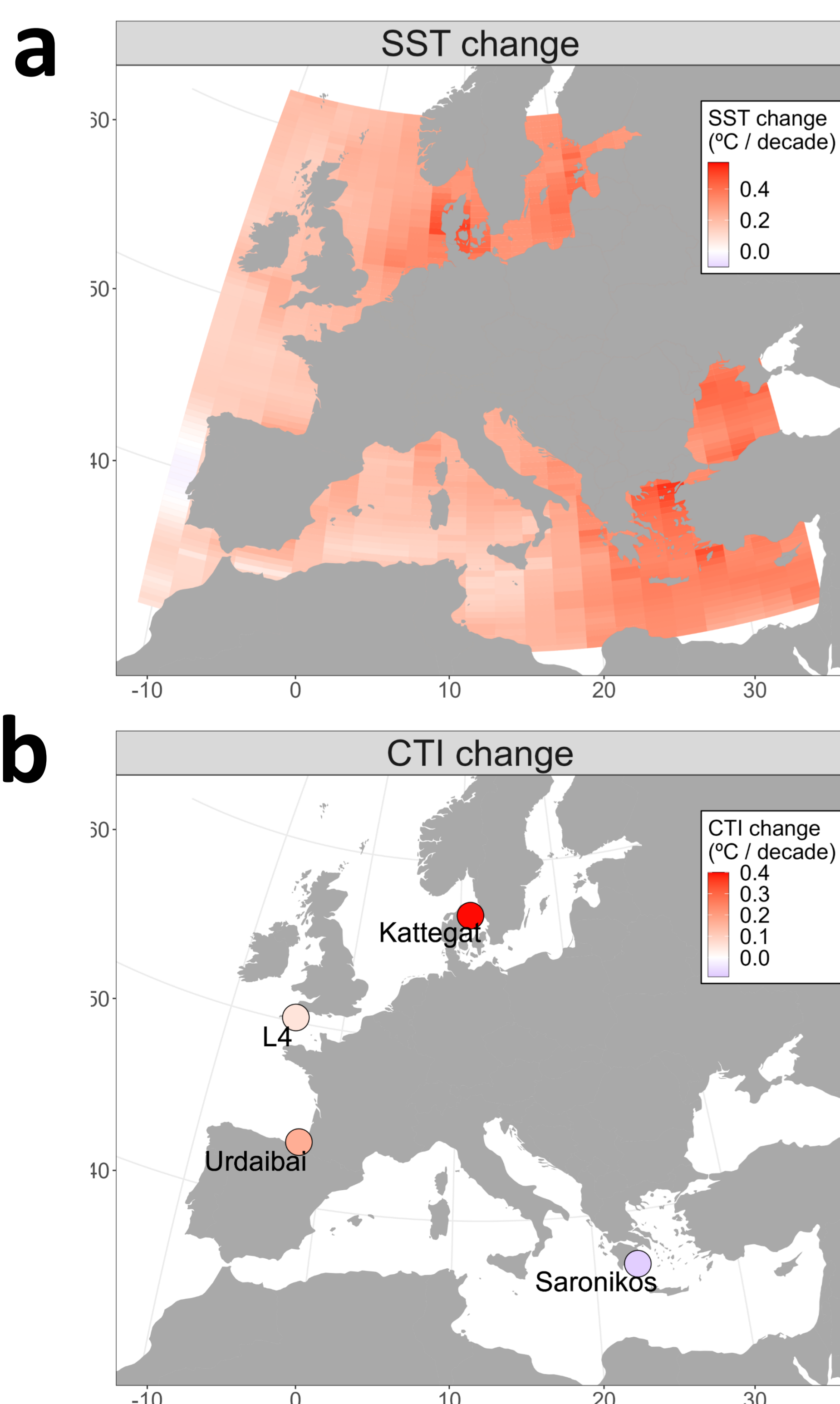
$$CTI = \sum_{s=1}^n Temp. pref_s \times Relative. Abundance_s$$

- average thermal affinity** of ecological communities, weighted by the relative abundance.



De Victor et al. 2012

4. Results



- Positive CTI changes** (0.015°C/year), but not significantly different to zero; community changes are **not** attributable **only** to thermal **niche tracking**.

- Tropicalization** (37-77%) prevailed in Kattegat and Urdaibai, **detropicalization** in Saronikos (47%), and **deborealization** in L4 (51%).

- Strong resilient capacity** of zooplankton to **ocean warming**, species can remain in place without the need to relocate to find favorable conditions.