



Les Jeudis de l'UMR

JEUDI 08 JANVIER 2026 / 11h30 **Bernardo R. BROITMAN**, Universidad Adolfo Ibañez, Chile

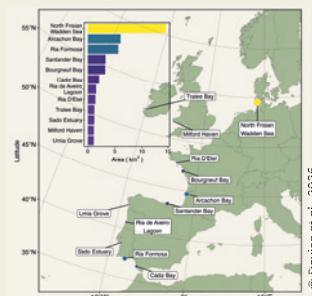
Tropicalization, borealization, none of the above? Almost three decades of community dynamics on the rocky shores of the southeastern Pacific

As the planet warms, coastal communities are being reorganized through changes in local species composition and the null expectation for temperature regions is tropicalization. But, is it such? Almost 30 years ago Andrew Bakun predicted that, as the planet warmed, upwelling circulation was bound to intensify along the oceans' eastern margins and cool the coasts of temperate regions. Over the past decades we have investigated how benthic communities respond to environmental change and the extent to which these responses can be associated with taxonomic relationships, as well as biological and ecological species traits. We periodically surveyed local species diversity and abundance at 22 rocky shore sites spanning 8° of latitude (28° S–36° S) along the south-central portion of the Humboldt Upwelling Ecosystem. Using joint species distribution models we examined community change, or lack of thereof, along the study region using satellite sea surface temperature (SST) as a proxy for changing environmental conditions. We found weak and non-significant SST cooling at central sites, whereas sites near 30° S showed (very) slight warming trends. Taxonomic relationships and individual species traits were weakly associated with their collective responses to SST variability. However, we identified a consistent increase in the occurrence of both macroalgal and invertebrate species across the region. The occurrence of macroalgal species was more sensitive to SST variation than invertebrates, with responses shifting from positive at equatorward sites to increasingly negative at poleward sites. Patterns of species co-occurrence were strongly dependent on spatial scale, particularly among invertebrates. Species occurrences increased across the region, but these responses were not significantly associated with taxonomic relatedness or with easily assigned species traits. The pattern is likely related to low niche conservatism within these communities in relation to SST responses, while other structuring processes—such as species interactions—are not well captured by the traits examined. As other studies have detected slight cooling trends over the past two decades, our results suggest that the lack of community-wide reorganization reflects the absence of a clear directional environmental driver. In a nutshell, after close to thirty years of global warming, things are not yet changing along the southeastern Pacific shores.

> accès zoom

<https://umontpellier-fr.zoom.us/j/92045795456>
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> prochainement



Jeudi 22 janvier 2026 : Bede Ffinian Rowe Davies
Post-doctorant Ifremer à MARBEC.
"Building an Initial Map of European Intertidal Seagrass"

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