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LIBRO DE RESÚMENES

Assessing geographic patterns of spatial turnover in benthic polychaete species along the South-eastern Pacific coast

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Understanding the processes determining variation in species richness and beta diversity, the change in biodiversity over space, time and environmental gradients are important goals of biogeography and ecology. Here we expand on recent work on the latitudinal diversity gradients (LDG) of marine benthic polychaetes along the Southeastern Pacific (SEP) coast and its underlying causes, by examining range-diversity plots using a dataset of 643 species inhabiting the continental shelf by calculating the normalized species richness and the dispersion field across 106 0.5° latitudinal bands along the SEP (3–56° S). We find that the normalized dispersion field, a measure of average species range distribution at each site, is positively correlated with species richness (Spearman's rs=0.81), and that Whittaker's? =2.928. When the range-diversity values are compared to the randomized expectations, we find that latitudinal bands close to the Peruvian-Transitional and Transitional-Magellanic biogeographic break points tend not to differ from the null expectation. Further, latitudinal bands in the Magellanic biogeographic region are characterized by the lowest normalized dispersion fields, indicating the polychaete fauna in these sites tend to have smaller latitudinal ranges. We then examined the possible driving variables by analyzing the response of patterns of turnover in species composition to environmental gradients along the SEP using Bayesian bootstrap generalized dissimilarity modelling (BBGDM) to assess the potential role of geographic distance, sea surface temperature, productivity (Prod) and shelf area (Area). BBGDM

analysis shows that the observed variances in compositional turnover is captured by geographic distance, productivity and shelf area, but not temperature.

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