



Size distribution of Holocene planktic foraminifer assemblages: biogeography, ecology and adaptation

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Résumé en anglais	<p>The size of any organism is influenced by the surrounding ecological conditions. In this study, we investigate the effects of such factors on the size spectra of planktic foraminiferal assemblages from Holocene surface sediments. We analyzed assemblages from 69 Holocene samples, which cover the major physical and chemical gradients of the oceans. On a global scale, the range of sizes in assemblages triples from the poles to the tropics. This general temperature-related size increase is interrupted by smaller sizes at temperatures characteristic of the polar and subtropical fronts, at 2°C and 17°C, respectively, as well as in upwelling areas. On a regional scale, surface water stratification, seasonality and primary productivity are highly correlated with the size patterns. Such environmentally controlled size changes are not only characteristic for entire assemblage, but also for the dominant single species.</p>
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