

# BENTHIC FORAMINIFERAL COMMUNITIES AND MICROHABITAT SELECTION ON THE CONTINENTAL SHELF OFF CENTRAL PERU

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## 1. Introduction

Oxygen and food availability are critical factors in the ecology of benthic foraminifera, influencing on the composition of the communities and on their vertical distribution (Jorissen et al. 1995). Several groups of benthic foraminifera are known to tolerate oxygen deficiency (e.g., Gooday et al. 2000; Bernhard et al. 2000), and some of them are able to survive under anoxic conditions (Moodley et al. 1997, 1998) by means of physiological adaptations (Risgaard-Petersen et al. 2006; Piña-Ochoa et al. 2010) or symbiotic associations with bacteria (Bernhard 2003; Bernhard et al. 2006).

The upper Central Peruvian margin is subjected to extreme dysoxic bottom waters and to strong phytodetrital carbon fluxes (Levin et al. 2001; Gutiérrez et al. 2009). Here, the Tropical South Eastern Pacific (TSEP) oxygen minimum zone (OMZ;  $O_2 < 22 \mu\text{mol.l}^{-1}$ ) is intensified because of the enhanced consumption driven by the upwelling-supported high productivity (Helly and Levin 2004; Graco et al. 2007). The oxycline can be very shallow, reaching up to 20–40 m depth (Gutiérrez et al. 2008). The continental shelf sediments display suboxic to anoxic conditions, driven by anaerobic carbon recycling