
Benthic and Planktic foraminiferal distributions in the Bay of Biscay during the Holocene: evaluation of hydrological patterns

Hélène Howa^{1,2}, Meryem Mojtahid*³, Jennifer Garcia , Michel Cremer , Eynaud Frédérique , Hervé Gillet , Elisabeth Michel , Sophie Terrien , and Frans Jorissen

¹Laboratoire des Bio-Indicateurs Actuels et Fossiles (BIAF) – Université d’Angers : UPRESEA 2644 – 2 boulevard Lavoisier 49045 Angers Cedex 1, France

²Laboratoire d’Etude des Bio-Indicateurs Marins (LEBIM) – Université d’Angers : UPRESEA 2644 – Ker Chalon, Port-Joinville, 85 350 Ile d’Yeu, France

³Laboratoire des Bio-Indicateurs Actuels et Fossiles (BIAF) – Université d’Angers : UPRESEA 2644 – 2 boulevard Lavoisier 49045 Angers Cedex 1, France

Résumé

The southeastern part of the Bay of Biscay is under the combined influence of the eastern branch of the North Atlantic Current (NAC) and coastal river plumes. The objective of this study is to use foraminiferal distribution from a 3 m high resolution record (SE Bay of Biscay; 550 m water depth) as proxies to evaluate the hydrological pattern of the Bay of Biscay during the Holocene; a period of rapid climatic change. Faunal distributions coupled to grain size variability suggest a rapid evolution of the sedimentary structuring of the basin. Major changes are recorded in benthic and planktic foraminiferal communities suggesting important fluctuations of primary and exported productivity during the Holocene. These rapid changes could be related to variations of the oceanic hydrology of the basin and/or to the coastal rivers hydrological regimes.

*Intervenant