



Live benthic foraminiferal faunas along a bathymetrical transect (140-4800 m) in the Bay of Biscay (NE Atlantic)

Submitted by Emmanuel Lemoine on Tue, 09/16/2014 - 11:49

Titre Live benthic foraminiferal faunas along a bathymetrical transect (140-4800 m) in the Bay of Biscay (NE Atlantic)

Type de publication Article de revue

Auteur Mojtahid, Meryem [1], Griveaud, Clémentine [2], Fontanier, Christophe [3], Anschutz, Pierre [4], Jorissen, Frans [5]

Type Article scientifique dans une revue à comité de lecture

Année 2010

Langue Anglais

Date 2010/09

Numéro 3

Pagination 139 - 162

Volume 53

Titre de la revue Revue de Micropaléontologie

ISSN 0035-1598

Mots-clés Bathymetric transect [6], Bay of Biscay [7], benthic foraminifera [8], Conditions redox [9], Foraminifères benthiques [10], Golfe de Gascogne [11], Microhabitat [12], Niveaux trophiques [13], Redox conditions [14], Transect bathymétrique [15], Trophic levels [16]

Résumé en anglais In a 10-stations bathymetrical transect in the Bay of Biscay, we observed important changes in the density, composition and microhabitats of live foraminiferal faunas from the outer continental shelf to the abyssal plain. Four zones are recognised: (1) at the upper continental shelf (140 m water depth), foraminiferal densities are very high and the superficial sediment is occupied by *Bolivina subaenariensis* and *Valvulineria bradyana*. *Globobulimina* spp., *Chilostomella oolina* and *Nonion fabum* dominate the infaunal niches, which are positioned close to the sediment-water interface due to a strong compaction of the vertical succession of redox zones. (2) At the upper continental slope stations (300-1000 m), foraminiferal densities are high and the superficial sediments are dominated by *Uvigerina mediterranea/peregrina*. Deeper in the sediment, intermediate infaunal niches are occupied by *Melonis barleeanus*. Due to a deeper oxygen penetration, the deep infaunal taxa *Globobulimina* spp. and *C. oolina* live at a considerable depth in the sediment. (3) At the mid and lower slope stations (1000-2000 m) in the superficial sediment *Cibicidoides kullenbergi* and *Hoeglundina elegans* progressively replace *U. mediterranea*. *U. peregrina* is still a dominant taxon, reflecting its preference for a somewhat intermediate organic flux level. Deep infaunal taxa become increasingly rare. (4) At the lower slope and abyssal plane stations (deeper than 2000 m), faunal densities are very low and the fauna is composed exclusively by shallow infaunal species, such as *Nuttallides umboniferus* and *Melonis pompilioides*. The foraminiferal data together with the pore water data in the sediment give evidence of the presence of a trophic gradient from very eutrophic settings at the upper continental shelf towards oligotrophic settings at the abyssal area.

URL de la notice	http://okina.univ-angers.fr/publications/ua3871 [17]
DOI	10.1016/j.revmic.2010.01.002 [18]
Lien vers le document	http://dx.doi.org/10.1016/j.revmic.2010.01.002 [18]

Liens

- [1] <http://okina.univ-angers.fr/m.mojtahid/publications>
- [2] [http://okina.univ-angers.fr/publications?f\[author\]=6498](http://okina.univ-angers.fr/publications?f[author]=6498)
- [3] <http://okina.univ-angers.fr/christophe.fontanier/publications>
- [4] [http://okina.univ-angers.fr/publications?f\[author\]=6213](http://okina.univ-angers.fr/publications?f[author]=6213)
- [5] <http://okina.univ-angers.fr/f.jorissen/publications>
- [6] [http://okina.univ-angers.fr/publications?f\[keyword\]=8177](http://okina.univ-angers.fr/publications?f[keyword]=8177)
- [7] [http://okina.univ-angers.fr/publications?f\[keyword\]=8115](http://okina.univ-angers.fr/publications?f[keyword]=8115)
- [8] [http://okina.univ-angers.fr/publications?f\[keyword\]=8078](http://okina.univ-angers.fr/publications?f[keyword]=8078)
- [9] [http://okina.univ-angers.fr/publications?f\[keyword\]=8178](http://okina.univ-angers.fr/publications?f[keyword]=8178)
- [10] [http://okina.univ-angers.fr/publications?f\[keyword\]=8179](http://okina.univ-angers.fr/publications?f[keyword]=8179)
- [11] [http://okina.univ-angers.fr/publications?f\[keyword\]=8180](http://okina.univ-angers.fr/publications?f[keyword]=8180)
- [12] [http://okina.univ-angers.fr/publications?f\[keyword\]=8110](http://okina.univ-angers.fr/publications?f[keyword]=8110)
- [13] [http://okina.univ-angers.fr/publications?f\[keyword\]=8181](http://okina.univ-angers.fr/publications?f[keyword]=8181)
- [14] [http://okina.univ-angers.fr/publications?f\[keyword\]=8182](http://okina.univ-angers.fr/publications?f[keyword]=8182)
- [15] [http://okina.univ-angers.fr/publications?f\[keyword\]=8183](http://okina.univ-angers.fr/publications?f[keyword]=8183)
- [16] [http://okina.univ-angers.fr/publications?f\[keyword\]=8184](http://okina.univ-angers.fr/publications?f[keyword]=8184)
- [17] <http://okina.univ-angers.fr/publications/ua3871>
- [18] <http://dx.doi.org/10.1016/j.revmic.2010.01.002>

Publié sur *Okina* (<http://okina.univ-angers.fr>)