



Spatial distribution of benthic foraminifera in the Rhône prodelta: faunal response to organic matter focussing

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Résumé en anglais On many continental shelf areas, the combination of high surface water productivity coupled with limited water depth leads to important organic matter deposits on the sea floor. In the Gulf of Lion, the Rhone River is a major source of nutrients and organic matter. This important supply may create important eutrophication and hypoxia on the benthic environment. In our study, three faunal assemblages occur in relation to the organic enrichment gradient and to the oxygen penetration in the sediment. The first assemblage is situated in the immediate vicinity of the river mouth ($1.3 \% < \text{Corg} < 1.9 \%$; $1 \text{ mm} < \text{O}_2 \text{ penetration} < 2 \text{ mm}$); the faunas are characterized by a low density and biodiversity; they are dominated by *Fursenkoina fusiformis*, *Bulimina aculeata*, *Reophax scotti*, and *A. longirostra*. A second assemblage is situated in the intermediate part of the organic enrichment zone ($1.0 \% < \text{Corg} < 1.3 \%$; $2 \text{ mm} < \text{O}_2 \text{ penetration} < 4 \text{ mm}$) and is characterized by maximum densities and intermediate biodiversity; faunas are dominated by the species *Nonionella turgida*, *Hopkinsina pacifica* and *Nonion scaphum* accompanied in lower proportions by the species *Rectuvigerina phlegeri*. A third assemblage is situated in the outer part of the organic-rich sediments ($0.7 \% < \text{Corg} < 1.0 \%$; $4 < \text{O}_2 \text{ penetration} < 7 \text{ mm}$). The faunas are characterized by high densities and a high biodiversity; they are dominated by *Cassidulina carinata* accompanied in lower proportions by the species *Epistominella vitrea*, *Valvulineria bradyana* and *Textularia porrecta*.

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Liens

[1] <http://okina.univ-angers.fr/m.mojtahid/publications>

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[3] [http://okina.univ-angers.fr/publications?f\[author\]=6500](http://okina.univ-angers.fr/publications?f[author]=6500)

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