

Benthic foraminiferal response to sedimentary disturbance in the Capbreton canyon (Bay of Biscay, NE Atlantic)

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Living (Rose Bengal stained) and dead benthic foraminifera were investigated at 6 deep-sea sites sampled in the Capbreton canyon area (Bay of Biscay, France). Three sites were located along the canyon axis at 301 m, 983 m and 1478 m and 3 stations were positioned on adjacent terraces at 251 m, 894 m and 1454 m. Sedimentary features indicate that frequent sedimentary disturbances of different magnitudes occur along the Capbreton canyon axis and adjacent terraces. Such environmental conditions cause the presence of very particular benthic environments. Along the 6 studied sites, different foraminiferal responses to various sedimentary patterns are observed revealing the complexity of this canyon environment. Some sites (Gitan 3 (canyon axis), Gitan 5 (canyon axis) and Gitan 6 (terrace)) are characterized by moderate to low standing stocks and low diversity and are mainly dominated by pioneer taxa such as *Fursenkoina brady*, *Reophax dentaliniformis* and *Technitella melo* suggesting a recent response to turbidite deposits recorded at these sites. Others sites (Gitan 1 and Gitan 2) show extremely high standing stocks and are mainly dominated by the opportunistic *Bolivina subaenariensis* and *Bulimina marginata*. Such faunal characteristics belonging to a more advanced stage of ecosystem colonization indicates strongly food-enriched sediment but extremely unstable conditions. Moderate standing stocks and diverse assemblage composed of species such as *Uvigerina mediterranea* and *U. peregrina* has only been observed at the terrace site Gitan 4. More stable sedimentary conditions recorded at this terrace seem to be suitable to the development of a dense and diverse foraminiferal community. Numerous neretic allochthonous species were observed in the dead foraminiferal fauna. These allochthonous species mainly originate from shelf areas (< 60 m).

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