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## Surface distribution of foraminifera from the Morbihan's Gulf, France: Study for paleoenvironmental reconstructions

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The Morbihan's Gulf is a complex, shallow ria system on the NW coast of France, which was flooded by the sea and partially infilled over the last few millennia. The recent history of the coastal depositional environments has never been done in this Gulf. There is a need for calibrating fossil foraminiferal assemblages with local present ones and their relationship with present sedimentary environments before reconstructing paleoenvironmental conditions in a complex paralic environment.

The eastern part of the Morbihan's Gulf is characterized by the presence of numerous channels under the influence of tidal and freshwater inputs. These channels are bordered by sheltered mud flats or exposed mud flats, according to the coastal morphology. Also, *Zostera marina* occupies some inner sheltered mud flat zones. Two hundred surface sediment samples were collected from February 2002 to July 2004, at water depths ranging from 1 m (subtidal zone) to 15 m (channel), with a mean distance of 500 m between each sample.

A total of 63 species were identified and only 49 showed living specimens. Five species are dominant and 15 are common. The distributions of living and total assemblages (for every dominant and common species) do not differ significantly. This low difference allows the use of foraminifera in paleoenvironmental reconstructions. A high percentage of hyaline species represents the general distribution with a great dominance of the genera *Ammonia* and *Elphidium*. Specific distinction between *A. tepida* and *A. beccarii* shows an environmental significance. *Ammonia tepida* is present in all samples, but it is largely dominant in restricted areas (sheltered mud flat) with fine paralic sediments. *Ammonia beccarii* occurs in tidal channels with coarser and more heterogeneous sediments. The genus *Elphidium* is also well represented in almost all samples with *E. excavatum*, which occurs in channels under the influence of both tidal and freshwater inputs. A *Zostera marina* seagrass bed is characterized by the living occurrences of *Eggerelloides scabrus*.

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In the case of channels under the influence of freshwater inputs, the dominant species is *Haynesina germanica*. Thus, this detailed study of the present distribution of major benthic foraminifera in the Morbihan's Gulf will allow paleoenvironmental reconstructions according to the characteristics of the coastal depositional environments.