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Benthic foraminifera distribution and diversity in inner and outer lagoonal sediments of the UAE (United Arab Emirates)

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Live and dead benthic foraminifera assemblages were studied from 50 samples collected in a lagoon located between Yas Island and Ras al Gurhab Island (UAE) in a system dominated by carbonate sedimentation.

Living and dead foraminifera tests are present at all of the sampled locations. The foraminifera assemblage is dominated by a high diversity of miliolidae together with epiphytic larger benthic foraminifera belonging to the genera *Peneroplis*, *Spirolina* and *Sorites*. Hyaline foraminifera, such as *Ammonia* and *Elphidium*, are commonly found at all the locations while agglutinated foraminifera are uncommon and have a scattered occurrence.

The abundance and diversity of benthic foraminifera were calculated for each sample. Four benthic foraminifera ecological indices were applied to the studied samples. For each of the samples we calculated: the total foraminiferal number (number of foraminifera in 1 g of sediment >125 µm); the percentages of agglutinated, porcellaneous and hyaline foraminifera tests; the ratio between living and dead benthic foraminifera; the ratio between larger benthic foraminifera with normal and abnormal test growth. The above-mentioned data have been applied to construct a foraminiferal assemblage database that facilitates the discrimination between inner and outer lagoonal environments.