How many benthic foraminifera live in the Arabian Gulf?

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This study documents the diversity and distribution of benthic foraminifera in the Arabian (Persian) Gulf in order to establish an estimate of the total biodiversity for the area. Previous studies of benthic foraminiferal in the Gulf have underestimated the richness, composition and diversity of this group of marine organisms. Also, estimates of possible numbers of species in the area are normally off the mark or too low compared to the published records. This is due to the fact that such records are poorly organized and consist of studies designed for different objectives other than taxonomy. Documented taxa in thirty-five published works from 1965–2016 were collated and subjectively synonymized. These studies cover the entire area of the Arabian Gulf from the northeast close to the Shatt Al-Arab to the southeast at the Strait of Hormuz were the Gulf empties into the Indian Ocean. They also represent wide range of depths and environment considered representative of the entire Gulf, e.g., lagoons, tidal flats, river delta, tidal channels, mangrove swamp offshore topographic highs etc.

A total of 849 benthic foraminiferal species and subspecies have been documented so far in the Gulf belonging to 187 genera, 76 families and 10 orders. The dominant wall dominant wall type is the porcelaneous group (48.8%) followed by hyaline group (39.5%), agglutinated (11.8%). These new findings probably better reflect the real diversity of the Gulf benthic foraminifera, and are more in line with the estimate of 946 species reported by Loeblich & Tappan (1994) from the Sahul Shelf and Timor Sea. A taxonomic census of the benthic foraminiferal in the Arabian Gulf is a vital dataset for establishing the baseline biodiversity data, and conducting reliable environmental assessments.