

**A Comparison of Live and Dead Large Benthic Foraminifera Assemblages,
San Salvador, Bahamas**

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This study is investigating the populations of large benthic foraminifera found on the shelf of San Salvador, Bahamas. A primary goal of this study is to determine the distribution of foraminifera species, before and after death, at various reef and lagoon environments. Taphonomic analysis of the dead foraminifera will be employed to determine the role of sediment transport in shaping dead foraminifera assemblages, as well as to test the hypothesis that taphonomy can be used to relate dead assemblage data to environmental conditions.

Sea-floor sediment samples were collected along three transects at approximately 50-m intervals, such that all major habitats were represented. Cobbles, sea grasses, benthic algae, and the top 1 cm of sediment were sampled and preserved in formalin. After staining with a solution of 1% Rose Bengal, live and dead foraminifera greater than 0.5 mm in size will be picked. Each species found in the dead assemblages will be examined to determine the range of post-mortem alteration. Cluster analyses will compare the foraminifera found at each environment and will group samples together according to their taxonomic makeup.

Large benthic foraminifera are excellent indicators of the environment in which they live because photosynthetic endosymbionts make them extremely sensitive to water depth, chemistry, temperature, turbidity, and nutrient flux. I expect that at the various reef and lagoon environments sampled at San Salvador, pristine dead foraminifera and live foraminifera have similar distributions; this finding would strongly support the use of taphonomic analysis of foraminifera to decipher paleoenvironment for ancient carbonate platforms.