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Benthic foraminifera community structure; a function of dispersal and environmental gradients

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Research into the resting stage and dispersal of benthic foraminiferal using propagules is helping to reshape our understanding of dispersal and the distribution of benthic foraminifera. As a result, our understanding of what constitutes a dominant and cryptic species is also changing. In other words, individual and multi-species assemblages appear to respond differently to one or more specific environmental conditions. This, in turn, is responsible for the noticeable changes or lack of, in a community structure. In the current study, we investigated the community structure of benthic foraminifera retrieved from samples collected from three locations in Eleuthera Island, Bahamas to understand the similarities and differences in the assemblage composition and structure. Our main undelaying assumption is that, given the three locations are spatially connected and receive a similar load of propagules, they should be similar compositionally without any other influences. However, our preliminary result indicates significant differences among the time average populations sampled. This finding, tentatively indicate the influence of environmental gradients among the sampled sites. Our observations corroborate previous conclusions arrived in several papers working on the “propagule method”, which seeks to examine the ecology of benthic foraminifera through their mode of dispersal and settlement.