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# Foraminiferal monitoring of ecosystems: Mission-Aransas National Estuarine Research Reserve, Texas

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On the Texas coast north of Corpus Christi, a National Estuarine Research Reserve (NERR) has been established. Several bays, including, Aransas, Mission, Copano, Redfish, and Mesquite Bays, are part of the reserve, which encompasses diverse habitats such as mangrove swamps, seagrass beds, and oyster reefs. Some of the sites within the Mission-Aransas NERR that have already been subject to human impact are designated as buffer zones, while the more pristine sites will be used for scientific studies such as this one. The purpose of this study is to establish baseline data for foraminiferal population distributions in Aransas, Copano, and Mesquite Bays (and eventually all of the NERR bays), and to use this data for future monitoring of the reserve. Past research by Phleger (1956) reported living numbers of foraminifers in Aransas and Mesquite Bays, and some of his stations are being re-sampled for this paper. Phleger found that average populations in Aransas and Mesquite Bays were 110 and 85 specimens per 10 ml, respectively. These densities are similar to those found so far in the current study, which average 99 individuals per 10ml in Aransas Bay. Species richness from the 1950s (approximately 15 species in each bay) is also comparable to that of today (approximately 13 species per bay), with the predominant genera usually being *Ammonia* and *Elphidium.* As the present research progresses in the coming months, it will be interesting to see if abundance and diversity correlate with environmental parameters such as salinity and nutrient availability. Since the estuaries in the NERR are important recreational areas, nesting sites, and spawning grounds for shellfish and finfish, it is critical to monitor these ecosystems for future use.