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While preliminary glance at a salt marsh might suggest a rather uniform environment, distinct micro-habitats within the marsh provide heterogeneity of flora and fauna. The small, shallow pools of standing water within a marsh called salt marsh pannes are one such micro-habitat. The goal of this study was to determine whether fish predation and/or physical parameters such as area, water depth, or elevation of the pannes influence infaunal community structure in the Bates-Morse Mountain Conservation Area pannes, Between October 19 and November 11, 1995, three 81cm^2 by 15cm deep cores were taken in each of the thirteen pannes to determine macrofaunal abundance. At the same time fish traps were set out and physical characteristics of the pannes were recorded. The pannes were found to be low in both species diversity and macrofaunal abundance. Total mean macrofaunal densities were significantly different amongst pannes. This was largely due to the differences in the number of *Streblospio benedicti* and oligochaete worms between pannes. Panne area was found to be positively correlated with number of macrofauna. We can interpret the result in light of the island biogeography theory, but it is likely that this is not the only cause of the correlation. Infaunal density was slightly negatively correlated with the total number of fish per panne. The weakness of this correlation is surprising, as previous studies have indicated that fish may be important in structuring macrofaunal communities. Discrepancies in my findings may be due to seasonal fish migration patterns or an inadequate sampling size.