

**Chandler, M. A. 1999. Population changes in a northern Gulf of California rocky intertidal invertebrate community before and after the 1997-1998 ENSO event. M.S. thesis. University of Arizona. Tucson, Arizona. 93 pp.**

A study was done on a rocky intertidal community in Puerto Peñasco, Sonora, Mexico in the summers of 1997-1999 in order to determine if the ENSO of 1997-1998 had an effect on population densities of selected macroinvertebrates. Two replicate transects were laid perpendicular to the sea edge and a census of 21 macroinvertebrate species was taken in the summers of 1997, 1998 and 1999. A significant decrease of species densities occurred in 1998 when the mean sea surface temperature (SST) was more than 2°C warmer than in 1997 due to the 1997-1998 ENSO event. A phenomenon was also observed in 1998 where some species changed, compared to 1997, their vertical distribution in the intertidal from shallow to deeper waters, with a subsequent return to a more expected distribution in 1999. Also a comparison of 1997 and 1976 densities showed an increase in 1997 in abundances of those species with southern geographic ranges and a decrease of those with northern geographic ranges. This was correlated with an increase of mean SST of 1.9°C between the 1970's and the 1990's.