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Climatic variation can change the daily pattern of recruitment of barnacles (*Chthamalus* spp.) in the SW coast of Portugal

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Daily recruitment of *Chthamalus* spp. was studied during Summer (July and August) 1998, 2002 and 2003 near Sines (SW Portugal). Correlation between recruitment and several environmental variables (sea water temperature onshore and offshore, cross-shore and alongshore wind stress, wave amplitude and tidal range) were tested in each year.

In 1998 and 2003, recruitment was positively correlated with sea water temperature (both onshore and offshore) and no significant correlation was observed with other variables. In 2002, recruitment was positively correlated with tidal range and no correlation was observed with the remaining variables. Mean sea water temperature onshore and offshore was lowest in 2002 and mean alongshore wind stress was more negative (north winds more intense) in 2002 than in 1998 / 2003. Based on sea water temperature and wind stress values, upwelling was probably more intense in 2002 than in 1998 and 2003. Changes in sea water temperature and in the Portuguese coastal upwelling system are forecasted as scenarios of climate change until the end of the 21st century.

We suggest that there were different mechanisms of transport of larvae onshore acting in 1998 / 2003 and 2002 related with inter-annual climatic variation occurred during Summer. We discuss variation in possible mechanisms of transport of larvae onshore due to climatic fluctuations.