

Coastal upwelling circulation and its influence on the population dynamics of *calanus chilensis* (Brodski, 1959) off northern Chile (23°S)

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Marine pelagic copepods must cope with a highly heterogeneous environment in coastal upwelling systems. In addition to spatial and temporal heterogeneity in temperature and food supply, advective forces may strongly influence their populations. Off northern Chile, the population of *Calanus chilensis*, a dominant copepod associated with upwelling centres, is subjected to large interannual variations in abundance, not explained by changing temperature regimes occurring upon cold and warm phases of the ENSO (El Niño Southern Oscillation) cycle. During two spring and two summer periods (1998-2000), we studied the abundance, distribution and growth of the copepodids of *C. chilensis*. The instantaneous mean weight-specific growth rate was estimated as 0.29 day⁻¹ and was not significantly different among cruises. Weights of late stages did not differ either. However, the numerical abundance and biomass substantially differed among cruises, such that daily production of copepodids increased with