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TITLE: Shifts in Deep-Sea Community Structure Linked to Climate and Food Supply

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ABSTRACT:

A major change in the community structure of the dominant epibenthic megafauna was observed at 4100 meters depth in the northeast Pacific and was synchronous to a major El Niño/La Niña event that occurred between 1997 and 1999. Photographic abundance estimates of epibenthic megafauna from 1989 to 2002 show that two taxa decreased in abundance after 1998 by 2 to 3 orders of magnitude, whereas several other species increased in abundance by 1 to 2 orders of magnitude. These faunal changes are correlated to climate fluctuations dominated by El Niño/La Niña. Megafauna even in remote marine areas appear to be affected by contemporary climatic fluctuations. Such faunal changes highlight the importance of an adequate temporal perspective in describing biodiversity, ecology, and anthropogenic impacts in deep-sea communities.

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