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CLIMATE INDUCED DYNAMICS IN SPONGE ASSEMBLAGES ON THE DEEPER ANTARCTIC SHELF?

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Introduction. The aim of this study was to analyse pecularities of Antarctic benthic structure with the background of environmental stability and dynamics.

Methods. Underwater-videos and –photographs from the shelf of the southeastern Weddell Sea have been analysed.

Results. At selected sites an unusually high proportion of dead sponges and unusually massive sponge spicule mats have been recorded. In addition, at one site sponges of the species *Cinachyra barbata* have been observed in a community being generally poor in biomass and abundance to which they usually do not belong. Also here the percentage of dead individuals was high.

Discussion. Since all sites are located close to a highly dynamic ice shelf edge, these finding can be explained by abrupt changes in environmental conditions, e.g. in food supply via the bottom-near current due to the advance and retreat of large ice shelf areas. The results indicate higher dynamics in Antarctic sponge communities on the deeper shelf than assumed so far.