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# Late Holocene paleoclimatic record of sediment near Joinville Island, Antarctic Peninsula

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A 4.76-m-long sediment core JV10-GC01 covering about 4000 years was collected near the Joinville Island, which is located on the northern tip of the Antarctic Peninsula. Six AMS radiocarbon ages were determined by carbonate shells. No age inversions were observed, implying a lack of reworking during deposition. Sedimentological, geochemical, and micro-paleontological parameters were analyzed to reconstruct paleoenvironmental changes. The records of total organic carbon, diatom abundance, diatom assemblage suggest that warm, stratified and stable condition lasted from 3900 to 2500 yr BP. After that, cooling condition persisted for about 1300 years from 2500 to 1200 yr BP. The onset of Neoglacial in this study is contemporaneous with James Ross Island, Bransfield Basin, and Maxwell Bay. However, the periods of Neoglacial, MWP, LIA are different from the Firth of Tay, although two sites are very close. In this core sediment, about 500 year periodicity of climate cooling is observed since 3000 yr BP. It may be correlative with 550-yr cyclicities in North Atlantic circulation patterns during the Holocene.