

Glaciomarine Sedimentation and Paleoglacial Setting of Marian Cove, King George Island, Antarctica

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The sea floor of Marine Cove is highly rugged and is covered by a very thin drape of sediments, suggesting that this area has been recently eroded by glaciers with minimal posterosional sediment accumulation. A piston core shows a vertical lithofacies, changing from waterlain till through meltwater deposits to pebbly mud as the result of a combination of ice rafting and suspended sedimentation. A reconstruction of the glacial history of this area since the late glacial maximum shows grounded ice filling the cove in late Holocene time and retreat of the ice sheet from the cove at least 1,300 yrs BP, accompanied by a marine transgression.