

COASTAL GEOMORPHOLOGY IN THE LÜTZOW-HOLM BAY REGION, EAST ANTARCTICA (ABSTRACT)

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A geomorphological investigation has been conducted in the Lützow-Holm Bay region, with special reference to Holocene raised beaches and their dates. Raised beach deposits occur extensively up to 20 m asl, and well-marked stepped topography often develops on beach surfaces. Radiocarbon dates revealed that relatively higher sea level occurred between 4000 and 5000 yr BP (ages corrected by 1100 yr as a reservoir effect). This event can probably be correlated with the climatic optimum or warmer episode. Lakes Suribati and Hunazoko in the Skarvsnes area were detached from the sea before 4000 and 1000 yr BP (ages corrected by 1100 yr) due to isostatic rebound of the crust, respectively.

Reliable Holocene marine limits were confirmed in each ice-free area: 16 m asl in the Ongul Islands, 20 m in the northern Langhovde, 22 m in the southern Langhovde, 23 m in the Skarvsnes and 12 m in the Skallen areas, respectively. These levels suggest that the ice sheet has not so deeply covered the present ice-free areas during the Last Glacial Maximum, or that a large ice sheet still exists close to the ice-free area.

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