



Precise analysis of MIS5e Marine Terrace, Hokkaido, Japan which was covered by deposits in succeeded glacial period

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Aim of the research: In general, marine terraces are covered by later non-marine deposits and difficult to obtain former shoreline using disturbed terrace surfaces. Precise determination of the former shoreline could be obtained from geological analysis of marine terrace deposits. Numbers of tight drilling have done to establish new method for terrace analysis.

Study area and geology: Japan Sea side margin of the Shakotan Peninsula and the southern region, Hokkaido, Japan. MIS5e Marine Terrace deposits which are mainly composed of well sorted shore sand and gravels associated with volcanic ash, Toya (erupted about 115,000 years ago) in the upper most part of the deposits. The terrace deposits (1 to 4m) are covered by thick talus deposits (5 to 30m) formed by periglacial process.

Method of terrace analysis: 7 sections across the MIS5e Terrace were selected. 4 to 8 tight drilling in individual sections, total numbers of 32(total length 456m) drilling have done. Buried wave-cut bench and sea cliff are reconstructed by distribution of the terrace deposits and the precise site of former shoreline was obtained.

Results: Obtained altitudes of the former shoreline from the 7 sections are about the same 25m. Our research proofed that the MIS5e terrace surface is not inclined in the study area and the previous study was misinterpreted by the cover of talus deposits. In some areas, we were recognized three peat layers from drilling cores. The deposition rate obtained from the depth of some peat layer and the 14C dating value is approximately 0.3mm / yr. Events in the last glacial period were recorded.