THE KOREAN JOURNAL OF QUATERNARY RESEARCH Vol. 22, No. 2, p. 47-47 (December. 2008)

Review on the submarine glacigenic fan deposits, western Barents Sea, Norway

Yong Ahn Park[1]

[1]*Research Institute of Oceanography, Seoul National University, Korea*
(yap@snu.ac.kr)

During the last c. 2.7 My, large quantities of glacially derived materials, that is, glacigenic sediments were transported to the shelf edge and upper continental slope from the Barents Sea inner shelf and Norwegian mainland areas and deposited mainly as prograding sediment wedges into a basin offshore. Although the Fennoscandian ice sheet expanded as early as 2.6 Ma, the ice did not grow big enough to cover the continental shelf until about 1.1 Ma after which the shelf has been repeatedly glaciated. Following the glaciation at 1.1 Ma, theice reached the shelf break again at about 0.5 Ma, after which it covered the entire shelf at least five times, the last being the Late Wisconsin maximum at about 20 ka. Large depocenters formed in front of the ice streams, at the outermost shelf and upper continental slope, with subsequent down-slope debris flow deposition during the peak glacial condition. In fact, during these periods very high sedimentation rates persisted with primary sediment types being diamictic debris flow deposits as well as basal tills on shelf.

Keyword: Glacial time, Prograding sediment wedge, Debris flow, Slides.