Late Holocene Topographical Development in the Shiraoi Coastal Plain, south Hokkaido, Japan

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The Shiraoi Coastal Plain is located along the narrow Pacific coast from the western edge of Yufutsu Plain through Shadai to Shiraoi City. Recently some gravel pits appear and provide large outcrops of Cheseki-so, mainly later Holocene deposits. We have investigated the deposits for three gravel pits and relating topography, to clarify depositional process and environmental changes in Shiraoi coastal Plain, mainly using tephrochronology, 14C datings, pollen analysis and other methods.

We found out many important tephra layers from those outcrops, such as Ta-c, B-Tm, Us-b Us-1663, Ta-b, Ko-c2 and Ta-a, since 3000 years ago.

Near the base of the pits, a gravel bar topography were distributed. Its age is about 3000 years ago by AMS dating method.

Over the buried gravel bar topography, five cycles of channel deposition from each outcrop of the gravel pits; 3.0-2.5ka, 2.5-2.0ka, 1.2-1.0ka, 1.0ka and 0.6-0.3ka. Each cycle has the first stage forming shallow meandering valley, the second stage filling the valley by channel deposits, the third stage forming flooding deposits, and the final stage of stable peat land.