

Stratigraphy and sedimentary characters of tsunami deposits along Nemuro coastal lowland, eastern Hokkaido

Shigeto Inokuma[1]; # Kiyoyuki Shigeno[2]; Futoshi Nanayama[3]; Yuji Soeda[4]; Ryuta Furukawa[5]; Masayuki Ishii[6]; Mitsuru Nakagawa[7]; Tsuneto Nagatomo[8]

[1] The Introduction of Nemuro City Museum of History; [2] Meiji C; [3] GSJ/AIST; [4] Historical Museum of Hokkaido; [5] AIST; [6] Meicon Hokkaido; [7] Hokkaido Branch, GSJ, AIST; [8] Nara University of Education

<http://staff.aist.go.jp/nanayama-f/>

Along the Pacific coastal zone of eastern Hokkaido, research tsunami deposits in marsh deposits during the late Holocene, have been increasingly conducted since 1998. It is thus believed that this growing academic interest contributed to the establishment of stratigraphy for the large tsunami traces extending between Tokachi coast and Kiritappu marsh. Meanwhile, the stratigraphy for large tsunami deposits along Nemuro coastal lowland has not been fully explained in detail. In the middle of October, 2005, a trench survey for large tsunami traces was conducted in this area. According to our stratigraphic methods such as tephrochronology and AMS14C dating, we identified 12 tsunami sands in marsh deposits in this area. In fact, these traces involve more layers than other large tsunami traces extending between Tokachi coast and Kiritappu marsh. In these facts, It has been concluded that it is necessary to estimate other tsunami sources off Habomai, Shikotan, Kunashiri and Etofu islands (southern part of Kuril islands) as well, other than tsunami sources caused by multi-segment of inter-plate earthquake such as off Tokachi and Nemuro areas. According to our sedimentological analyses, these tsunami sands derived from only from the coastal area, and although they do not show clear graded bedding, they commonly have convolution structures and erosional bases and include peat clasts and internal bed forms such as plane beds, dunes, and current ripples, reflecting bed-load transportation.