

**A mega-trench survey of huge tsunami traces in Nemuro lowland, eastern Hokkaido**

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A large trench survey (100m length, 20m width and 5m depth) for huge tsunami traces were conducted using by civil engineering techniques in Neuron lowland along the Kuril subduction zone, eastern Hokkaido, northern Japan. According to our stratigraphic methods such as tephrochronology and AMS14C dating, we identified 15 tsunami sands in marsh deposits since 5500 yr.BP and their recurrence interval was estimated almost 300 to 350 years. It has been concluded that it is necessary to estimate other tsunami sources of the southern part of Kuril Islands as well, other than tsunami sources caused by multi-segment of interplate earthquake (probably M 8.6) such as off Tokachi and Nemuro areas. Furthermore, we found strange large tsunami scores in past foreshore and backshore sediments. These were clearly traced to each tsunami deposits in marsh deposits. According to our sedimentological methods, these tsunami sands only derived from the beach area, and although they do not show clear graded bedding because of a single source. Also they commonly have convolution structures and erosion bases and include peat clasts and internal bed forms such as antidune, plane bed, dune, and current ripple, reflecting bedload transportation on the beach and marsh.