

Four tsunami sands in peat layers at the Bettouga Lowland in Nemuro City, and their correlation with regional tsunami events

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Large earthquakes in the Kuril subduction zone have caused tsunami damage along the Pacific coast of eastern Hokkaido, between Nemuro and Tokachi. In this study, we report tsunami deposits from an additional site in the region: Bettouga Lowland at the western side of Nemuro City. Four tsunami deposit layers named Bs1 to Bs4 are identified in this site. The Bs1 event may correspond to the 1973 Nemuro-oki tsunami (Mt 8.2). The Bs2 event may correspond to the 1843 Tokachi-oki tsunami (Mt 8.0) or 1894 Nemuro-oki tsunami (Mt 8.0). The inundation distances and altitudes of Bs3 (17th century) and Bs4 (13th century) events are longer than that of Bs2 event. These suggest that earthquakes caused Bs3 and Bs4 events were larger in size than Bs1 and Bs2. And we could correlate Bs3 and Bs4 events to Ts3 (17th century) and Ts4 (13th century) events described along the Pacific coast of eastern Hokkaido based on key tephra layers.