

Tsunami deposits and preservation potential of them in Onuma, Minami-Sanriku Town, northeast Japan

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Preservation potential of tsunami deposits (Szcucinski, 2012; Spiske et al., 2013; Fujiwara, 2015) is significant for deciding study site, identifying tsunami deposits and assessing interval and frequency of them. One of the factors of preservation potential is topography and depositional environment. Therefore, we reconstructed paleoenvironment during Holocene for assessing preservation potential, and then identified paleo-tsunami deposits.

Our study site is Onuma, Minami-Sanriku Town, Miyagi Prefecture, at the southern part of the Sanriku Coast. Based on geomorphic interpretation, study site had been kept marsh or swamp closed by sandbar and sand dune, and is appropriate for paleo-tsunami study. Thus, we conducted three kinds of methods for obtaining subsurface sediments and identifying tsunami deposits, and used two kinds of analysis for estimating paleoenvironment. As a result, marsh or swamp environment was constructed in 6 ka (just after the fall of To-Cu tephra) and existed until 1 ka. This indicates high preservation potential of tsunami deposits. In this presentation, we will report age and magnitude of paleo-tsunami based on tsunami deposits.

Keywords: tsunami deposits, Sanriku Coast, preservation potential, reconstruction of paleo-environment