

Identification and ages of paleotsunami deposits in Sanriku Coast: Trench survey in Koyadori, Iwate Prefecture

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We show new geological evidence of some historical tsunami deposits based on many radiocarbon dating and tephra analysis. Firstly, we sought study area matching for paleotsunami research based on geomorphological analysis and field survey, and excavated trench in coastal lowlands in Koyadori, Iwate Prefecture, northeast Japan. In trench, eleven event deposits (E1-E11: E1 is the 2011 Tohoku-oki tsunami deposits) interbedded within peat/peaty sediments were discovered. Thus, we revealed roundness of each event deposits and modern beach and river deposits to deduce the origin of event deposits. Consequently, we correlated tsunami deposits to historical tsunami events; E1: the 2011 Tohoku-oki tsunami, E2: 1896 Meiji Sanriku tsunami, E3: 1611 Keicho Sanriku tsunami, E4: 869 Jogan tsunami, and identified total eleven tsunami deposits during the last 3000-4000 years.

Keywords: tsunami deposits, Sanriku Coast, 2011 Tohoku-oki earthquake, historical tsunami, AD869 Jogan tsunami