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# Tsunami sandy sediments of the coastal forest reserve in Asahi city, Chiba Prefecture, central Japan

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3.11 gigantic tsunami hit Pacific coast of NE Japan and human damage was extended to Chiba Prefecture. Sandy tsunami sediments were distributed in the forest reserve at Yasashigaura coast 3 km west of Asahi city downtown, Chiba Prefecture. The mud drape covering current ripple was discovered there. This mud drape covering current ripple indicates that the stagnant water situation occurred when the gigantic tsunami hit and when tsunami water overflowed artificial bank 5.4 m high into the forest reserve.

The grain size analysis of rippled sandy tsunami sediments collected from the forest reserve indicates that grains less than 0.25 mm occupy 93%, and the threshold velocity attains 25.2 to 29.9 cm/s. The current producing current ripple was concluded to be due to outflow of tsunami, because the direction suggested by all fallen pine trees was different from that of rippled sediments; all pine trees were fell down by hitting of inflow.

In this paper, inflow and outflow of tsunami water flow in the forest reserve will be discussed based on the rippled sediments and fallen trees and grasses. In conclusion, referring to DVD recorded at the near-by light house, it proves that sandy tsunami sediments were produced by 1st and 4th hits of tsunami.

Keywords: inflow, outflow, sandy tsunami sediment, ripple, mud drape, land form