

Analyzing paleo-earthquakes along the Nankai Trough from Holocene deposits in the Ukishima-ga-hara lowland, central Japan.

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Five cores of Holocene sediments were collected from the Ukishima-ga-hara Lowland, Shizuoka Prefecture, located on the Philippine Sea Plate subducting under the Eurasia Plate, to investigate geologic records of past subduction zone earthquakes.

The cores are composed mainly of alternation of dark color peaty sediments and light color muddy sediments, which have been recording repeated environmental change of the lowland during about the last 6000 years. Abrupt lithofacies changes from peaty interval to muddy interval probably indicate the water-level rise caused by the co-seismic subsidence of the lowland.

Laminated sand or gravelly sand sheets are occasionally intercalated in the boundary of the abrupt lithologic change, which are inferred to be tsunami deposits.

The lithofacies changes have been repeated with 100 to 400 years interval based on ^{14}C ages and tephrochronology of cores. Some of them were correlated to historical earthquakes occurred along the Nankai Trough. Further researches are needed to accurately clarify the relationship between lithofacies changes and paleo-earthquakes.