

Study of tsunami deposits along northwest coastal area of Kyushu, Japan

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Tsunami deposits caused by big earthquake are studied in many localities around the Pacific and the Sea of Japan. However, only few coastal areas are studied in northwest to west Kyushu along East China Sea. Several researches on tsunami deposits are reported from west coastal area of Kagoshima Prefecture (Oshima et al., 2014). In this paper, researches of tsunami deposits in northwest coastal area in Kyushu are summarized.

Many core-samples from eight sites located in following three northwest coastal areas are studied; Genkai-cho and Karatsu City in Saga and Iki City in Nagasaki. Basis of variant examinations such as X-ray CT imaging, radiocarbon dating, sedimentary facies, fossil shell and microfossil analysis, regional sedimentary environments and events are studied. Those show several sedimentary events have been occurred at two sites of Minato-machi and Hamatama-machi in Saga.

In Minato-machi, event-sediments are recognized at two sites. From the radiocarbon dating data, two events ages are estimated to about 6,200 and 3,800 years ago. Those are composed of shell fragments in the intertidal-subtidal sedimentary environments of inner bay. 6.2 ka event sediment occurs imbricated fossil shell lived in the intertidal zone under the slightly deep water conditions. 3.8 ka event sedimentary structure is estimated to be a part of ripple-dune structure.

In Hamatama-cho, three event-sediments are recognized. From the radiocarbon dating data, three events ages are estimated to about 7,100, 2,200 and 2,200 years ago or later. Those are composed of following deposits in the intertidal-subtidal sedimentary environments of inner bay; shell and charcoal fragments, shell fragments-mixed coarse sand and gravely medium sand. Those are consisting of poor sorted silty medium sand, imbricated shell fragments and three normal grading layers each. Marine fossils and flow structures suggests all event-sediments have been formed by marine events. Because no simultaneous sediments in these events are identified at surrounding areas, those were local events probably. Currently, additional researches are continuing under the considering of the effects on depositional gaps and bioturbations.

In this presentation, additional data will be showed, the correlation of each regional event deposits will be discussed. And the comparison with previous works such as wash over deposits of 2,500 years ago in Kajikurihama ruin, west of Yamaguchi (Ichihara et.al, 2012) near the northwest costal area of Kyushu will be focused.

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