

Estimation of depositional age from Ariake tidal flat deposits

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When we study environmental change from tidal flat deposits, it is important that we examine age of the sample. Species such as Pb210, Cs137 are used in particular to become the survey for the past 100 years. However, it is often that age determination is difficult because bioturbation is remarkable, and sediments is disturbed.

The coast of Ariake Sea was attacked in 1792 by tsunami with the collapse of the Mt. Unzen Mayuyama. The tsunami deposit is found with Arao, Kawazoe. In this study, we were able to find event sediment like the tsunami deposit in Yanagawa. The tsunami deposit in Yanagawa is characterized in a shell transported by the deeper water, and the sedimentary structure is not clear.

In Ariake Sea coastal zone, there are many points trying sand cover method with a decrease of the *Ruditapes philippinarum*. The sand cover is characterized by environmental shells unlike the tidal flat. By the sediment survey in the fishery, it is difficult to avoid this sand cover. As benefit, the sand cover can decide performed age. Therefore I can know age by finding the sand cover layer (sand cover facies) from tidal flat sediments. In addition, I am convenient for examining the environmental condition of sand cover before and after.

It is the easiest to examine the shell which is the composition to distinguish the sand cover layer from tsunami deposit as the heterogeneous event sediment which it is not found sedimentary structure. As well as such an observation, the synthetic interpretation that increased other technique (Pb210, Cs137) becomes important by the age estimate of the tidal flat deposits.