

Reconstruction paleoenvironment by using diatom fossil assemblage analysis in Imuta-ike wetland, Satsumesendai, Kagoshim

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Paleoenvironmental reconstruction, using diatom assemblage analysis have been carried out in Imuta-ike, Satsumasendai, Kagoshima, Japan. In this site, there are deposit peat layer which is rare in west Japan, 6 visible tephra layer and 2.5m depth laminated layer. Boring survey conducted center of Imuta-ike at Feb. 2011, we was able to got 25m depth core. It can be traced back to 30,000 years past, can be reconstructed until modern environment from ice age. Following environment changes are reconstructed. Since about 30,000 years ago, peat and silt continuously has deposited, but accumulate speed has changed.

About 30,000 yr BP to 23,400 yr BP, we can't reconstruct detail environment change, because of the small number of diatom. About 23,400 yr BP to 13,600 yr BP, inflow river has been existed. And edge of the lake, moor has been formed. About 13,600 yr BP to 10,800 yr BP, moor became land, then pH rose. About 10,800 yr BP to 4,600 yr BP, it starts the postglacial age, increase precipitation and water level was rose. After K-Ah, tephra deposited the lake and water depth was shallow. About 4,600 yr BP to 1,500 yr BP, those days was dystrophic lake and it started to form wet land in west side of the lake. About 1,500 yr BP to present, it continues aggradation, water depth has been shallow. It progresses wet land formation so that water pH was dropped.

Keywords: diatom, Holocene, climatic change, pH change, volcanic stratigraphy, annually laminated lake deposit