

diatom assemblages in INW2012 drilling cores from Lake Inawashiro , Tohoku, Japan

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Inawashiro-ko Formation is named by a 28.13m sediment core taken from Lake Inawashiro-ko, Fukushima Prefecture, Japan. Stratigraphy and facies analysis combined with tephra and AMS radiocarbon dating were carried out on INW-2012. The Inawashiro-ko Formation are divided into three stratigraphic units: the Lower part (37.17-26.60m) consisted by medium sand-sandy silt (vertically varied in grain size) with granule and wood fragments, the Middle part (26.60-24.89m) consisted by very fine sand-silt with upper level grain refinement, and the Upper part (24.89-0.00m) consisted by dense alternation of brighter and darker clay layers including fallout tephra and Lahars by sediment gravity flow. Each unit are formed by fluvial basin before the form of the lake, early stage of the lake, lake with deep water as present, respectively. ¹⁴C dating indicate that Lake Inawashiro-ko is formed 42 cal k BP, and characteristic dense alternation of brighter and darker clay layers deposit continuously except for the most early stage of the Lake. The sedimentation rate in the upper part is 0.3-1.0(mm/yr). Additionally, We report the temporal variation of diatom assemblage and its relation to water environment in the past 2000 years from upper 2.00m of IN2012.

Keywords: Lake Inawashiro-ko, lacustrine sediment core, stratigraphy, diatom assemblage, late Pleistocene, ¹⁴C dating