The Tokyo Bay Unconformity and the Mandano Ice- Age

*hisashi nirei[1], Osamu Kazaoka[2], Hideto Kimura[3], Takeshi Yoshida[2], Hiroshi Fujita, Wataru Nirei[4]

1.International Union of Geological Science for Environmental Management, 2.Research institute of Environmental Geology, Chiba, 3.Tohochisui Co., 4.Tokyo university of information science

The Kanto fore-arc basin in the Kato plain is an extremely deep submarine basin that was formed during the early Pleistocene. The sediments in the basin change from deep-sea sediments to lacustrine-alluvial sediments, the Mandano formation which is up to 95 m in thickness and overlays the Tokyo Bay unconformity that is widely distributed under Tokyo bay area. The formation consists of three parts. The lithofacies in the lower part on the unconformity gradually change, with decreasing depth, from sand to gravel. The lithofacies of the middle part are muddy. The upper part changes with increasing depth from gravel to sandy shilt by transgression. The lower part and lower half of the middle part comprise sediments characteristic of a topset fan delta (Nirei H., 1997) in the regression stage. The upper half of the middle part and upper parts are composed of transgression sediments. The lower half of the middle part contains sediments from the ice age regression stage, evidence of which is provided by the cold-index plant remains,Picea maximowiczii, Tsuga diversifolia,Fagus crenata, Cryptomeria japonica, etc., present in the uppermost part of the lower half. Geological analysis reveals the Kanto continental shelf to extend widely under the Kanto Plain; it is also underlaid by a range of bottom set sediments in distinct formations and forest sediments, also in distinct formations, in ascending order under the conformity.

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