Holocene Sediment at Idku III near Kom al-Diba’a archaeological site, Egypt

Shigeko Haruyama1, Kay Thwe Hliagn1, Muhammad Hamdan2 and So Hasegawa2

Graduate School of Bioresources, Mie University1
Faculty of geology, Cairo University2, Waseda University2

Keywords: Egypt, Holocene, sediment, archaeology

1. Introduction
We carried out the topographic survey and three all core borings near Kom al-Diba’a archaeological site and former lagoon of Idku. This field survey aimed to reveal the sedimentary structures surroundings of Kom al-Diba’a environmental change related with human activities in Hellenism period. At Kom al-Diba’a, we advanced observation from the base of Idku III to the southeast main at places where the sedimentary structures are exposed due to man-made excavation and farmland development. We found that the depth of the sand layer forming the sand hill differs between the east side and the west side in the surroundings of Kom al-Diba’a South and that the sedimentary structures are different between Kom al-Diba’a North and South despite bright yellow naturally accumulated eolian sand.

2. Coring Point of Idku III
In the summer of 2012, we performed all-core boring at three points, and three exploratory coring were performed to a depth of approximately 15 m. The exploratory coring point, Idku III, reported here is located in a low lakeside area spreading south of the former Lake Idku. After the exploratory coring, the sediments dug up were separately stored in PVC tubes by 1 cm-depth. The same sample was analyzed by Dr. Fujine Hisashi of Paleo Lab. The analytical results were classified based on the criteria for the environmental indicator species group proposed by Dr. Sugi (1988) and Dr. Ando (1990). Of the diatom species other than the environmental indicator species group, the freshwater species were handled as cosmopolitan species and the seawater/brackish water species were handled as unknown species. Of the fossil diatoms and spores are 11 in total, consisting of tideland, most downstream rivers.  

3. Future research
Kom al-Diba’a is one of the archaeological site estimated in Hellenistic period. The surrounding area this site were lagoon and the environmental changes related with global climatic change pushed the local people’s occupation. In this report, we found the environment in middle Holocene in this former lagoon and we continue to analysis of sediment for reconstruction of environmental change in this area using electric exploration and analysis ions including sediment.

References
Fumihiko Hasebe edited(2012) The environments and civilizations of the Nile delta I, Joint usage/research center for Islamic area studies organization for Islamic area studies, Waseda University, 127p