

Sedimentary facies and physical properties of the Kazusa Group cores from Setagaya and Fuchu area Tokyo, Japan

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The Pliocene to Middle Pleistocene Kazusa Group is widely distributed in the Kanto Plain, central Japan. In this study, we obtained three cores from the late Pleistocene terraces called Musashino uplands in the southwestern part of the Kanto Plain. These cores consist of the Kazusa Group sediments, terrace gravels, and volcanic ashes and surface soils called Kanto Loam, in ascending order. We logged the lithology and sedimentary structures of these cores in detail. Grain-size distributions, water content, density of soil particles, electrical conductivity and pH values in soil-stirred water were measured. Also, diatom assemblage analysis and X-ray fluorescence analysis were conducted.

The 80-m-long CRE-NUCHS-1 core was obtained from Setagaya district, Tokyo (altitude: 41m), which is located on the Shimosueyoshi surface of the Musashino uplands. It consists of the bluish gray sand of Kazusa Group, terrace gravels, and Kanto Loam in ascending order. The sand of the Kazusa Group indicates upward coarsening trend with abundant pumice and plant fragments. The sulfur value and electric conductivity are high in upper part. The lower part of the sand (below 45m in depth) contains the shell fragments with high calcium content and pH values.

CRE-TAT-1 core (altitude: 56.06m, penetration depth: 50m), and CRE-TAT-2 core (altitude: 59.14m, penetration depth: 55m) were drilled in the Fuchu city, Tokyo, which is on the Tachikawa surface of the Musashino uplands. They are divided into unit 1 to unit 7 units in ascending order. Unit 2, 4, and 6 are gravels. Unit 1 is sandy channel sediments and floodplain sediments. Unit 3 consists of silt with brackish-water diatom. The lower part of the Unit 5 is bluish gray silt with abundant marine diatom. Since the sulfur content and electric conductivity is high, this part should be the marine sediments. It gradually changes into the sandy channel and floodplain sediments. Geomagnetic polarities change from normal to reverse in unit 5 (Ueki et al., this volume). Thus, unit 1 to 5 should be the Kazusa Group sediments. Unit 6 and unit 7 are terrace gravels and Kanto Loam, respectively.

Acknowledgement

This work was supported by the Core Research Evolutional Science and Technology (CREST) project of Japan Science and Technology Agency (JST).

Keywords: Kazusa formation