

Stratigraphy and sedimentary environment of the Recent Deposits in the lower Maruyama River Plain, Hyogo Prefecture

Koichiro Tanigawa[1]; Shigehiro Katoh[2]; Hiroshi Sato[3]; Sumiko KUBO[4]

[1] Education, Waseda Univ.; [2] Hyogo Museum; [3] Inst. Nat. Environ. Sci., Univ. Hyogo; [4] School of Education, Waseda Univ.

We clarified the facies and stratigraphy of the Recent Deposits (Chuseki-so) in the lower Maruyama River Plain by borehole logs with analysis of sulfur contents, identification of tephra layers, and ¹⁴C dating of core samples.

The stratigraphy of the Recent Deposits can be divided into the Basal Gravel (BG), Lower Sand (LS), Middle Mud (MM), Upper Sand (US), and Upper Mud (UM) in ascending order. The longitudinal gradient of the Paleo Maruyama River represented by the surface of the BG is steeper than that of the present river. The Middle Mud is distributed up to the uppermost reach at about 21km from the mouth of Maruyama River. The U-Oki volcanic ash was found in the middle part of the Lower Sand in the upper reach, while it was found in the lower part of the Middle Mud in the lower reach. In addition, K-Ah volcanic ash was found in the middle part of the Middle Mud.

It was considered that the relative sea level at the fall of the U-Oki volcanic ash about 10700cal.BP was to be about -30 m, and the coastline was located around the Toyooka town. At about 6800cal.BP, the relative sea level was between +0.3 m and +0.9 m, and the coastline was located at the innermost part of the Toyooka Basin. The coastline had probably retreated to about 10km upstream from the mouth at around 2000cal.BP.