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Alluvium stratigraphy and basal topography in the southern part of the Kujukurihama Lowland, central Japan

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Alluvium stratigraphy and basal topography in the southern area of the Kujukurihama Lowland, Boso Peninsula, central Japan are reconstructed on the basis of numerous number of borehole logs and radiocarbon datings. The Alluvium in this area is divided into two patterns of succession. Pattern I is composed of estuary muds (20-30m in thickness), shoreface-beach sands (up to 20m), and lagoon-floodplain muds (about 5m), in ascending order. Pattern II, while, is almost the same as the Pattern I without the estuary muds. Radiocarbon ages show that estuary muds and shoreface-beach sands were deposited during a transgression stage 12,000-9,000 calBP and a highstand stage 7,000-5,000 calBP, respectively. The radiocarbon ages of shoreface-beach sands shows younger toward the seaward, that means that the shoreface-beach sands prograded after a maximum highstand stage. The boundary between the Alluvium and the Pleistocene deposits is recognized by N-value, which is based on the hardness of sediments. The basal depth of the Pattern II shows that the boundary forms somewhat flat surface inclined to offshore direction. On the basis of the distribution of the estuary muds of the Pattern II succession, several incised valleys, which direct from NW-W to SE-E, are revealed. The incised valleys are formed by river-flow from surrounding hills into the Pacific during the Last Glacial Maximum.

Keywords: Alluvium, incised valley, Last Glacial Maximum, Holocene, Kujukurihama, Mobara