

Sedimentary environments and physical properties of the latest Pleistocene-Holocene incised valley fills in the Nakagawa Lowland

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The latest Pleistocene to Holocene sedimentary environments and physical properties of the southern Nakagawa Lowland, Kanto Plain, Japan, has been established based on the sedimentary facies analysis and radiocarbon dating of two cores. The two cores had been obtained from the axis portion of the incised-valley which was exposed by the Nakagawa River until the Last Glacial Maximum. The sedimentary facies of the two cores had been reconstructed on the basis of the lithofacies and biofacies. As the result, four sedimentary systems (and the beginning ages); braided river (up to 10000 cal BP), meandering river (12500 to 10000 cal BP), estuary (10000 to 9000 cal BP) and delta (6500 cal BP), have been identified in ascending order. The beginning the depositional ages of the meandering river and estuary systems are younger in landward core. This feature might be associated with the post-glacial sea-level changes and the geography of the valley. This difference is also recognized in the diatom assemblages of the estuary and deltaic sediments. The brackish and brackish-fresh water species are dominant in the landward core. These features might influence the physical properties of the core sediments such as density.