Grain size distributions and C/N ratio of estuarine- and deltaic-muds: a Holocene example of GS-SK-1 core, Saitama Prefecture

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The incised-valley fills deposited since after the LGM, under the Nakagawa Lowland, are mainly composed of (1) gravel bed deposited into/during the LGM, (2) meandering river deposits, (3) salt marsh to mud-flat deposits, (4) sand-flat to sand-bar deposits, (5) prodelta to delta-front deposits, and (6) delta-plain deposits in ascending order. These deposits, respectively, fines upward in the lower estuarine deposits, and coarsens upward in the upper deltaic deposits.

The GS-SK-1 core, obtained from the back marsh of the Nakagawa River in the Nakagawa Lowland, has thick muddy deposits in two horizons: one in salt-marsh to mud-flat deposits and another in the prodelta to delta-front deposits. In this study we analyzed grain size distribution and C/N ratio from these transgressive estuarine- and regressive deltaic-mud deposits.