

Stratigraphy of Middle to Lower Pleistocene tephra under Koriyama Basin, Northeast Japan

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In order to construct the stratigraphy of Middle to Lower Pleistocene tephra under the Koriyama Basin, Northeast Japan, a 100.33 m long boring-core was obtained at the Fukushima Prefectural Koriyama-kita Technical High-school (248.6m absl) located on the Koriyama Upland emerged between occurrences of Nm-SB tephra (110 ka) and DKP tephra (620 ka). We detected two well-studied Middle Pleistocene fall-out tephra and one Lower Pleistocene ignimbrite. A white fine pumice fall deposit with a thickness of 4 cm collected from 37.63-37.67 m in depth can be correlated to Sn-SK tephra derived from Sunagohara Caldera at 220 ka. A weather pumice fall deposit with a thickness of 16 cm collected from 38.24-38.40 m in depth can be correlated to So-OT tephra derived from Shiobara Caldera at 300-330 ka. A thick ignimbrite with a thickness of ca.11 m (69.60-80.37 m in depth) is similar to Asino Ignimbrite erupted Lower Pleistocene Caldera in south part of Fukushima Prefecture at 1.27-1.45 Ma. The recognition of these tephra constrains the age of the sediment filling the Koriyama Basin, providing significant information for consideration of the development of the Koriyama Basin.

Keywords: Koriyama Basin, Middle Pleistocene tephra, ignimbrite, Boring core, Koriyama Formation