

Subsurface structure and tectonic geomorphology along the Western marginal fault zone of the Kitakami lowland

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The Western marginal fault zone of the Kitakami lowland is an active reverse fault zone that extends for about 70 km along the Quaternary volcanic front of the northeast Japan arc. We conducted an integrated survey including geomorphic interpretation, surface geological mapping, seismic reflection and gravity surveys, on the Tengumori-Dedana Fault group and Ichinoseki-Ishikoshi Flexure, to clarify the structural linkage in the Kitakami lowland. The Tengumori-Dedana Fault group is composed by several active faults in the southern portion of the fault zone. The Ichinoseki-Ishikoshi Flexure develops from southern end of the fault zone to high seismicity zone in northern Miyagi prefecture.

Keywords: Western marginal fault zone of the Kitakami lowland, seismic reflection profiling, gravity survey, tectonic geomorphology, subsurface structure