

## Petrological Properties of Early-Middle Pleistocene Tephra in the Tokachi Plain, Hokkaido, Japan

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Quaternary volcanism in central-eastern Hokkaido converged on the Taisetsu-Tokachi and the Akan-Kutcharo volcanic regions. In the Tokachi Plain, Hokkaido, Quaternary tephra are widely distributed. This study shows petrological properties of Early Pleistocene tephra in the Tokachi Plain and examines their sources and volcanism.

The study area is in the Osarushi Hills, the Tokachi Plain. For petrological properties, this study shows the chemical composition of major elements of volcanic glass by EPMA analysis as well as heavy mineral composition.

The resulting conclusions on the basis of stratigraphy and petrological properties of tephra are as follows.

- 1) Most tephra contained abundant rhyolitic volcanic glass.
- 2) Some tephra were identified with the Meto tuff and the Kamishikaribetsu tuff.
- 3) Tephra in the Tokachi plain were classified into five groups, according to the chemical composition of their volcanic glass (Type I-V). Most tephra had derived from the Taisetsu-Tokachi volcanic region (Type I-III).
- 4) In the Tokachi Plain, this study found Early Pleistocene tephra that had derived from the Akan volcano.
- 5) These data suggest that Taisetsu-Tokachi volcano and Akan volcano had often repeated explosive eruptions during the Early Pleistocene. As a result, many tephra had spread in the Tokachi Plain.

The petrological properties of successive thin tephra layers that have not been noticed before are significant for volcanology in Hokkaido as well as tephra study of the Tokachi Plain.