

## Detection, Observation, Preservation, and Utilization of Sand Boiling Traces along an Active Fault : Effort of Hakusan T

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The Morimoto-Togashi Fault Zone which goes through Kanazawa City to Tsurugi District, Hakusan City, is one of geosites where people can learn about the formation of earth in the Hakusan Tedorigawa Geopark. On the eastside of the fault mountains (elevation of 650 meters) were formed by the upheaval. On the other hand, on the westside of the fault the Tedorigawa River transported much sediment, and an alluvial fan was formed by them.

In recent years two excavation surveys of the buried cultural properties were carried out in the western margin of the active Togashi Fault. One at the Bunyudo ruins (Hiramatsu and Kozaka, 2013) and the other at the Netsuno ruin which was excavated in 2013. Sand boiling traces were found in the both ruins, which showed a huge earthquake occurred between the late Yayoi Era and the Heian Era. It is difficult to identify the active fault which the earthquake happened, causing the sand boiling traces. However, from a survey in Umeda District along the Morimoto Fault, it was reported that the latest activity occurred after approximately 2000 years ago, prior to the fourth century (Headquarters for Earthquake Research Promotion, 2013). Therefore, the sand boiling traces are likely to be caused by the activity of the Togashi Fault, considering that the sedimentary layer which the sand boiling traces were found is correlated to the era the fault movement occurred.

We report people's activities related to these ruins where they are located on slight elevations of the alluvial fan, together with an introduction of the sand boiling traces. Additionally, we report about a study tour held in 2013 for the citizens to walk around and observe the both ruins and the Togashi Fault.

The Hakusan Tedorigawa Promotion Council is planning to peel off the sand boiling traces, panel it, and then utilize it as learning materials of the geopark to learn about the formation of earth and disaster prevention.

Keywords: Hakusan Tedorigawa Geopark, Active Fault, Morimoto-Togashi Fault Zone, Sand boiling traces, ruins