

## Development history of sagging around Kanmuriyama Pass, Gifu-Fukui prefecture boundary

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Recently sagging landforms like double ridges and uphill-facing scarps attract attention as precursors of large-scale landslides. Many types of large- and small-scale saggings have been ubiquitously found in the Japanese mountainous regions by the analyses of detailed topographic maps made by LiDAR survey. Their development histories and processes, however, are unclear. We report the results of field and chronological researches on saggings in the Kanmuriyama Pass area, Gifu-Fukui prefecture boundary. Since the lithology and age of sediments accumulated in the linear depression between the double ridges east of the Kanmuriyama Pass were reported in the last meeting, those on the uphill-facing scarps west of the pass will be presented in the meeting this year.

Four rows of uphill-facing scarps parallel to the slope are recognized on the south side of the prefecture boundary ridge about 2 km west of the Kanmuriyama Pass. The sediments accumulated in the linear depressions were collected and analyzed by the hand-auger boring and pit survey. Lithological characteristics of these sediments are common and they are composed of, in descending order, 1) carbonaceous mud/leaf litter mixture, 2) dark gray mud, 3) light gray mud, and 4) orange-color conglomeratic mud. This lithology is also similar to that of the sediments between the double ridges east of the Kanmuriyama Pass. The sediments in the first, second and third depressions from the top include Kikai-Akahoya tephra (K-Ah) about 7.3 ka or have peaks of volcanic glass contents of this tephra. The horizons of the tephra, however, are recognized in the different lithologies; the sedimentary environment about 7.3 ka varied with the depression. The ages of the tephra and the AMS-<sup>14</sup>C ages of wood fragments embedded in the sediments indicate that the sedimentation rates of the dark and light gray mud members are about 0.08 mm/year, and several times slower than those of the upper carbonaceous mud/leaf litter mixture member. The depressions and uphill-facing scarps formed about several tens of thousand years ago on the basis of the estimation of the thickness of sediments and the extrapolation of the sedimentation rate of the mud formations.

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